THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
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So keenly have our readers appreciated the series of articles on *Sport and Recreational Buildings* (which will be resumed on April 7 next) that the Editor has arranged to devote the CURRENT ARCHITECTURE SECTION of the next issue to a collection of sports pavilions recently erected in various parts of the country. While Mr. Bill's articles have been severely technical and informative, Mr. Gordon Hemm, the author of this special article, will describe the best work that has been done in this field of late.

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PRINCIPAL CONTENTS

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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.

RENDERINGS OF ARCHITECTURE

Selected and annotated by Dr. Tancred Borenius.

xii. Antwerp Master (*c.* 1620-1625).
The Salon of Rubens.

A delightful rendering of the interior of a wealthy Antwerp patrician's home, conveying an abundance of information concerning the way in which the houses of this type were internally decorated and furnished. The painter is unknown; his style is not unlike that of Cornelis de Vos (1585-1651), but we know of no other little interiors akin to the present one by this Master. The picture is known as "the Salon of Rubens," because, for one thing, the pictures hanging on the walls are clearly by Rubens (we recognize among them, above the fireplace, "Lot and his Daughters," now in the de Forest collection, and the "Last Judgment," now at Munich); and, secondly, because the lady seated on the left somewhat resembles Rubens's first wife, Isabella Brant, while the two boys remind one a little of his sons Albert and Nicholas; the little girl might be the daughter of Rubens, who died in 1624. This must, however, for the present remain a conjecture; but the pretty name is likely to cling to the picture.—[Stockholm, National Museum, No. 407.]

THE ARCHITECTS' JOURNAL

Wednesday, March 24, 1926

SHOULD ARCHITECTS CRITICIZE?

THE President of the Royal Institute of British Architects, in his stimulating address to students the other day, made one particular remark which should cause every architect to think deeply. In commenting upon some of the architectural evils from which we are suffering to-day, such as the ruin of the English countryside by innumerable vulgar buildings and the uglification of our cities by the same cause, Mr. Guy Dawber hinted that one reason why these atrocities are allowed to be committed is that the function of criticism is not being effectively exercised, and that in the realm of architecture charlatans flourish with none to expose their charlatanry.

"What is the remedy?" it may be asked. The obvious answer is that we must have more and ever more criticism. But then the trouble begins. Who is to do the criticism, and in what manner is he to criticize? This is a subject upon which the most diverse views are held. According to one school of thought architects ought never to criticize one another in public. Sir Reginald Blomfield, in his recent article in the *Quarterly Review*, stated very clearly that in his opinion such action was unsportsmanlike. The disputants, on the other side, refer to the example of literature, and remind us that it is the common practice of men of letters to criticize each other with the utmost vigour. It may be pointed out, however, that the analogy is not quite complete, and that even in literature there is a certain convention which discourages, for instance, the practice of one novelist writing to the Press to comment unfavourably upon the work of another novelist, because these are rival technicians who might be actuated by jealousy. The literary critic, it has been contended, should take all literature for his province, and should be in some respects above the mere artist or creator in one particular literary medium, as it is especially important that there should be no suspicion of personal rivalry between him and the author upon whose works he happens to be animadverting. The truth is that the critical faculty is very much rarer than the creative, and while a generation may produce thousands of creators, it is lucky if it gives birth to even half-a-dozen good critics. For a critic must possess, not only wide knowledge, philosophic acumen, an unusual magnanimity, and a still more unusual courage, but that precious quality of mind which is known as the historic sense.

Suppose, it may be asked, that a practising architect happens to possess this intellectual equipment, is he necessarily to be debarred from exercising the critical function, or must we put to him the stern choice of either abandoning the practice of his profession or of depriving the public of the benefit of his critical pronouncements? It seems a hard choice, yet the problem propounded is not quite insoluble. There is criticism and criticism: and, while an architect may feel himself to be bound by convention not to find fault in detail with particular buildings designed by his professional *confrères*, he may yet give public expression to general opinions and principles, the acceptance of which would imply the condemnation of some of the works in question. The need for architectural criticism seems so urgent that, provided it be of the right quality, we should accept it from whatever quarter it may come. Nor is it to be supposed that people without technical knowledge or academic qualifications need be debarred from expressing their candid opinions upon architecture. For errors in design are of all grades, and while some subtleties of composition may not be apprehended by the layman the worst architectural misdemeanours can scarcely escape his notice. The most important thing to establish in the mind of the layman is the habit of criticizing modern buildings with the utmost freedom. If his criticisms are ill-founded let us hope that the architectural profession can produce a few spokesmen with enough logic and literary capacity to reply to them.

Criticism is commonly identified with fault-finding, and while, of course, it is true that praise is also an essential element of criticism, the fault-finding part is the more important and, though it may seem a little ungracious to say so, of the greater cultural value. In every highly-organized community exacting an unremitting service from its members, the whip of reproof rather than the stimulus of praise is the really formative influence. While serving in the Army or Navy, for instance, to have escaped censure is itself no small commendation. In such a society praise is implicit in the absence of dispraise, and is just as welcome to its recipients as if it had been communicated to them by word of mouth.

But architects are not effectively reproved, whatever architectural wickedness they may commit. Thus it happens that even when they are commended the praise gives them little satisfaction, because the function of criticism is so timidly exercised. What the good architect demands from his critics is not so much their praise as their assistance in saving his buildings from being overwhelmed, and al ogether defeated in their æsthetic intention by neighbouring buildings so vulgar and incompetent that they deprive him of the honour of making his proper contribution to the beauty of his native city. Geniality in criticism is, of course, a fine thing, but in the opinion of many what we now most need is candour and severity. It would be well if the profession would collaborate with the public in making possible a criticism of architecture that would be both lively and courageous.

NEWS AND TOPICS

The annual report of the Birmingham Advisory Art Committee, which has just been published, although consisting of but few pages, is a very important publication, inasmuch as it describes the initial development of a system of æsthetic control which is, perhaps, destined to be copied in many other towns. This committee was formally inaugurated by the Lord Mayor of Birmingham in 1922, when its powers and constitution were determined. Although the findings of the committee upon all matters submitted to it are in the nature of recommendations only, its influence is very considerable. All new designs for public buildings or other structures to be erected upon land belonging to the city and all proposals for new parks or public memorials are reported upon by the Advisory Art Committee. A reference to the report for the year 1925 shows that submissions to the committee include such multifarious items as designs for tramway depots, bridges, secondary schools, sports pavilions, water towers, latrines, formal gardens, and posters. That an advisory art committee of this kind should have been established and should show in its earliest years such a useful record of service is greatly to the credit of the Birmingham Civic Society, through whose instigation it was formed.

* * *

The chief difficulty must have been to constitute the committee in such a manner that its personnel should inspire confidence. Very wisely, it was ordained that the majority of the ex-officio members should not be directly associated with the practice or the teaching of any of the visual arts. The specialists comprise the director of the School of Art, the director of the School of Architecture, and the president of the Birmingham Architectural Association; but these are outnumbered by the Lord Mayor, a representative of the Birmingham Public Works Committee, a representative of the Education Committee, the city surveyor, the vice-chancellor of the University, and the principal of the University, to whom may be added the chairman and the hon. secretary of the Civic Society. The committee has power to co-opt four additional members, selected for technical knowledge in art matters, who, however, may not serve for more than three years consecutively. That this body is gradually gaining the confidence of the citizens of Birmingham is proved by the fact that its advice is frequently sought, not only by the city departments engaged in building operations, but by building-owners who feel that they have a special duty to preserve the amenities of their native city.

* * *

Of Sir John Vanbrugh, the bicentenary of whose death was commemorated on March 20, there is but little left to add to what has been already said with considerable copiousness in the general Press. Duchess Sarah's relentlessly mean and rancorous persecution that embittered the architect's declining years is a thrice-told tale that shall not here be repeated. I prefer to think of the pleasure he gave to the Earl of Carlisle in the building of Castle Howard, and of its graceful and substantial recognition by that excellent nobleman. How strong a contrast to the treatment so stoically endured at Blenheim! I could find it in my heart to forgive Van the naughtiness of the lightest of his plays, and the dullness of the heaviest of his buildings, if only because of his fortitude and amiability as a man. If, as Mr. J. C. Squire conjectures, it was Jeremy Collier's remorseless and not wholly unmerited attacks that drove Vanbrugh into the penitential profession of architecture, I conceive that we owe a short measure of gratitude to the "dusty collier who heaves his ponderous sack."

* * *

Most of the stories of Van's imprisonment in the Bastille are, I imagine, best seasoned with salt; but I like to believe, howsoever unwarrantably, that Van was arrested as a spy because he was caught in the act of sketching a fortification. Such an incident would show that he could sketch, and that he had some sort of enthusiasm in it. Young architects of our own time have been now and again so incautious as to expose themselves to similar risks. That Van was released on account of his pleasant manners and polished wit is a tougher yarn than I can easily swallow. Anyhow, he got out, and the only building of his that remains at Greenwich seems to have been originally called "The Bastille," perhaps as an ironic reminder of his youthful escapade. This building is now known as "Vanbrugh Castle," and is used as a school. Strolling around in search of traces of Van, I found them in plenty, but not in the form of buildings designed by him. His name is blazoned by villa-flanked roads, a dangerously steep hill, a so-called park, and an alleged terrace; while the name Vanbrugh Fields is a reminder that in 1714 he acquired the lease of some 12 acres of land here. In 1719 he built at Greenwich a house for the Duchess of Bolton—Polly Peachum of *The Beggar's Opera*—and near it a house for Sir James Thornhill, who did paintings by the square yard in Greenwich Hospital. Of these, and of two or three other houses that Van built—one of them known as the "Mince Pie" house—not a wrack remains. But I shed no tears.

* * *

Brick-throwing is, on occasion, an effective form of repartee, as well as an exhilarating sport. A king-closer or queen-closer may be as decisive an argument or last word as the "chunk of old red sandstone" in the celebrated case of Abner, Dean of Angel's. A London editor has—metaphorically, of course—just hurled with deadly aim a hefty brick at the railway companies. The companies had subtly stated that "the average rate for the carriage of bricks is shown by the Ministry of Transport statistics to be 6s. 1d. per ton only." Quoth the aforesaid editor in reply: "But bricks are not sold by the ton, but by the thousand, and even the lightest common building bricks weigh about 2 tons 8 cwt. per 1,000, up to well over 3 tons for heavier varieties as used in the northern counties; consequently, even on their own showing, rail transport adds anything from 15s. to more than £1 to the cost of bricks—a very material factor, even in these days of high prices." This would seem to have silenced the railway-rates defenders, who, duly in accordance with precedent, will now "curl up on the floor." But though the discussion

is closed, the problem is not solved, but is merely stated, and I would counsel the railway to abate, lest a worse thing happen to them.

* * *

Whether the Lead Paint Bill introduced by Sir William Joynson-Hicks is to do any manner of good, or is to prove utterly futile, is largely a question of administration. It seems to me that the only certainty suggested by the text of the Bill, as issued on March 17, is the creation of a further addition to the overgrown and still growing army of official supervisors, medical and otherwise, to see that painting is done with common-sense precautions against injury to health. These precautions are already observed by the better type of employer and workman, and may be summed up in the one word *cleanliness*. Workers are to have proper facilities for ablution, are to wear protective clothing, and are to receive printed instructions as to the hygienic measures they ought to take. I anticipate that many employers will protest against over-inspection, and will aver in the same breath that although you may supply the painter with facilities, you cannot, even with the utmost vigilance, compel him to use them. Yet to do one's best to protect him against the appalling consequences of lead-poisoning is mere humanity. Still, I remember to have read somewhere the contention that the lead-compound in paint is actually less dangerous to health than the added turpentine. And I have always understood that the paint manufacturers are quite ready and willing to substitute harmless zinc paint instead of that containing lead-compounds. But I cannot speak as an expert in paint.

* * *

Charing Cross railway bridge has been hitherto weighted with objurgation until there was some likelihood of the safe-load being injudiciously exceeded. Indeed, at one time there were rumours of sagging. Some of this lavish concentration could have been spared for Behemoth's ugly brother, the Hippo, that crosses the Thames at Cannon Street. But this obvious inequality of distributed load of contumely is on the point of being rectified. Cannon Street bridge is qualifying to attract some small share at least of the polite attention hitherto lavished so unstintedly on Behemoth. If only Mr. John Burns would discover a similarly picturesque pet name for the Cannon Street bridge, Equality and Fraternity would waft kisses to each other. But we seem to be hastening on towards that blessed consummation. For I think that the wooden contraption they have just finished putting up on the Cannon Street bridge ought to go some way towards redressing the balance and allaying the possible jealousy. I know not what the structure is intended for. It has rather the appearance of an incipient Noah's ark, but, for aught I know, it may be a glorified rabbit-hutch. Anyhow, it may serve to divert to the bridge, on which it challenges observation, some of the enthusiastic encomiums hitherto lavished on blushing Behemoth.

* * *

If the plastering machine now being used in order to restore Thornhill's ceiling at Greenwich Hospital and painted ceiling at Hampton Court proves to be successful, plasterers may in time find themselves replaced by machinery. If this occurs, the rapidity with which houses can be built will be vastly increased. For some time past the sagging of those ceilings that are regarded as national treasures, has caused anxiety to the authorities. Some means had to be devised to put new plaster on to the back of the old with just sufficient moisture to enable it to set and not to flake off. There was also the problem of preventing the colour flaking off. A method has now been devised to spray finely-desiccated gypsum by means of air pressure and then to cover it with the minutest spray of water. It is hoped in time to preserve these historical ceilings, especially the Verrio on the King's staircase at Hampton Court, which is one of the finest in the country.

* * *

Mussolini's courageous project for the town planning of Rome should have helped mightily to secure an attentive hearing for the very representative deputation which was due to wait on the Minister of Health yesterday (Tuesday) afternoon to urge the preparation of a regional plan for London and the Home Counties. No doubt the familiar case for town planning will be eloquently restated by a deputation so eclectically constituted (it comprised delegates from no fewer than nine different societies), and the chief danger was that in exhausting the subject they might reduce the Minister and his attendant satellites to exhaustion. No doubt the deputation would perforce have to recite facts already familiar to saturation point; but it should not be difficult to adduce fresh phases and new and striking views of the facts that were already familiar in broad outline at least; and Signor Mussolini's great project should provide an effectual clinching argument. But why do not the professional associations unite to send a member to the House?

* * *

On Sunday afternoon I spent an hour looking through Mr. William Rothenstein's portraits which have just been

Geoffrey Scott. From the Portrait Drawings of William Rothenstein, 1889-1925.

collected by his son in book form. Max Beerbohm, in his delightful introduction, speaks of " this august record of what has been best among us in our time "—and what names are here ! Beardsley, Pater, Zola, Whistler, Edmond de Goncourt, Swinburne, Shaw, Hardy, George Moore, Sargent, Yeats, Irving, Conrad, Rodin, Tagore, Arnold Bennett, Lethaby, Lutyens, Eric Gill, Ivan Mestrovic, Ralph Hodgson, Albert Einstein, Henry Nevinson, Frederick Delius—a hundred and one or so—names that shine with the lustre of jewels. Kipling's name is the only one to be straightway missed.

* * *

I went to the Memorial Exhibition of the oil and water-colour paintings of the late Carlile H. H. Macartney—the late brother of Mr. Mervyn Macartney—which is being held at the Gieves and Arlington Galleries. Most of the pictures are of the English countryside, although there are a number of Italian, French, and Dutch landscapes. Mr. Macartney adhered rigidly to the English convention of the second half of the last century. His love and understanding of landscape is admirably demonstrated, but while the composition is generally good, the handling is heavy and uninspired. The colour, although consistent, is dull. Once only, in " Mouth of the Scheldt," does he leave his usual quiet manner for a lighter, more vigorous mode of expression, strongly reminiscent of Turner. The serenity, the sureness, and the modesty of the pictures made the exhibition a pleasure to visit.

* * *

Derwent Wood is buried at Amberley, in the village churchyard at the foot of the Downs. Amberley was the place he had set his heart on for his retirement, and he will be happy to be at rest there. In the church and in the churchyard are examples of his work. I walked to Amberley from Storrington on Saturday, and stood by his freshly-made grave. The floods, which in winter almost isolate both church and castle, had retreated, and the first flowers of spring had come.

> And gray walls moulder round, on which dull Time
> Feeds, like slow fire upon a hoary brand.

As Shelley said of the cemetery of Keats, " it might make one in love with death, to think that one should be buried in so sweet a place."

* * *

The exterior of the London Mansion House is being spring-cleaned, and the news is set forth in *The Times* so :

> The exterior of the Mansion House is being cleaned and scraped and, when the work is finished in about a month, the building will present an appearance which it has rarely, if ever, exhibited since its erection in 1753. It took fourteen years to build, its designer being Mr. George Dance, " clerk of the City's Work," at a cost of £71,000, part of which was produced from fines imposed upon citizens who refused to become sheriffs. The first Lord Mayor to inhabit the Mansion House was Sir Crisp Gascoyne, an ancestor of the Marquis of Salisbury. He held office in 1752-3.

I feel that, considering the importance of the job, the story has not been allowed to run. Why miss, for instance, the really charming tale of Richard Whittington—and his cat ?

* * *

There is a certain verse which has been quoted in every article about John Nash and Regent Street for the last fifty years. And now a writer in this month's *English Review* quotes it again. It has appeared in the pages of THE ARCHITECTS' JOURNAL and its contemporaries at least a hundred times. (It wouldn't have appeared once if I'd had anything to do with it.) Mr. Beresford Chancellor has quoted it; Mr. Trystan Edwards has quoted it; Mr. H. J. Birnstingl has quoted it. Dead and gone note-writers have quoted it. It has been reported as being quoted by lecturers (some of them also dead and gone) at the R.I.B.A. It has been quoted and misquoted, and *pro bono publicos* galore have written reminding writers of its existence when they have failed to quote it. The deadly rhythm of its lines hammers in my head like the terrible " Punch, brothers, punch with care " of Mark Twain's railway car. It has been well-nigh done to death. For God's sake let it die.

* * *

The authorities of an old church in Switzerland decided to make some repairs to its interior furnishings and employed an artist to touch up a large painting, writes a correspondent in the *St. Martin's Review*. When the artist presented his bill, the committee refused to pay it unless the details were specified. The bill was itemized :

	Francs
For correcting the Ten Commandments, embellishing Pontius Pilate, and putting new ribbons in his hat	8
Putting tail on rooster of St. Peter and mending his comb	4
Repluming and gilding left wing of Guardian Angel ..	6
Washing High Priest's servant	5
Renewing Heaven, adjusting the stars and cleaning up the moon	7
Brightening up the flames of Hell, putting new tail on the Devil, mending his hoof and doing several odd jobs for the damned	12
Touching up Purgatory and restoring lost souls	7
Mending the shirt of the Prodigal Son	3
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ASTRAGAL

ARRANGEMENTS

WEDNESDAY, MARCH 24

At the Royal Society of Arts. 4.30 p.m. Sir Frank Baines, C.V.O., C.B.E., on The Preservation of Folk Architecture in this Country.

FRIDAY, MARCH 26

At the Royal Sanitary Institute. 7.0 p.m. C. A. Clews, M.INST.M. and CY.E., on Some Aspects of the Housing Problem.

At the Architectural Association. 3.30 p.m. Sir Giles Gilbert Scott, R.A., opens the Exhibition of the work of the late Bertram Goodhue. The Exhibition will be open from 10.0 a.m. to 6.0 p.m. until April 21.

MONDAY, MARCH 29

At the Royal Institute of British Architects. 8.0 p.m. Special and Business Meetings : Election of the Royal Gold Medallist; Election of Members.

TUESDAY, MARCH 30

The Society of Illuminating Engineers. 7.0 p.m. Mr. H. Lester Groom opens a discussion on Stage Lighting at the E.L.M.A. Lighting Service Bureau, 15 Savoy Street, Strand, W.C.

TWO STREETS

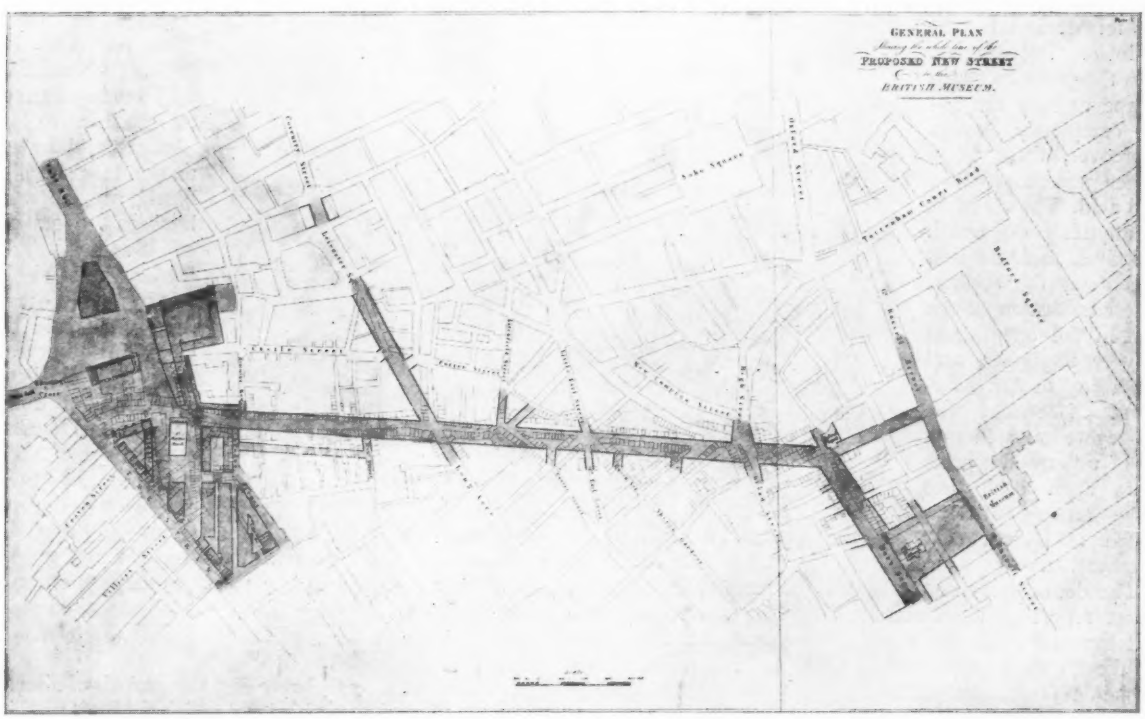
BY THE EDITOR

A WEEK or two ago we learnt from ASTRAGAL about the new street from the eastern end of the Strand into New Oxford Street which Mr. G. Topham Forrest foreshadowed in his recent paper before the Institute of Public Administration. A new interest has just been lent to this proposal by the scheme for transferring Covent Garden Market to the Foundling Hospital estate, for if this scheme materializes a vast amount of market traffic will soon be proceeding northward along Kingsway, and a street such as the one described by Mr. Topham Forrest may become almost necessary. But one of the chief points of this street is its relation to the British Museum, a building which most of us feel to be very badly served by its surroundings. Exactly one hundred years ago John Nash, fresh from his triumphs in Regent Street, designed an admirable thoroughfare which was to carry St. Martin's Lane straight through to the British Museum forecourt.

At the time there was no through communication between either north and south or east and west of what we now consider the centre of the metropolis. Among the improvements suggested by Nash and the "Woods" in connection with the 1826 scheme, it will be well to note those that have been since carried out. The fifth *Report* of H.M. Woods, Forests, and Land Revenues for 1826 states that "we were furnished by him (Nash) with plans for effecting the objects which we had in view, and to which he added a plan for a more direct communication than at present exists between Oxford Street and Holborn, as this would also be a very desirable and important improvement." This scheme would have given, and now gives, direct communication between the Oxford and Holyhead Roads and the City, but it was not carried out until twenty-two years afterwards. Nash died in 1835, otherwise we might have had some of his façades along New Oxford Street. Next in order was the scheme for giving more direct access between the Bath Road and the City, in order to avoid the detour by way of Cockspur Street and the Strand. In the *Report* we read: "Another opening to which we directed Mr. Nash's attention had for its object the continuation of Coventry Street into Leicester Square, and from thence through Long Acre, Great Queen Street, and Lincoln's Inn Fields into Holborn, near the north-east corner of Lincoln's Inn Fields."

Cranbourne Street, which is the most important link in this scheme, was not formed until 1843. The widening of the Strand, very much on the lines proposed in 1826, was carried out by Decimus Burton in 1831. Of the main scheme (the proposed new street from Charing Cross to the British Museum) the narrow lane which connected St. Martin's Lane with St. Andrew's Street was widened to some 72 ft., and is known as Upper St. Martin's Lane. But although the exit to the north from the existing line of streets has been considerably improved consequent on the formation of Shaftesbury Avenue, it is in no sense a great thoroughfare, and is, for the moment, used for one-way traffic only for the greater part of its length.

The outline of the main scheme was as follows: A square, approximating to the present Trafalgar Square, was to be



The proposed street from Charing Cross to the British Museum, by John Nash (1826).

formed. The centre of the square was to contain a " Greek temple " for housing the Royal Academy. Other improvements were suggested in the neighbourhood of St. Martin's Church, which were, in part, carried out about 1831. From the north-west corner of St. Martin's Church to a point where New Oxford Street and Hart Street now meet, it was proposed to carry a perfectly straight thoroughfare 80 ft. wide. At the latter point the road was to bifurcate, one prong being a widened Hart Street, and the other, on the line of the present Charlotte Street, connecting the main thoroughfare with Gower Street. Between Hart Street and Great Russell Street, and in front of the British Museum, a great open rectangle, 350 ft. by 230 ft., was proposed, leaving St. George's Church, Bloomsbury, in the middle, axial with the museum. The object of this thoroughfare was primarily for the purpose referred to in the *Report* of 1826; but Nash foresaw that it would also give direct access between Westminster and the Marylebone-Euston and Hampstead Roads.

It will be seen that both schemes agree in opening-up a space in front of the British Museum. Is such a space altogether an impossibility ? Well, we need parking spaces for our cars very badly, and it is to be hoped that all our squares will not go the way of St. James's Square, and be devoted exclusively to this purpose. Would it be unreasonable to solicit help from the Road Fund in providing this open space ? It is much needed there for more than one reason, and fortunately a long line of waiting automobiles would be no nuisance in such a spot. It would certainly be a far better place for them than any of the Duke of Bedford's lovely squares.[1]

[1] I should like to acknowledge the valuable help given me by Sir Frank Baines, C.V.O., C.B.E., H.M. Director of Works, in the preparation of this note.—*Author's note.*

SMOKE

BY H. J. BIRNSTINGL

ii: DOMESTIC SMOKE

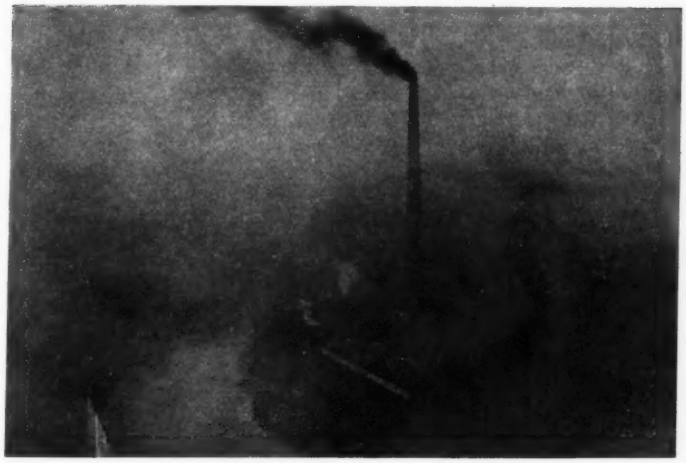
According to the report of the Committee on Smoke and Noxious Vapours Abatement, of 1921, domestic smoke is responsible for five-sixths of the total waste of coal. Sir Napier Shaw, in the *Times* for April 5, 1922, states that " domestic smoke is responsible for about two-thirds of the smoke problem." The authors of *The Smokeless City* say that " the domestic chimney is responsible for three-quarters of the smoke and more than three-quarters of the damage." The reason why the domestic smoke does greater damage than factory smoke is because the former is burnt at a lower temperature, thus the particles which escape as soot are not so completely burnt. Moreover, there is a larger percentage of tar and acid. The tar sticks to anything on which it lodges, and the acid eats away the surface. The combustion of the fuel in the open grate is very imperfect, and according to Dr. Margaret Fishenden, the aggregate losses in soot and unburned gases from open coal fires may amount to as much as 25 per cent. of the theoretical energy of combustion.

Sheffield in the morning.

The deductions from a series of graphs published in the latest report of the Committee for the Investigation of Atmospheric Pollution, showing the suspended impurities in the air during summer and winter in Blackburn and Stoke-on-Trent, are particularly interesting in helping to show the relation between industrial and domestic smoke. The report says : " The hourly distribution is broadly similar to that found in other cities, such as Glasgow and London. There is the same rapid increase in impurity rising to a maximum in the forenoon. Then there is a gradual tendency to fall, followed by a subsequent rise to a second but lower maximum late in the afternoon." The report proceeds : " The rapid rise of impurity in the morning commences in the summer about 4 a.m., and reaches its maximum on weekdays and Saturdays at 7 a.m.; while on Sundays the maximum is not reached until 10 a.m." And again : " It would seem . . . that there are two main sources of smoke which make their maxima at different times. . . . One is . . . inclined to conclude that the first maximum is due to industrial or factory furnaces, and the second to domestic fires." In Blackburn the relation between the total smoke on Sundays and on weekdays is as 2,000 to 3,077. The diagrams show very little difference in the second morning peaks between weekdays and Sundays, which tends to corroborate the fact that the majority of the air impurity is due to the domestic chimney. On the other hand, the graphs, in the same report, which deal with the incidence of smoke fog upon different days of the week at various observation stations, show that the tendency is for the maximum fog to be at the beginning of the week and the minimum at the end.

It is encouraging to know that the growth of alternative methods of heating dwellings, of which the most used is gas, has effected a very great reduction in smoke emission; in ten years about a sixth of London's domestic chimneys

have] ceased to emit smoke. Unfortunately, a stupendous opportunity for encouraging the use of smokeless fuel was lost by the Government a few years ago; this fact is severely criticized in the report of the 1921 committee. "We consider that municipalities should do everything practicable to extend its (gas) use, and we note with regret that the Ministry of Health have not required gas-heating and other smokeless arrangements in the new houses erected under the housing schemes." In the interim report it is urged that the "central housing authority should refuse to sanction any housing scheme . . . unless specific provision is made in the plans for the adoption of smokeless methods." The issue was between statesmanship and politics. Statesmanship would have realized that even if, through the installation of gas, the first cost was slightly increased, the benefit to the nation at large would more than counterbalance it. Politics, on the other hand, give way to every agitation, and at the moment there was a Press economy campaign.



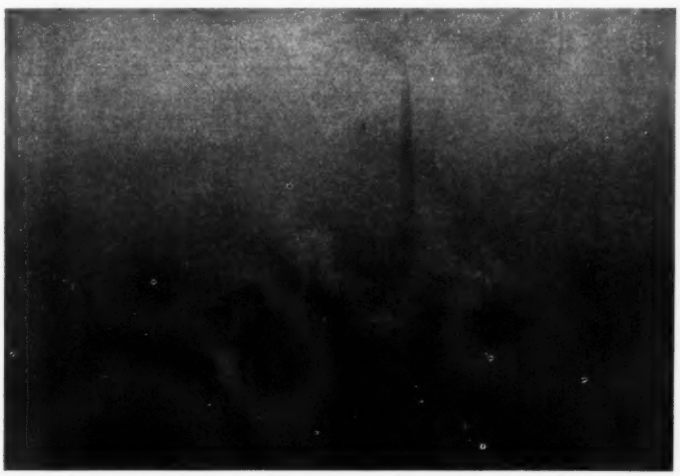
Sheffield in the afternoon.

Unfortunately, the whole subject of domestic heating is surrounded by false ideas and loose thinking, which do much to augment the prejudice against the use of other methods. In this connection the work carried out by Dr. Margaret Fishenden of the Fuel Research Board is invaluable. But before arguments are advanced against the coal fire, its one great advantage, under certain conditions, over other methods must be mentioned—and that is, its cheapness. According to Dr. Fishenden, for continuous heating by far the cheapest means of providing radiation is an open fire of low temperature coke, of which more will be said later; open coal fires are slightly more expensive; gas fires are about two and a half times as dear as coal, and electric heaters five and a half times as dear as coal. The alternative method for continuous heating, which might be compared, is some system of central heating, but unless this is undertaken communally it is rarely practicable for working-class homes. Where, however, continuous heating—and for the purpose of these figures by this term is understood a sixteen-hour day—is not required, the cost of gas and electricity varies directly with the consumption. Some particularly interesting figures have been worked out by the authors of *The Smokeless City*. Thus, the time taken to clean, prepare, lay, and light a coal fire is estimated at thirteen minutes, which is priced as a proportion of a domestic servant's cost at 1s. 9d.; to this is added the cost of wood, ·5d., and the cost of the initial coal, sufficient to burn for two and a half hours, 1s. 9d., making a total of 4s. 3d., compared with gas at 4s. a thousand; the following table is obtained:

No. of Hours.	Coal Fire. Pence.	Gas Fire. Pence.
1	4·3	1·25
2	4·3	2·5
3	4·5	3·75
4	4·9	5

Up to between three and four hours, therefore, the gas fire is cheaper.

Let us now deal with some of the disadvantages of the open fire. The aggregate fuel waste from this source has already been mentioned in a former article. Dr. Fishenden gives the following figures dealing with heating efficiency: "The radiation efficiency of open coal fires usually lies between about 17½ per cent. and 25 per cent., direct convection heating probably accounts for less than 5 per cent., which would indicate an aggregate efficiency of 22½ per cent. to 30 per cent. Little systematic difference is shown between the amounts of radiation emitted by modern barless grates and vertical-fronted grates with bars, the latter, if anything, giving a rather better efficiency." The author then gives the radiation efficiency of the best modern gas fires as from 45–50 per cent., with an addition of 10 per cent. for convection. The radiancy efficiency of electric heaters is 70 per cent., with the balance as convection, thus giving a full 100 per cent. efficiency. Further disadvantages of the open fire are set out in *The Smokeless City* as follows: "Its surface is nearly horizontal in form, and so directs a large amount of heat towards the ceiling where it is not wanted. There is also a considerable loss through direct radiation up the chimney. While the coal fire ventilates excellently, it generally does so to excess, and renews the air of the room much more rapidly than is necessary for health. This means extra heat to warm up



Sheffield towards evening.

the unnecessary air . . ." The labour entailed by fire laying, coal carrying, and grate cleaning has been mentioned, but not that of extra cleaning in the house due to coal dust, and occasional smoky chimneys. Another disadvantage of the coal fire is the enormous fluctuation of its heating value according to its condition. Thus, every time the fire is stoked the radiation is checked more or less severely according to the condition of the fire and the skill with which the stoking operation is performed. And this opens up a further objection, and one which may at first sound fantastic. A good modern grate is far from fool-proof, and considerable skill and knowledge is required to manipulate it to the best advantage. Very rarely is this skill and knowledge available or exercised. According to Dr. Fishenden adequate draught regulation is essential if the maximum efficiency is to be obtained, and this regulation should be effected at two places: below the fire to vary the amount of air actually passing through the fire, and in the chimney to vary the chimney draught, so affecting both the air drawn through the fire and the supplementary air which passes above the fire direct to the chimney. For the kitchen range there is even less defence than for the coal grate. Its inefficiency is far greater. Mr. Barker points out that an average range would use in the oven about 2 per cent. to 3 per cent. of the available heat, and only a very good range would use 5 per cent. When the whole apparatus is in use—hot-water supply, hot plate, and oven—it uses only about 7 per cent. of the available heat.

The next matters to deal with are the objections which are raised against other methods of heating. Before these can be usefully discussed, however, it is necessary to distinguish between the two methods of heating—radiation and convection. By radiation the heat is emitted by rays, which pass through the air without warming it, impinging upon solid bodies, whereupon they become absorbed by that body and cause its temperature to rise. By convection the air in the vicinity of the source of heat expands, rises, and its place is taken by colder air; thus the air is warmed and kept in circulation, and it in turn warms the objects with which it comes into contact. With this knowledge we are able to combat the fallacious statement that central heating dries the air. It does nothing of the sort. The capacity of the air for carrying moisture, however, increases with its temperature. Thus, when a room is warmed by convection the air is heated, and so the proportion of moisture in the air to the possible saturation is less than in a room heated by radiation. This accusation of dryness is, however, also levelled against the gas fire which heats almost entirely by radiation. Unfortunately, about twenty years ago when gas fires were less scientifically installed certain burnt gases did escape into the room, unpleasantly affecting the throat, and giving a sensation of dryness, but now badly-installed gas fires are the exception, so that there is rarely any justification for this accusation. With high temperature steam heating there is sometimes justification for the charge of dryness as there is a tendency to burn some of the organic matter in the air.

Something must now be said about the conditions which make for warmth—comfort in a room, in order to understand its relation to the various methods of heating. The following extracts from *The Heating of Rooms*, by Margaret Fishenden, assisted by R. Willgress, deal succinctly with the matter: "The disposal of the heat generated in the body is divided between radiation, convection, and evaporation. Numerous observers have demonstrated a steady increase in the importance of the first two factors with decrease of surrounding temperature. When, therefore, evaporation has fallen so low that any further possible diminution is practically negligible, radiant energy must be absorbed by the body if chilliness and increased heat loss are not to ensue. Under different methods of artificial heating the relative amounts of heat lost from the body by the agencies of radiation and convection vary over wide limits, being smaller the higher the surrounding air temperature; though for comfort conditions to be satisfied for sedentary workers the aggregate heat loss, inclusive of lung and skin evaporation, must remain approximately uniform, at a value not much in excess of normal basal metabolism for any particular subject. Thus, comfort conditions are attained in an air-heated room when the air temperature reached is such that radiation, convection, and minimal evaporation will carry away the heat produced in the body; but in a room with an open fire, air temperatures will in general be low enough to cause a removal of heat from the body at a more rapid rate than it is being produced, and comfort is found in positions where the body absorbs from the radiation falling upon it from the fire an amount of energy equivalent to the excess of removal by radiation, conduction, and evaporation over internal production." Therein is to be found one explanation of the necessity which most people find of placing themselves within the direct radiation of the fire in order to maintain warmth comfort.

It is fairly certain that the open fire is likely to remain the usual means of heating the sitting-room in this country for many years to come. How is this to be done while at the same time increasing efficiency and abating smoke? It would seem that the answer is, by means of low-temperature fuel. "Coal, suitable for coking, consists mainly of carbon, mixed with certain tarry and oily constituents. To make ordinary coke the coal is heated to a high temperature in the absence of air, and all the tar is driven off. It is the tar and oil which enable the coal to light easily, and which also cause smoke; so that ordinary coke, from which they are completely absent, is smokeless and hard to light. To make a good domestic fuel the coal is heated to a much lower temperature (low temperature carbonization), with the result that only a portion of the tar and oil is driven off. In this way a fuel is produced, known in scientific circles as low-temperature coke or semi-coked coal, which is both easily lit and smokeless, and is, in fact, an almost ideally perfect domestic fuel." *The Smokeless City.*

Dr. Fishenden, who has made a series of tests on semi-coked coals, concludes that coke lights easily, burns brightly, and without smoke, and is easily kept going; moreover, as mentioned earlier in this article, it gives the very highest radiant efficiency. Unfortunately, the difficulty with regard to its production in adequate quantities have not yet been overcome. There are technical and economic difficulties.

Mr. David Milne Watson, giving evidence on behalf of the National Gas Council before the Coal Commission on November 5, stated that, although the gas industry had given most careful consideration to low-temperature carbonization, no scheme had so far proved commercially satisfactory. Experimental work, however, is continuing, and it is to be hoped that the difficulties will be surmounted, so that the use of low-temperature fuel may become general. When this is brought about the cause of smoke abatement will be enormously advanced, the fog incidence and air pollution will decline, with an immense resultant benefit to the entire nation.

[*To be concluded.*]

CURRENT
ARCHITECTURE
SECTION

THE RECONSTRUCTION OF THE MORGAN-GRENFELL BANK

BY H. P. CART DE LAFONTAINE

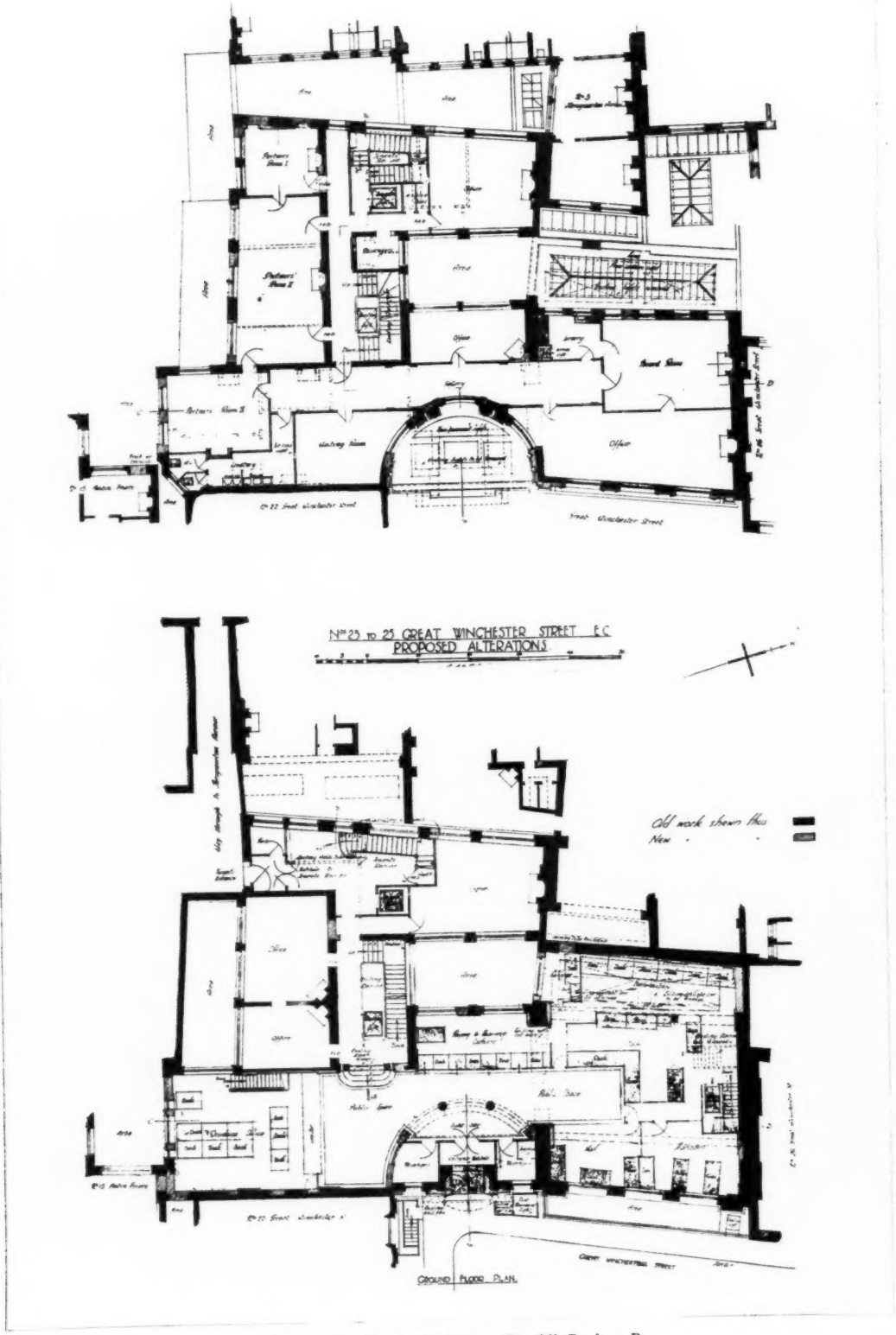
THE problem presented by the head office of a great bank is one which demands the highest architectural ability. Not only is it necessary, in the limited space available in the crowded central area of the City, to provide for the actual requirements of the business of the bank: make suitable provision for possible growth and to anticipate future developments, but it is also necessary to impart to the architectural composition that special character by which each great banking house is distinguished; to hold the balance true between past traditions, present practice, and possible future developments of business, and, withal, to scheme an architectural setting, equally removed on the one hand from vulgar ostentation as on the other from any appearance of the nondescript office building destined to house a heterogeneous collection of professions and trades. In brief, the aim of the architect should be to provide just that setting which expresses the personality of the bank, and so satisfy both the directors and the actual and prospective clients. In no sphere of architectural design has the advance from the eclectic vulgarity of the Victorian era been more marked. And it is instructive to observe how this marked improvement in the architecture of finance gains added strength and impetus with the completion of each new building.

The main entrance.
By Mewès and Davis.

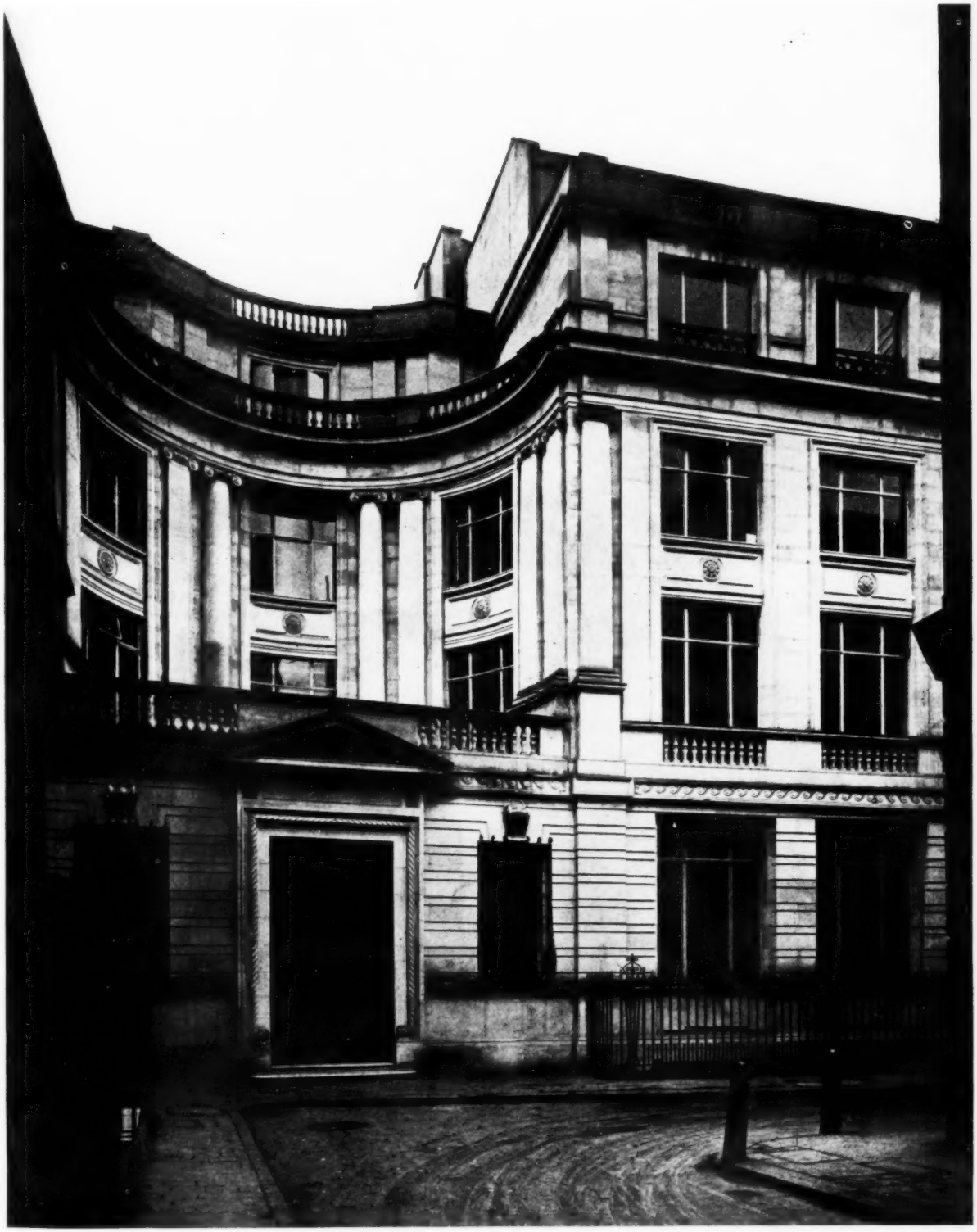
Some may object, on sentimental grounds, that the wholesale transformation of the City which is now taking place removes many landmarks, such, for example, as the old Bank of England or the little building known as "Birch's"; and tends to produce architecture of the type which is monumental rather than picturesque, but this is surely the logical expression of the new development of finance and commerce, where big corporations and vast interests tend to replace the smaller personal institutions of our ancestors. It is generally conceded that success in architectural composition connotes the expression of some special "motif": it is also usually found, though this fact is not fully appreciated by the public, that a cordial and close co-operation between the architect and his clients results in a successful scheme.

Among the many modern buildings which strikingly illustrate these two important factors the reconstruction of the Morgan-Grenfell Bank, in Great Winchester Street, is a notable example. Here the problem which confronted the architects was one of considerable difficulty: a reconstruction of the building without any modification of the main lines of the external walls. The special character of the bank required a treatment depending on the qualities good proportion and sobriety, rather than any display of architectural ornament or decoration. The original building, of a curiously debased and eclectic style, occupied an important position at the end of Great Winchester Street; some few years ago a new wing was added and, as a result, the centre of the site no longer corresponded with the axial line of the approach from Old Broad Street. This presented an interesting problem in plan; the architects have retained the main entrance, and the semicircular line of the recessed front in the upper floors of the preceding structure, and these two features have been schemed so as to form a well-proportioned terminal feature, when viewed from Great Winchester Street, while the portion of the building extending to the left has been designed as a subordinate mass.

In plan the whole of the front of the site is occupied by the banking hall. The problem of the recessed front wall of the upper floors has been met by utilizing the semicircular space as a lobby and messengers' rooms. The interior of the banking hall, the floor of which has been lowered some 2 ft. 6 in., is faced with polished Roman marble, and a pleasing unity of tone is achieved by the counter fronts and flooring being of the same material, while fittings and partition doors are in dark bronze. In rear (at the higher level) are two pleasantly-schemed waiting-rooms, entered from a wide passage which connects (by stairs or lift) with the upper floors. Beyond is a secondary staircase and lift, so planned, with a side



The reconstruction of the Morgan-Grenfell Bank. By Mewès and Davis. The ground and first-floor plans.



The elevation to Great Winchester Street.

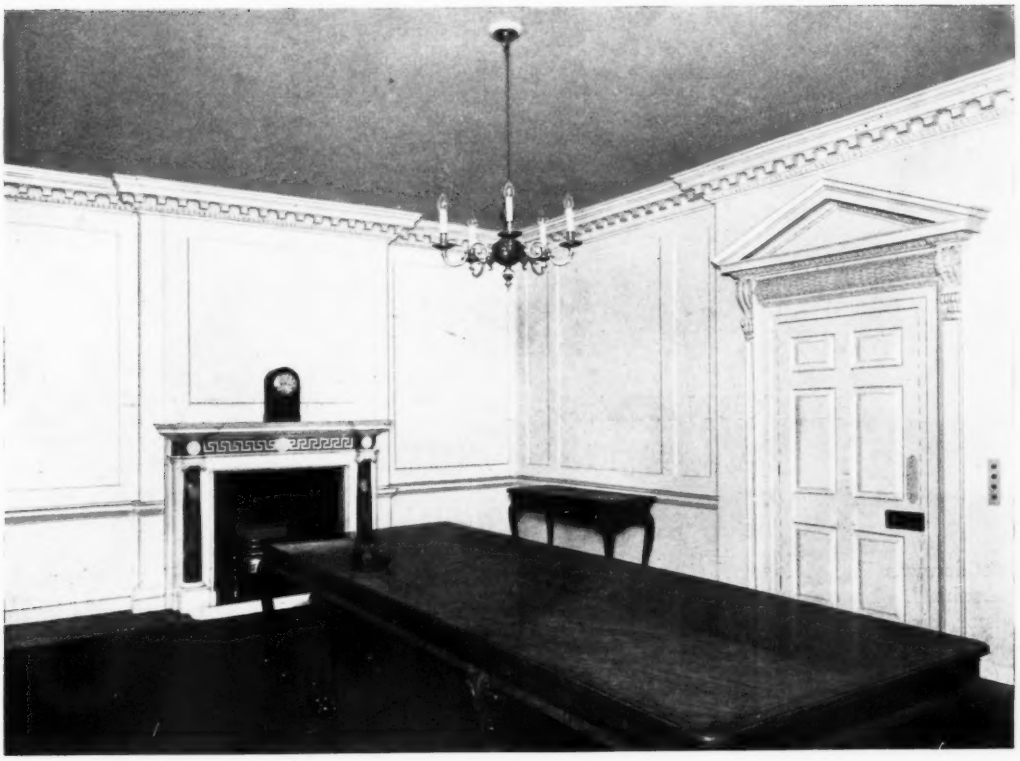
entrance and lobby, as to give direct access to a part of the upper floors which may be let to separate tenants.

Immediately above the banking hall — on the first floor — is a gallery, from which open the board-room, waiting-room, and the suite of private rooms designed for the partners. Here the doors, architraves, etc., from old Devonshire House have been skilfully incorporated in the architectural treatment; their incorporation in the board-room is not quite so successful, as here they appear with undue emphasis in the severely-restrained scheme of decoration. The three partners' rooms, treated throughout in figured Italian walnut, are admirable examples of skilful design and excellent workmanship, and have that blending of dignity and comfort which suggests close co-operation between the architect and client.

The upper floors contain office accommodation, and do not call for special notice, though details of lighting, telephones and other matters of convenience have evidently received careful thought. For the rest a study of the photographs and plans which illustrate these notes will be sufficient to show that Messrs. Mewès and Davis have added one more notable building to their previous record, and in so doing have added another page to the history of modern architecture.

The general contractors were Messrs. Trollope and Colls, Ltd., the clerk of works was Mr. G. M. Ramplin, and the general

Above, the partners' room, number two. Below, looking along the public space.



foreman was Mr. Morley. The general contractors were also responsible for the fireproof construction, the Portland stone, the ventilation, plumbing, joinery, stonework, and the office fittings. The sub-contractors were as follows: Limmer and Trinidad Lake Asphalte Co., Ltd., damp-courses, asphalt, and special roofings; The London Brick Co., and Trollope and Colls, Ltd., bricks; Art Pavements and Decorations, Ltd., wall tiles; Redpath Brown & Co., Ltd., structural steel; Bagués, Limited, and Art Metal Equipment Co., partitions; Nicholas and Clarke, glass; Luxfer Co., patent glazing and casements; The Acme Flooring Co., wood-block flooring; Robinson Bros., Cork Growers, Ltd., patent flooring; Heffer Scott & Co., Keystona paint; Benham and Sons, Ltd., central heating, gas fixtures and gasfitting, and Cunoid boilers; G. Matthews and Bratt Colbran & Co., grates; Higgins and Griffiths, Ltd., electric wiring, electric heating, and bells;

Bagués, Ltd., and Higgins and Griffiths, electric light fixtures; Carter & Aynsley, ironmongery; Pontifex & Co., Ltd., sanitary fittings; Lenygon and Morant, and J. M. Pirie, metalwork–door furniture only; Hill & Co., window furniture; Western Electric Co., internal telephones; Bagués, Ltd., folding gates and metalwork; Gen. Constructional and Engineering Co., rolling shutters; Meredith and Sons, sunblinds; Lenygon and Morant, Ltd., decoration on whole of first floor; G. Rome & Co., plaster; J. Whitehead and Sons, marble; The Art Pavements and Decorations, Ltd., The Vitrolite Construction Co., tiling; Lenygon and Morant, and Trollope and Colls, furniture; Waygood-Otis, Ltd., lifts; Metropolitan Water Board, water supply.

Above, the board-room. Below, the passenger lift, looking from within the public space.

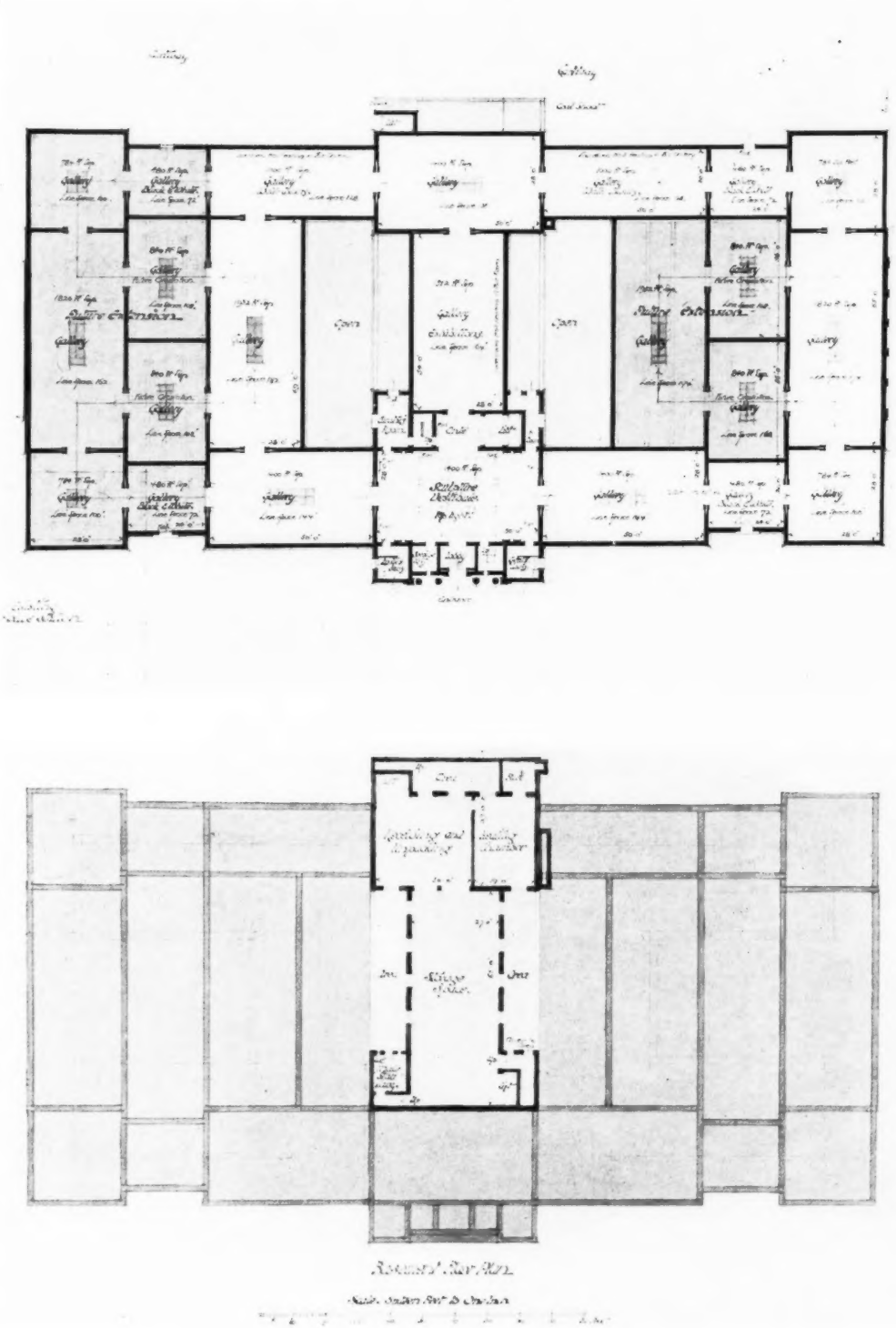
BIRKENHEAD ART GALLERY COMPETITION

BY W. DOUGILL

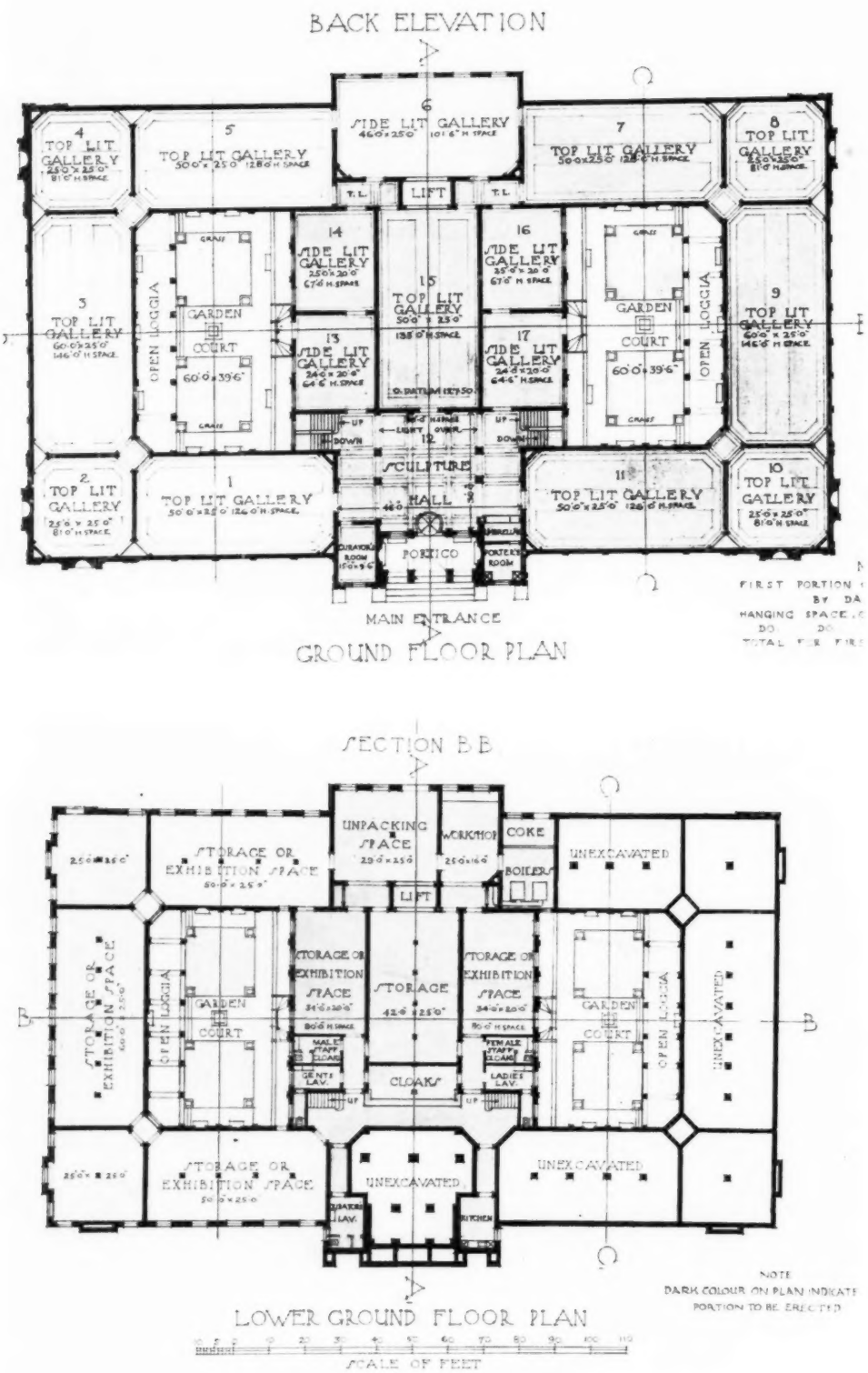
THIS competition was limited to architects within twenty miles of Birkenhead. Nineteen designs were submitted, and the assessor, Sir Robert Lorimer, made the following awards : (1) Messrs. Hannaford and Thearle; (2) Mr. D. A. Beveridge; (3) Professor Lionel B. Budden and Mr. J. E. Marshall. All the successful competitors are of Liverpool.

The conditions laid down for the competitors were, briefly, as follows : The building was to occupy a rectangular site of 5,986 sq. yds. at the junction of Balls Road and Slatey Road, Birkenhead. Competitors themselves had to decide on which of these two roads the main entrance to the building should be placed, though, presumably in this connection—and being wise after the event—a further condition expressed a wish for Slatey Road to be widened opposite the Gallery, to give the latter a more dignified setting. Frontage lines were not fixed. The Corporation realized that a building large enough for their present and anticipated needs could not be erected for the sum available, namely, £37,000, and competitors were asked, in addition to showing the complete building, to indicate how much and which part could be built for the sum stated. The majority of the picture galleries, including a few for

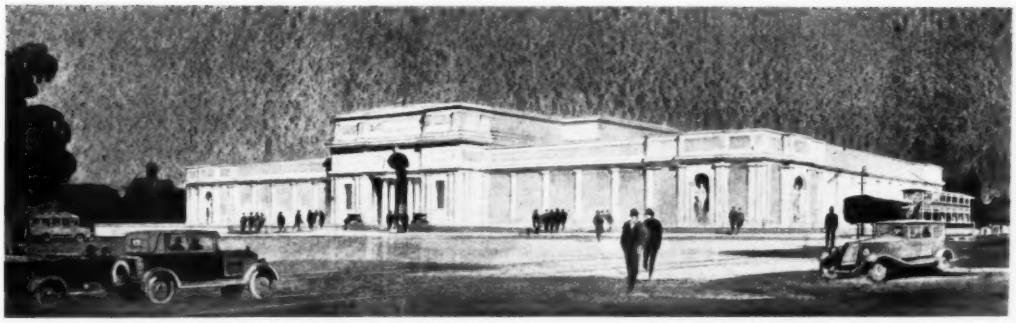
The first premiated design. By Hannaford and Thearle. Above, the elevation to Slatey Road. Below, the main entrance.



The first premiated design. Above, the ground-floor plan. Below, the basement-floor plan.



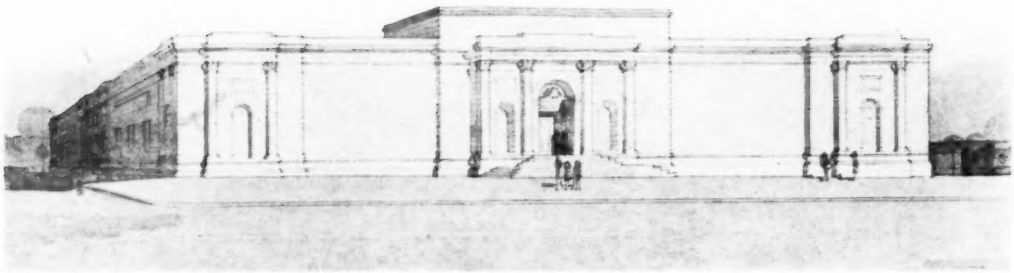
The second premiated design. By D. A. Beveridge. *Above, the ground-floor plan. Below, the lower ground-floor plan.*



water-colours and miniatures, were to house the permanent collection, but some had to be allotted for purposes of loan exhibitions, and the building was to be so planned as to make the latter possible without interfering with the main circulation. The usual unpacking and storage accommodation, curator's room, cloak-rooms, etc., were required, also a vestibule for sculpture, and a small room for providing tea and other refreshments in case of meetings being held in the building. The partial building was to provide a minimum of 1,500 lineal feet picture-hanging space.

It was from the elasticity of a few of these conditions, particularly those giving the competitors a free hand regarding the choice of entrance front and of frontage lines, that the main differences on plan have arisen. In general, the schemes can be divided roughly into two categories : those with the main entrance in Slatey Road, and those entered on the Balls Road front. Alternatively, they might be divided into two further categories : those covering most of the site, with all the principal accommodation on one floor only, and those occupying a much more restricted area and extending to two or even three stories above ground. It is undoubtedly open to question whether the full responsibility concerning the placing of the main entrance—involving, as it did, the whole orientation of the building—and the fixing of the frontage lines, should have been allowed to devolve upon the competitors themselves. Probably a good deal of wasted time on the part of

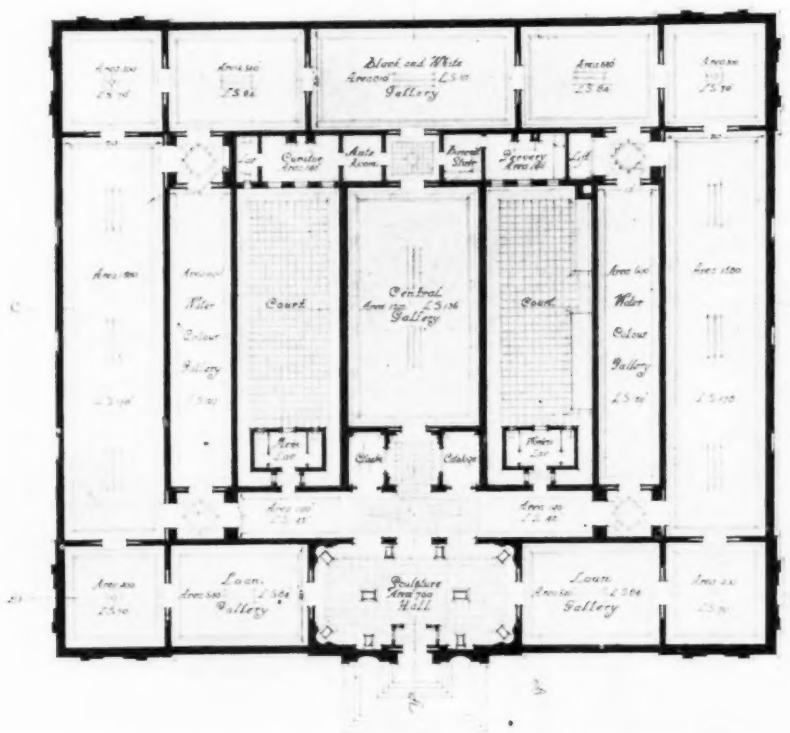
The second premiated design. Above, the elevation to Slatey Road. Below, half elevation of centre feature.



some competitors would have been avoided if the conditions had given a lead, no matter whether tentative or definite, on these two points.

Many of the designs submitted are of a much more extensive and monumental character than was justified by the £37,000 cost, or by the expressed or implied conditions. In addition to this, one of the essentials in buildings of this type: namely, a clear-cut and direct circulation through the galleries, with its resulting minimization of supervision, has been overlooked by many of the competitors. The two-fold nature of the programme, arising from the stipulation that only a part of the complete building is to be erected in the near future, considerably increased the difficulties of the problem. Some of the schemes show a very admirable solution for the completed building, but a defective arrangement for the partial building; and others vice versa. Success, and rightly so, has gone the way of the competitors who have designed a partial building, which, whilst being a self-contained and workable entity in itself, will eventually take its place naturally as an organic part of the whole building without any extensive re-arrangements on plan or structural adaptations. Unlike most, if not all, previous competitions for art galleries, there is very little distinction to be made between the designs as regards the method of providing natural and artificial lighting to the galleries. Nearly all show what has become known as the Hurst Seager "top-side light," or some modification of it, with the artificial light points concealed above ceiling level. Admittedly, the modification in some cases practically effaces any semblance to the "top-side light" system.

The first premiated design shows a plan of considerable merit. It is extremely economical throughout, with all the chief accommodation arranged on one floor. The main entrance is in Slatey Road, and leads direct to a fine top-lighted sculpture vestibule, which bears both in size and

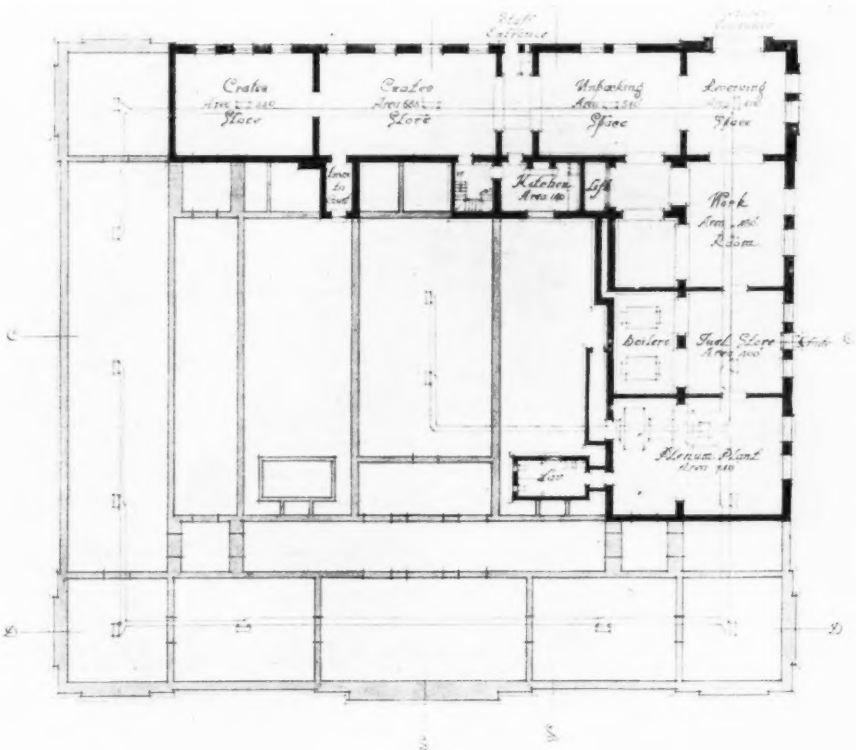


The third premiated design. By Lionel B. Budden and J. E. Marshall. Above, the elevation to Balls Road. Below, the ground-floor plan.

height, a proper relation to the remainder of the building. From the vestibule one immediately enters, to the right and left, the main circulation of the permanent collection galleries. These are all of suitable size, with just the right degree of variety in width to suit the different types of pictures to be exhibited in them, and form the perimeter of the building. The loan collection gallery is admirably placed on the axis of the main entrance, and is approached direct from the vestibule. It has the further advantage that it can be shut off without interfering with the main circulation, either of the completed building or of the first portion. It is by virtue of this latter point that the winning scheme scores over many of the others. Loan exhibitions will undoubtedly take place in the partial building, and the winners have foreseen this fact and provided for it. A further score comes from the fact that a maximum of permanent frontage to the two main roads will be built in the partial scheme. The inner part of the plan is completed by twin-light areas, and by six subsidiary galleries. Cross-lighted storage and service accommodation is provided at lower ground-floor level under the loan gallery.

The following slight improvements in planning might be suggested. To avoid the necessity of passing through the main storage space to get to the picture lift the latter should be brought nearer to the service entrance. The cloak-room and lavatory accommodation appears too small for a building of this size and nature. The public meetings, mentioned in the conditions to competitors, will presumably take place in the loan gallery. For this reason it is very desirable that the kitchen and service-room should be adjacent, thus to avoid serving across the sculpture vestibule. These points, however, are of a minor character, and could be dealt with without in any way upsetting the main planning arrangement. The elevations of the winning design are given a broad and dignified treatment in brick, with stone dressings; the details, including those of the entrance portico, being of a pleasantly free Renaissance type. The large unbroken masses of brickwork will need careful handling, but given good and suitable facing bricks there is every reason to believe that the building will enhance considerably the architectural amenities of the district, and will conform admirably to its immediate surroundings.

The second premiated design, in its main lines, is very similar to that of the winners. The gallery circulation of the complete building is excellent, but it might have been improved for the first portion. The cross gallery, presumably allotted to loan exhibitions, though this is not stated, would either become part of the main circulation, thus preventing a convenient arrangement for temporary exhibitions prior to the erection of the final portion, or would have to be side-tracked in order to free it. Two large internal courts are provided. These are shown grass-planted and bounded on one side by an open loggia, both very doubtful expedients in this northern locality. To compensate for the loss of space due to the largeness of these courts, some of the picture galleries are placed on the first floor, involving, as they would, an increase in supervision costs. The cloak-room, storage, and other accommodation in the basement are competently worked out. In common with one or two others, this scheme shows a very considerable area of auxiliary gallery and storage accommodation at the basement level at the lower end of the site, thereby taking advantage of the falls in the site levels. The elevations, American in character, and



The third premiated design.
The lower ground-floor plan.

accompanied by a fine perspective, are more elaborate than those of the winning scheme, but it might be questioned whether they could be erected for the money available.

The third premiated design, so far as this competition is concerned, is an isolated example of its kind. The first portion consists of a definitely completed and self-contained rectangular building, with the main entrance in Balls Road, and taking up less than one half the site. The final scheme, not shown in the illustrations, shows an identical duplication of this building, the two being connected together at the middle of their adjacent sides by means of a circular hall crowned by a lofty dome and approached through an open space or entry between the buildings. The first portion is developed in a thoroughly competent manner. The plan of the picture galleries is simple and direct, and would entail a minimum of supervision. Special consideration has been given to the receiving-room, storage, heating, and to site levels, and the whole scheme is set forth in a distinctive and finely-rendered set of drawings. The half-inch detail shows the Hurst Seager "top-side light" system of gallery lighting fully assimilated and applied.

The third premiated design.
A detail of the main entrance.

Among the unsuccessful designs were the following:

Scheme No. 2: This plan, by Messrs. Quiggan and Gee, is on the corridor and bay system throughout, a reversion to the original Hurst Seager method, as carried out at the Mappin Gallery, Sheffield. The plan, in its main lines, is the essence of directness and simplicity, but the numerous small bays, there are forty-eight in the completed scheme, whilst giving a maximum amount of picture-hanging space, might possibly have proved tedious in execution. The elevations are very pleasantly treated in a semi-Florentine style.

Scheme No. 3: There are no internal courts in this design, by Messrs. Grayson and Barnish, the whole of the galleries being arranged *en masse* at ground-floor level. The authors appear to have attacked the problem from a different point of view from that of most of the other competitors. They have conceived the building as a group of small galleries where the public might view the pictures at extreme leisure, rather than as a definite sequence of galleries, where one might see the whole of the exhibits in a limited space of time. A main feature of the plan is the arrangement for receiving the pictures, and for distributing them into the various galleries. This is all done at ground-floor level.

Scheme No. 6: In the completed building this scheme, by Messrs. Rees, Holt and Howard, resembles fairly closely that of the winners, but its division into two parts—immediate and future—is not so good. The circulation is affected by the fact that no part of the Balls Road elevation was to be built in the first scheme. The elevations are dexterously handled.

Scheme No. 12: Mr. Ernest B. Bailey submits a plan showing the main entrance in Balls Road. Internal light courts are practically eliminated, the plan consisting of a main outer circuit of galleries with the area enclosed by these given up to a series of cross galleries arranged parallel to the entrance front, and each forming part of a subsidiary circulation. This disposition would have given great flexibility regarding loan exhibitions. The scheme is shown by a remarkably fine set of drawings, including a charming perspective.

There are one or two other designs which well merit careful study, notably the workmanlike and well-conceived scheme submitted by Messrs. Townsend, Hutton and Bramwell, and the beautifully-presented set shown by Mr. Bernard A. Miller, with a plan in its main lines very reminiscent of that of the winners'.

THE COMPETITORS' CLUB

THE LESSON FROM RUSSIA

In a previous issue there appeared an outline of the methods of conducting competitions in Russia which, while not perhaps appropriate for transportation in their entirety to this country, nevertheless display so many good points that is is worth while to consider whether it would not be practicable to embody some of the more salient ones into our own procedure without slavishly following the Russian method in all its details.

To begin with, the initial submission of the proposals to an architectural body would be undoubtedly advantageous. As it is, competitions have to be approved by the R.I.B.A., and an assessor is stipulated for. It is but a small and obvious step in advance to submit the outline programme with or without the nomination of an assessor to the R.I.B.A. as a first step. Alternatively, if it be felt that this went too far in the direction of centralization, the submission could be to the allied society of the district, which would deal with the matter, only reporting its action to the R.I.B.A. and consulting the central body in matters of doubt. Each allied society should have a small competition committee to support the assessor and see that the conditions were in order. It would be best that all important open competitions should be dealt with by the R.I.B.A., and that these should be assessed by a jury, which could always include an architect versed in competition practice to take the position of the "registrar" in Russia, and who might have a larger proportion of the remuneration in view of his more arduous duties.

As it is unlikely that promoters would agree to holding the adjudication anywhere but on the spot, the society concerned would not as a rule have to charge itself with the exhibition of the designs, and there is no sufficient reason for changing the the system of paying a fee to assessors who have to go to the designs instead of the designs coming to them.

The idea that the type of drawings to be submitted may be measured by the liberality of the premiums is rather a neat one, and might be commended to assessors or those charged with the organization of a competition, but as things are in this country little importance can be attached to this, as practically the only reward of adequate value is the execution of the work, the other premiums being disproportionately small in any case.

Then, again, the exhibition of the designs to the competitors before adjudication has some points in its favour, provided the criticisms admitted as the result of this inspection be confined to matters such as non-fulfilment of the requirements and breaches of essential conditions. The assessor or jury would be required to answer any of these affecting premiated designs, but would thus be freed from subsequent criticism. There may be some doubt whether this arrangement would work well or badly, but perhaps it might be worth trying as an experiment.

Not only in Russia, but in many other countries outside our own, and even once or twice here, the election of a member of the jury by the competitors has been employed, but there are too many uncertainties involved to make the practice of much value. For one thing the man first chosen may be a competitor, or otherwise not available, and the subsequent selections have an element of fluke about them, rendering the result very doubtfully better than the previous nomination of an assessor would be. Assuming a single assessor to be so elected, may it not be imagined that competitors would feel a good deal of hesitation in entering under these circumstances, while when they know before hand who is to judge their work they can speedily make up their minds whether to compete or not.

The privilege of formal protests by members of the public at the time of the open exhibition might very well be dispensed with in this country, as but few have educated themselves in the principles of architectural design, and the prior professional criticisms would be fully adequate to the needs of the case were these found to be of service; indeed, these various elaborations while having their value as tending to maintain a live interest in the practice of architecture, demand an attitude of philosophic leisure rather out of tune with our practical notions of economy in time and energy. It is more in accordance with our ideas to be satisfied with something which arrives at a near approximation to justice, and in which the balance is fairly right on the whole, than to require numerous checks and counter checks, entailing procedure which we regard as uneconomical in comparison with the possible differences in the result. This feeling is, to a large extent, responsible for the acceptance of the single assessor, but as it is intended to deal with this question at a future date, it need not be enlarged on now.

The last point of major importance is the form of the award. In England it has always been felt that this should be as brief as possible, giving the assessor's decision, but not his reasons for it, whereas the Russian view is that the report should include a reasoned criticism of every design submitted. Perhaps we are right if the differences in architectural training are taken into consideration, for it is fairly certain that it is much easier for most of our architects to arrive at a sound conclusion than to explain the mental processes by which they reached it; but such a course has the grave disadvantage of depriving the competition of a great part of its educational value, and it is a reflection on our form of training if the assessor does not feel equal to submitting with his award a report covering the logical reasons for his decision. It has been argued that this would confuse the promoters and open the door to arguments from them if their valuation of the various considerations differed from that of the assessor, but this point could easily be met. The award for the promoters would be in the simplest form, and the report might be a confidential document transmitted to the competitors through the R.I.B.A., and, there being no urgency about the matter, transmission could be delayed till after the award has been accepted and dealt with by the promoters: thus there would be no risk of the technical arguments as to the relative merits of the designs falling into the hands of those who were not qualified to understand their real purport.

SENESCHAL

COMPETITION CALENDAR

The following competitions are announced with the full approval of the R.I.B.A.

Wednesday, March 31. New offices for the West Bromwich Permanent Benefit Building Society. Open to practitioners within fifteen miles of Birmingham. Assessor, Mr. W. A. Harvey, F.R.I.B.A. Premiums, £100, £75, and £50. Particulars from Mr. J. Garbett, Secretary, 301 High Street, West Bromwich. Deposit £2 2s.

Thursday, April 1. Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Assessor, Mr. Walter Cave, F.R.I.B.A.

Monday, May 10. Isolation Hospital for Infectious Diseases, Doncaster. Assessor, Mr. T. R. Milburn, F.R.I.B.A. Particulars from Mr. W. Bagshaw, Town Clerk. Deposit £1 1s.

Monday, May 31. Australian National War Memorial, Villers Bretonneux, France. Open to Australians. Particulars from High Commissioner's Office, Australia House, Strand. Deposit £2 2s.

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

Monday, June 14. Dance Hall, Restaurant, Pavilion, and Shops at the Sea Beach, Aberdeen, for the Town Council. Assessor, the President of the Incorporation of Architects in Scotland. Particulars from Mr. A. B. Gardner, Town House, Aberdeen.

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

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans.

No date. Manchester Town Hall Extension. Assessors, Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A.

No date. Lay-out for new cemetery for Leicester City Council. Open to local practitioners. Premiums, £100, £50, and £25.

No date. Cenotaph for Liverpool, on the St. George's Hall Plateau. Particulars from Town Clerk.

No date. New Nurses' Home, Walsall. Premiums, £50 and £25. Particulars from the Walsall Board of Guardians.

No date. New interior design for Wagon-Lits. Premiums, 100,000 francs, 25,000 francs, 10,000 francs, and 5,000 francs. Particulars from La Compagnie des Wagons-Lits, 49 Rue de l'Arcade, Paris.

PRESENT-DAY BUILDING CONSTRUCTION

BY WILLIAM HARVEY

iii: BRICKWORK: SOME ECONOMIC FACTORS

ALTHOUGH a section of the daily Press has raised an outcry against bricks and mortar as if these were no longer practicable materials with which to erect houses in this country, both private house-owners and State-aided town-planners continue to use brick in a great many new buildings. In spite of the campaign now afoot to popularize houses made of steel, and in spite of the encouragement that has been given by the Government to the invention of houses whose walls are composed, among other materials, of wood and iron, the tendency among many architects still is to regard brick as the standard material of construction for modern domestic buildings. Brickwork is now undoubtedly very costly, and those who persevere in its use have either to submit to heavy charges or to adapt their methods of building construction to the extraordinary conditions now prevailing. If a reasonable tender is to be obtained it must be made clear to the builders who are invited to submit competitive estimates that the amount of brickwork required is not excessive. It is also equally important that they should realize the design permits of straightforward erection by the adoption of normal building routine. Any device shown in the plans of the proposed building which involves delay or temporary suspension of bricklaying operations is looked upon with suspicion by the experienced estimator, who knows that, as long as skilled craftsmen are in great demand, a stoppage on his building will mean the disbanding of his gang, whose several members will find employment elsewhere.

Figure one. Cottages at Welwyn Garden City. Economy has been considered in the plain, square plan and level eaves, which facilitate the bricklayers' work.

With so many inducements to use substitute materials it becomes necessary for the architect designing in terms of brickwork not only to know how to design for convenience, strength, and beauty, but also for reasonable speed and economy in the actual processes of construction. To obtain a brick building at a reasonable rate in these difficult times it is necessary that it should be designed so that it can be carried through with a swing from start to finish. Figure 1 illustrates the use of plain masses of brick walling in cottage building at Farm Close, Welwyn Garden City. Speed of erection has been considered in the avoidance of all unnecessary breaks and angles in the plans and elevations, and the employment of standardized windows and joinery units of fixed dimensions has permitted the bricklayer to proceed with his work without hesitation. The cottages are faced with local red bricks made by the Welwyn Garden City in connection with its own building scheme, and these bricks have been utilized in the wall much as they came from the stack. The pleasantly mottled appearance of the wall has been purposely heightened, however, by the insertion of a few vitrified headers spotted about the wall surfaces at unequal distances from one another. To have stopped to form a pattern of reds and blacks would have delayed the work, and could not be afforded, even if it had been desirable. The black base to the wall is another device to which artistic and economical considerations have both contributed their part. Fletton bricks of irregular colour have been used for this part of the work, and the exposed surface has been covered with tar in order to preserve the bricks from scaling with the wet and frost, and also to provide a colour note contrasting with the light-painted joinery.

The question whether gabled roofs or hipped roofs are the cheaper has been settled in these cottages, and in most of the brick-built houses at Welwyn, in favour of the hipped roof, which saves a certain quantity of bricks needed for the triangular gables. What is of even more importance, it also saves bricklayers' time in setting out the gable, for where the brickwork is racked back in a sloping line it is impossible to resort to the usual method of building the corners of the wall first and then stretching the bricklayer's line from corner to corner. In building a gable the line has to be stretched by first setting the end bricks of each course and weighting them until they are sufficiently steady to bear the pull of the whipcord. Sometimes two little piers of brickwork are built up, one at each side of the gable, to carry the bricklayer's line for four, five, or six courses, and as the piers will be knocked down again after they have served their purpose, they are known by the name of "dead men." Time spent in building "dead men" and in fiddling with the "line" in the erection of a gable has to be set off against the cutting of tiles and rafters to fit the hip roof, and the relative extra cost of hip or gable naturally varies from time to time and from district to district with the rates of material and labour in the different trades involved. The decision to use a hipped roof in the cottages shown in figure 1 was arrived at as the result of consideration of ways and means in their broader aspect. If a gable end had been adopted, artistic propriety would have demanded that the proportion of the roof slope to the walling masses should be recognized in the design, and the planning would have been controlled by an æsthetic condition. Where cost is limited such control becomes practically inadmissible, and as the hip roof offered a more pleasant arrangement of masses, as seen in elevation and perspective, even without interference with the plan, it was adopted in preference to the gable. Another economical device in the erection of brickwork is shown in the use of a raked-out joint in the lime mortar used in setting the bricks, and the application of a harder pointing mortar after the roof has been put on and the scaffold is about to be taken down.

In figure 2 a cavity wall is in process of construction above the lintols of the ground floor windows, and speed of construction has been taken into account by the use of lintols prepared in advance and placed in position as soon as the brickwork had reached the required height. This order of operations permits of bricklaying proceeding without any break other than the application of the bitumen-felt dampcourse above the lintol, and even this is often laid by the bricklayer. The use of the first floor joists as a support for the scaffold-boards is another economy, both of time and material, which is made possible where the height of

Left, figure two. The interval between the completion of the bricklayers' work on the ground floor and the commencement of operations on the first-floor walls has been reduced to a minimum by the use of lintols prepared for immediate insertion in the work at the proper height. Right, figure three. The built-up corners of the side walls are used as supports for the bricklayers' lines. Plentiful supplies of mortar of the right consistency, not too fluid, are necessary for speedy work.

ground-floor rooms has been kept down to the permissible minimum. The normal method of building the corners of the wall first as a support to the bricklayers' line is also clearly shown. Fletton bricks are being used for the interior of the wall, and for facing, red bricks stamped in the frog with Welwyn Garden City initials, W.G.C. The red bricks run from $8\frac{5}{8} \times 4\frac{1}{8} \times 2\frac{5}{8}$ in., in well-burnt specimens, to $9 \times 4\frac{1}{4} \times 2\frac{3}{4}$ in., where lightly burnt, and range sufficiently well with the Flettons on the average.

A matter which needs careful adjustment in building a cavity wall is the consistency of the mortar, and the illustration, figure 3, shows how the lime mortar is capable of standing in fairly erect masses when turned out of the pail. It should be brought to its final state of plasticity by working with the shovel, and not by the addition of excess of water. Ample supplies of bricks have been stacked up on the site, and the bricklayers are kept well furnished with bricks and mortar brought up in hod and bucket. Good speed is being maintained, a course of bricks along the whole front of the house having been laid in the short interval between taking photographs numbers 2 and 3.

The walls of the ground floor of a large bakery are shown in course of construction, figure 4. Fletton bricks are used for the interior of walls intended to be plastered with W.G.C. red bricks for facings above a plinth of Luton grey bricks. These fine, hard, and beautifully coloured bricks very considerably exceed the standard dimensions, different specimens measuring $9\frac{1}{8}$, $9\frac{1}{4}$, and $9\frac{3}{8}$ in. in length. When the thickness of the mortar joint is added this excess makes it quite impossible to bond with bricks of ordinary size, and the use of grey bricks has been discontinued at a certain level, and the smaller red facings start with a slight set-back from the front line of the grey plinth. In this building the limitation of first cost has not been pressed quite so far as in the cottages above described, the dampcourses are of asphalt, laid by a special firm, though this necessitates some stoppage of the bricklaying. In other respects, however, continuity of operations has been thought out, and the girder shown in figure 4 has been temporarily supported upon a wooden trestle in order that the steelworker need not return to the site to fix a single girder. When the brickwork has picked up the weight of this end of the girder the wooden trestle will be removed.

The difficulty of obtaining bricks of uniform colour is well illustrated in figures 4 and 5, where the lower courses of the Fletton backings are whitish pink, and the upper courses are red. These bricks will be covered with plaster in most places, so the change in tint is immaterial, except that it raises a problem that

Left, figure four. The bricklayers have been stopped for the laying of a sound asphalt dampcourse, but in other respects straightforward working has been considered. The girder is temporarily supported on a wooden trestle in order that the steelworker need not return to fix a single connection. Right, figure five. The different colours of the Fletton bricks used in backings will be covered with plaster, but the question is raised whether a finer brick used inside and left exposed is not also a legitimate way of treating brick construction.

is worth thinking about in these days of high prices. Should bricks be hidden beneath a coating of plaster or is it wiser to spend the money that the plaster will cost in procuring a really fine piece of brickwork that is worthy to bear inspection as well as capable of supporting a certain amount of weight? The desire to avoid weak, under-burnt bricks and the plaster needed to cover them, to say nothing of the cost of decorations and redecorations to cover the plaster, has led to the adoption of a hard and fairly smooth facing brick in the interior shown in figure 6. In this house the entrance hall, staircase hall, and a large sitting-room have been provided with brick walls identical in character with the external walls of the building. A brick was chosen which would stand cleaning with hot water and soda if necessary, and the lime-mortar is liberally gauged with Portland cement, so that while it is light in colour it is still hard enough to stand wear.

Reinforcement was used in some of the horizontal joints of the brickwork in order that settlement cracks should not disfigure the finished surfaces, for cracks are far more difficult to disguise in plain brickwork than where a little stopping and a coat of distemper can bring back an appearance of stability to a plastered wall, or where a charitable wall-paper covers a multitude of sins. To equalize the bearings all round the building continuous reinforced concrete lintels were cast *in situ* above window and door heads, internal partitions and exterior brick walls being treated alike in this respect. The shuttering for the reinforced concrete lintels and the time taken by them in setting undoubtedly interfered with the speed of the work, and increased the total cost of the house. A more plentiful use of reinforcement in the horizontal joints might have been substituted for them, with less interruption of the bricklayer's activities, but several violent gales to which the green brickwork was exposed on successive nights just after the first-floor walls had been erected made it apparent that the continuous reinforced lintels all round the building were doing useful work.

Figure six. Brickwork used in the interior of a dwelling-house. The fireplace will be darkened with smoke to carry the colour-note of the beams, and the panel above will be filled with antique tiles.

In the entrance hall several minor problems in building construction in brickwork had to be met. The brick fireplace was made by a craftsman selected by the building-owner, who worked during week-ends when the other workmen were absent. The projecting corbels for the mantel-shelf were set by the contractor upon the top of a straight chimney bar, and the arch below was pinned up to the underside of it. In building the corbels, which have a tendency to droop forward on their mortar beds, it was found expedient to insert long, thin slivers of broken roofing slate in the joints and to bed the corbel so that it received a temporary support from the slate until the mortar had set hard. At the completion of the whole house the slivers of slate were cracked short off, and the pointing to the joints made good.

The small panel above the mantel is being prepared to receive some interesting highly-ornamented tiles. The corbelled head had already been set in position when the tiles arrived, and the question arose whether the extreme corners of two of the most elaborate tiles should be chipped, or whether two half bricks should be removed and replaced after the tiles had been set. The possibility of smashing the tiles in cutting into their plain margins was held to be a sufficient reason for adopting the second plan, and the illustration shows the two half bricks removed and the cement rendering in position in the panel ready for bedding the tiles. When finished the lintels will dry out white, and contrast with the dark beams, and the little panel of tiles will carry the light colour-note into the mass of brickwork. The interior of the fireplace will become darkened with smoke, until it carries the weight (artistically speaking) of the beams overhead. Given a brick of suitable colour, texture, and strength for the purpose, this use of exposed brickwork in the interior of a house probably works out but little more expensive to install than the normal plaster and distemper, since it leaves the householder provided with a permanent scheme of colour decoration. He should be actually in pocket over the arrangement in the course of a few years.

Unfortunately, there are very few bricks on the market that are suitable in all respects, and even with the best a difficulty presents itself in connection with the thin partition walls now in use. In the ordinary course a half-brick partition can only be built fair faced one side, and if required to show bare brickwork on both sides, bricks have to be selected from the stack for uniformity of shape as well as for suitable colour, and this is a toilsome and costly business. Where 9-in. partitions are being built the same difficulty is experienced, though here it can be met by building two separate face walls and connecting them with Exmet reinforcement instead of bonders. Thicker walls, or walls which back on to cavities behind the external facings, present no difficulty, and can be built in the normal way.

The cemented brick trough which encloses the open channel of a gulley is one of the anomalies of modern bricklaying. Both wall and paving are made of fine coloured bricks, but the gully channel has its outside covered with a dingy grey coating of cement rendering. It is quite doubtful whether the exterior need be rendered even to comply with the by-laws, but a tradition has come into being, and persists in spite of reason or colour sense. Internal rendering in Portland cement may be necessary to keep the dirty waste-water from soaking into the brick, but the outside of the brick wall surrounding the glazed channel might well be left to match its surroundings. Actually some better device is needed, for the internal cement almost invariably cracks and flakes away in the course of a few years, since it is subjected to alternate heating by gushes of hot water and cooling with frosty air. Hard impervious bricks bedded on the slope down to the edge of the glazed channels would meet the case, and would be far more sightly than the cement. Another trouble which is experienced in connection with sink channels, steps, water-butt seatings, and other minor projections from the wall of the house, is their tendency to move independently and to crack away from the main building. The earth around the footings is necessarily disturbed in laying the

foundations of the house, and however well it is rammed in filling in the trench, it will consolidate again in course of time, and a very considerable amount of shrinkage takes place in the process. On a clay subsoil the shrinkage is aggravated by a periodical movement as the ground itself shrinks after a hot summer or swells again with a rainy autumn. Two courses are open to the builder. He may either reconcile himself to open joints between such features and the house wall and allow the steps to float on their own concrete foundations, or he can provide them with foundations resting upon those of the walls and take precautions that these out-bracketed masses of concrete do not tumble outwards and downwards as the made-up ground shrinks. The only way to prevent this action is to embed tensile reinforcement in the upper part of concrete foundation of the step or other projecting feature, and to anchor it back into the solid wall of the building. This precaution is particularly useful in connection with inspection chambers of drains laid near a house on deep clay, for the lightly-built manhole tends to drift and float at a different rate from the heavy house wall, and to fracture the pipe or pipes which anchor the one to the other. The long length of drain on the far side of the inspection chamber also moves, but its rate is more like that of the manhole, and its greater length provides it with elasticity and a chance of adjustment by bending instead of by fracture. A certain amount of reinforcement in the concrete surrounding the drain and uniting house and sewer would probably pay for itself several times over in the avoidance of leakage and troublesome repairs, even if ill-health does not result from the escape of sewage into the cracked and sun-baked clay. Without adequate precautions against movement the cracking of drain-pipes laid in clay has to be accepted as part of the normal routine. Deep digging might prevent the nuisance, but the provision of a proper fall from house to sewer governs the depth at which the drain-pipes are laid, and the maintenance of a sufficient buffer of clay between the pipe and the weather may not be practicable in every case.

In the first article in this series, published on March 10, Mr. Harvey drew his examples from the workshops of the Northern Polytechnic, the only school recognized by the R.I.B.A. which provides practical instruction in the building trades. Last week the author went out on a small job and gave detailed views of a bricklayer at work. In the present article, which concludes the section dealing with brickwork, the author's canvas expands, and a more comprehensive view of the bricklayer's operations are now taken. Illustrations one to five are from the admirable work being done by Mr. Louis de Soissons at Welwyn Garden City.—Ed. A.J.

CORRESPONDENCE

ARCHITECT, BUILDER, CRAFTSMAN

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The present method of building necessitates not only a contractor but a very large number of craftsmen, or sub-contractors, as we call them to-day. These latter, while often selected and approved by the architect, are actually employed by the builder. The position is involved that while the architect selects his master craftsmen and approves their estimates on behalf of his client, the builder actually orders the work and payment comes through the builder. The architect issues a certificate to the sub-contractor, which the builder is called upon to honour, but the builder in many cases says he cannot pay this unless he is allowed to deduct 2½ per cent. from the sub-contractor, and then only when and after he has actually received the money from the building-owner.

The first point is: Is there any moral justification for this levy on the small profits of the craftsmen merely because the money comes through the hands of the builder? It is a commercial and undignified system, and lowers the status of both parties.

Again, the builder saddles the sub-contractor with indemnity forms guaranteeing him (the builder) against every form of insurance liability. Some of these indemnity contracts between the builder and the sub-contractor contain exceedingly harsh clauses, wherein the poor sub-contractor is saddled with all kinds of responsibilities not always legally or morally his. Should not the architect see and approve every contract made between his contractor and his craftsmen? His responsibility is just as great to the one as to the other. Certain clauses and extreme provisions have insinuated themselves and become almost established of late years in these sub-contracts, placing upon the sub-contractor very heavy burdens. It is a pity that there cannot be standardized some simple form of sub-contract, approved by the R.I.B.A., and agreed to by the Master Builders' Federation and a committee of sub-contractors. Surely the collective interests of all the sub-contractors could be put on a reasonable basis, fair alike to the architect, the building-owner, the builder, and the craftsman. At present the difficulty is that every builder seems to have a different form of indemnity and sub-contract. The sub-contractor is responsible to the architect for the merit of his work, but he is subject to the builder for the facilities to execute his work. It is all very complicated, and the poor sub-contractor is tossed about from one difficulty to another, from one master to another.

In what way could all this be made more favourable to the sub-contractor, and what are the moral obligations of the architect to the sub-contractor? I think a discussion on these lines in the columns of your JOURNAL might be of material assistance to many of us. I am not attacking builders, as I think our big English builders are the finest in the world and are a tradition we are all proud of. All I want to lead up to is in what way the interests of the sub-contractors could be co-ordinated, and the status of the craftsman be put upon a higher plane than it is at present. This is a discussion in which I hope all sides will join. There is the builders' point of view, the sub-contractors', and the architects'; and what is required is to define the moral obligation of one to the other.

W. AUMONIER

THE READY-MADE HOUSE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I was much interested in the letter from P. A. J. Binns, published in your last issue. Commercial and other firms are devoting a great deal of attention to the ready-made house, and attractive advertisements describing its virtues appear frequently in the daily press. On the day your JOURNAL was published I noticed another advertisement of a similar kind to that quoted by your correspondent. It appeared in a London newspaper in connection with a visit to the Ideal Home Exhibition of Miss Marie Tempest, the actress. Beneath an illustration, in which Miss Tempest is seen standing at the entrance to a house in the New Hall, is the following: "At the Tibbenham Tudor House in the New Hall the famous actress was unfeignedly delighted with all she saw. The staunch timbering of the exterior appealed to her immediately, and when she entered the long living-room, with its wealth of beams, panelled walls, and deep brick fireplace, she asked that detailed plans should be sent to her at the earliest possible moment. She expressed her great surprise that a house of such delightful character, in which every piece of timber is solid oak, could be built at so low a price as £1,450." The advertisement goes on to say: "This house was sold for erection on the Potters Bar Estate twenty minutes after the opening of the Ideal Home Exhibition, and can be reproduced anywhere within thirty miles around London at an inclusive cost of £1,450. This price includes drainage and foundations and all domestic and sanitary fittings."

Business firms enjoy many advantages over the architect. They may design a building, erect it in exhibitions where it is inspected by millions of people, and they can advertise it in all the leading newspapers. The architect may design, but he must not build or advertise. Comment is needless.

R. HUTCHINGS

LITERATURE

THE NEWER VIEW OF HISTORY

HARDLY more than a generation ago history was generally conceived as a matter of kingcraft and statecraft. Casual allusions to the life and work of the people were introduced grudgingly and of necessity. J. R. Green was apparently the first to break away from that stale old convention. It had certainly dawned on him when he called his book *A Short History of the English People*. Perhaps he did not quite fully realize the obligation that the title seemed to impose. H. D. Traill came nearer to " the full round orb," when he invited a brilliant band of specialists to co-operate with him in producing *Social England*, the scheme of which insisted on the importance of the handicrafts in their influence on social history. At length Mr. and Mrs. Quennell came upon the scene with a very noteworthy performance. Their *History of Everyday Things* was a very gallant attempt to demonstrate the significance of the artistic and the practical sides of life. It set a new scale of proportion and values in the writing of history for schools, and we are glad to believe that it was an architect who was the first to right a vessel that had acquired a disconcerting list or bias. It was certainly " Don Q." (as he was affectionately called) and his accomplished wife who gave the first impetus to the new way of writing and illustrating school histories. Two ladies have co-operated in the production of the pair of slender volumes now before us, the one lady supplying the letterpress, the other providing the illustrations. In the numerous plates, we get deft renderings, in the charming manner made popular by Mrs. Quennell, of the manners and customs, clothes, crafts, buildings, and implements of each period, the subjects being cleverly redrawn from originals that are usually accessible in archives often themselves inaccessible to all but specially favoured persons. We can sincerely congratulate both author and artist on the attractiveness and the utility of illustrations and text alike, which together form a comprehensive survey of life and work in the centuries with which the two volumes respectively deal.

Life and Work of the People of England: a Pictorial Record from Contemporary Sources. Two volumes: A, Fifteenth Century; B, Sixteenth Century. By Dorothy Hartley and Margaret M. Elliot. London: B. T. Batsford, Ltd. Price 4s. 6d. net each volume.

WINGFIELD: ITS CHURCH, CASTLE AND COLLEGE

Here we have, not a parish history, which the learned author has been at pains to avoid, but a somewhat detailed account, presented in an unusually straightforward and convincing way, of the several structures of outstanding note contained within the village bounds. Each structure is of considerable interest in its own category. The castle is treated first, and its erection exactly dated by the Royal licence accorded its owner to crenellate the *caput* of his manor here in 1384; and the college stands last, though it is, perhaps, of chief interest on account of the rarity nowadays with which one finds the original component parts of fourteenth-century houses; but most space has been devoted to the elaborate detail of Wingfield Church's architecture, one of the best proportioned in this county of such excellent fabrics. Here no architect with a penchant for the archaic in style can fail to become absorbed in the present volume, whether that penchant be in the way of military or domestic or ecclesiastic. Its title will warn him, however, to expect little that is too severely technical; and the book opens with the comprehensive fact that all pertained to the same great lord, the Delapole earls and dukes of Suffolk, whose somewhat meteoric career is fully sketched, enabling the author to regard these structures as mere adjuncts of a homogeneous whole. The heiress of the last of the old " de Wingfield " family carried the estates in marriage to Michael Delapole, first Suffolk earl of that name, and he it was who, while Lord Chancellor in 1384, raised the present castle upon a site some mile way from the earlier manor house. Of this castle little more than the south curtain-wall remains, with its octagonal flanking towers and central gatehouse, all in typical late Decorated style, excepting where the main drawbridge has been underpinned with flush-flint Perpendicular panelling, though obviously built rather for comfortable residence than feudal defence, as was to be expected at so late a date. For the Decorated windows in all these three sections of the south elevation are double lights of no mean size, while that of the guardroom is distinctly large over the main gateway, which retains its portcullis grooves.

Though the erection of the college was begun by the de Wingfield heiress's widowed mother so early as 1362, it is thought to occupy the site of the first manor house on account of its proximity to the church, for the sites of such houses are certainly pre-Christian, and the later manorial churches were no more than one of their natural adjuncts, along with the mill and other involved rights; well illustrated by the way in which advowsons continued appendant upon the mesne tenancies throughout medieval times. Well and solidly, as befitted its period, was the college built of substantial walls 24 in. thick; and very instructive is the curious asymmetry of the roof-timbers, of which those of one wing consist of struts 18 by 4 in., rising from a 1 ft. square beam, and support another almost equally stout, whence in two places rise an octagonal king-post with somewhat elaborately carved base and coronal cap, now all above the ceiling, of course.

By far the most detailed description has been reserved for the church, whose style is entirely typical of its erectional date, for the reception of the collegians soon after 1362. But the whole eastern end, not only of the chancel, but of both north and south chapels, was lengthened to at least the extent of the " xxxviii tons of Lyncolnshire stone and viii tons of Kingmelle stone " included in the total cost of £75 8*s*. 4*d*., which was no small sum in 1430, when these additions were carried out. Thus, we see—and every ecclesiologist should visit it—the latest phase of delicate Decorated work, combined with the earlier Perpendicular style, here so tastefully blended and elaborately enriched as to form an harmonious whole, to which the oak and stone and alabaster effigies of the de Wingfields and Delapoles, beneath profusely crocketed and cusped and finialed canopies, add the intimate touch that was at first completed by tinctured glass and burnished brass, whereof a very few debris now remain. The structure's oldest visible part is the early Decorated tower, which seems to be the sole feature not renewed in 1362-1430; and its newest an intermediate chapel connecting that at the north-east extremity with the north aisle, the late date of which this book first notices. We consider few volumes have so faithfully and fully fulfilled their title as that for which we are very grateful to Mr. Aldwell; it should be in, and known upon, every hand.

CLAUDE MORLEY
Hon. Sec. Suffolk Archæol. Instit.

Wingfield: Its Church, Castle, and College. By S. W. H. Aldwell, Vicar of Wingfield. Illustrations chiefly by J. E. Groom. Published by W. E. Harrison, The Ancient House, Ipswich. Price 12s. 6d. net.

OBITUARY

The death has occurred of Mr. John Wayland Benwell, F.R.I.B.A., a well-known architect in the North of England. He went to Carlisle over forty years ago as assistant to the late Mr. J. C. Ferguson, F.S.A., and after further experience in London, Leeds, and Bolton, he settled down to practice in Carlisle. He was a clever and artistic draughtsman and was entrusted with many important works, among them being a charming restoration and addition to Dalston Hall, Cumberland; the Bakewell Almshouses, Balderton, Notts; garden city and housing scheme, St. Ann's, Carlisle; additions to Netherby for Sir Richard Graham; and a residence at Crofthead for Mr. Fergus Graham; new branch office, Carlisle, for the National Provincial and Union Bank, Ltd.; mansion at Barscobe, Kirkcudbright.

TRADE NOTES

In our last issue it was incorrectly stated that Messrs. E. J. and A. T. Bradford supplied the concrete blocks and stair-treads for the Plaza Theatre. This firm was responsible for the stone carving and modelling.

Princeps electrical clocks are the subject of an illustrated booklet which we have just received from Messrs. Prince's Electrical Clocks, Ltd. They have been invented by Major C. E. Prince, O.B.E., M.I.E.E., who was officer in charge of the Experimental Wireless Section of the Royal Air Force, and for many years on the Marconi Company's research staff, and they can be used as solo clocks or as master clocks to run any number of slave clocks. No winding or attention are necessary beyond the replacement of the dry cells once a year in the master clock, and at still longer intervals in the slave clocks. In the clocks all the work is done by the current from an electric battery operating a patent mechanism, which in no way interferes with the swing of the pendulum. The master clocks are supplied in designs to stand on the floor, to hang on the wall, or to stand on the mantelpiece, and the slave clocks are also obtainable in a great variety of patterns. The complete mechanism of the master and slave clocks can, however, be fitted to any type of case required, or can be adapted to existing cases. It is readily adapted for the conversion of thirty-hour grandfather clocks. Many of these cases are very beautiful, and can thus be brought into use without any change in their appearance. Among the important firms who have installed the clocks for their own use are the Faraday House Electrical Standardizing Institution, Messrs. Abdulla & Co., Ltd., the Spenser Press, Ltd., and the City of London Electric Lighting Co., Ltd. The clocks have also been installed for the Admiralty. A large public clock was also supplied to the clocks, watches, and jewellery section of the British Empire Exhibition, 1924. The system can be used for any type of building, from the largest commercial office to the smallest home.

Following upon the leading article on page 443 of this issue a questionnaire on the subject of architectural criticism has been sent to a number of architects throughout the country. This document contains the four following questions :

i. Do you approve of architects criticizing each other's works under their own names or anonymously—

a, *in the technical press,*

b, *in the public press ;*

and, in the event of your disapproving of such criticism, would you go so far as to suggest that The Royal Institute of British Architects should place its members under a solemn obligation to abstain from all public comment upon buildings erected during their own lifetime ?

ii. In arriving at your conclusion as to the desirability of architects publishing criticism of each other's work, do you draw a distinction between praise and censure, and maintain that, while considerations of professional etiquette should deter one architect from committing to print an unfavourable judgment on the work of another, he may yet indulge in eulogy ?

iii. In view of the fact that during the last century famous littérateurs *were able to initiate architectural movements while the profession itself remained almost inarticulate, what steps would you take to ensure that architects may employ the written word in order to combat such movements should it be considered that they are injurious to the art of architecture ?*

iv. If you accept the view that, in the interests of architecture, architects themselves, in common with other members of the community, should have perfect freedom to animadvert favourably or otherwise upon the designs of modern buildings, do you think it possible to establish an etiquette of impersonal and purely objective criticism so that the critic, even when he is most censorious, will be free from the suspicion of being actuated by unworthy motives ?

Readers who have not received a copy, and who would like to give their views on any of the points raised in the questionnaire, are asked to apply to the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate, Westminster. All questionnaires should be returned to the Editor on or before Friday, April 9.

The spring number of *The Crown Journal*, the house Journal of Messrs. Higgs and Hill, Ltd., builders, contains many literary features of architectural and general interest. Chief among the former, perhaps, is an illustrated description of the stone frieze adorning East India House, Regent Street, the new premises now nearing completion for Messrs. Liberty, from the designs of Messrs. Edwin T. and E. Stanley Hall. This frieze is attracting considerable public attention, and is the largest piece of sculptured work of its kind in London. The new premises for the Buscot and North Berks Dairy Co., Ltd., Harrow Road, Messrs. Williams and Cox, architects ; a hotel-de-luxe, Piccadilly, Messrs. Henry Tanner, architects ; the board-room of the new Spillers' Building, Sir Edwin Cooper, architect ; Messrs. Schroder & Co.'s new bank premises, Leadenhall Street, Messrs. Joseph, architects, are among the other important work described and illustrated, upon which the firm are engaged. A list is also given of the many new contracts secured by the firm since the publication of the last issue of the Journal. Other notable contributions in the present number include : "On Producing the Magazine," "Down by the Thames," and "The French-polishing Trade."

The twenty-sixth ordinary general meeting of the London Brick Co. and Forders, Ltd., was held at the Connaught Rooms. Mr. P. Malcolm Stewart, O.B.E., J.P., chairman of the company, presiding, said that the profit for the year amounted to £301,263, an improvement of £68,744 on last year's figure. The directors recommended a final dividend of 10 per cent., making 20 per cent. for the year, after the payment of which there remained a balance of £49,862 19s. 8d. to be added to the carry-forward, which would then total £87,212 1s. 3d. The increased profits were due not only to increased mechanical efficiency and an enlarged turnover, the productive capacity of the brick works having been brought up to 600 millions per annum, but also to the loyalty and excellent work of the staff and all employees. A scheme for installing electric power to replace inefficient steam-power plants was on the eve of completion, and the most modern excavating machinery was being installed. The prospects for the current year were good provided they enjoyed a period of industrial peace and freedom from strikes. The profit and loss account, the balance sheet, and the reports of the directors and auditors were adopted unanimously.

The "Electric House" exhibited by the British Electrical Development Association, Inc., at the Ideal Home Exhibition, comprised a series of seven rooms and an inquiry bureau. The rooms in route order were an old-fashioned living-room of fifty years ago, a modern electric living-room, a modern bedroom, a modern bathroom, a modern laundry, an old-fashioned kitchen of fifty years ago, and a modern electric kitchen. Visitors were thus able to appreciate by contrast the comfort, convenience, and labour-saving obtainable to-day by electrical means, but utterly unthought of a few generations ago. A complete range of modern British electric appliances was in actual operation in all the modern rooms. The lighting of the whole house formed a special and interesting feature, demonstrating to the public that scientific lighting could be obtained as economically as bad and indifferent lighting. Electric heating was represented by examples of the most modern types of radiant fires. In the bedroom the conveniences of a well-wired house were displayed in the facilities for warming without waste or work, for dressing, making morning tea, and many other adaptations of electricity. Water heating was a feature of the bathroom. Electric ironing, washing, mechanical washing of plates and dishes, silver, and other tasks could be seen in the laundry.

THE WEEK'S BUILDING NEWS

Housing at Macclesfield

It is proposed to erect forty-six houses at Elm Beds, Higher Poynton, Macclesfield.

Housing at Friern Barnet

One hundred houses are being erected by the Friern Barnet Urban District Council.

A School for Stoke Newington

A central school is to be erected at Stoke Newington at a cost of £24,000.

Hotel for Croydon Aerodrome

It is proposed to build a hotel at Croydon Aerodrome at a cost of £40,000.

A Cinema for Newmarket

A new cinema is to be built at Stamford House, High Street, Newmarket.

More Houses for Surbiton

The Ministry of Health has approved of the erection of another fifty houses at Surbiton.

New Schools for Bridlington

The Bridlington Education Committee has decided to erect new schools in the Hilderthorpe Ward at a cost of £10,000.

The Completion of a By-pass Road

The Sidcup by-pass road is to be opened on March 31. It is 2½ miles long and has cost £150,000.

The Progress of the Polytechnic Scheme

Over £100,000 has now been raised or promised towards Marylebone Polytechnic £250,000 extension scheme.

The Hornsey Rise Estate Scheme

Dwellings to accommodate 1,168 persons are to be erected on the Hornsey Rise estate at a cost of £38,000.

London Street Improvements

The L.C.C. estimates an expenditure of £1,000,000 on street improvements during the next twelve months.

Plans Approved at Chippenham

The Chippenham Town Council has passed plans for forty houses on a site in Greenway Lane.

Harbour Improvements in Jersey

The Jersey States are considering a scheme for improvements to the harbour, estimated to cost £300,000.

A Factory near Selby

A bacon factory at Sherburn, near Selby, for the farmers of the East and West Riding of Yorkshire is to be built at a cost of £20,000.

A Housing Scheme for Darfield

The Darfield District Council is to carry out a new housing scheme comprising the erection of eighty-six houses on the Barnsley Road estate.

Housing in Ireland

Omagh Urban Council is to build ten houses at a cost of about £300 each, and Galway Urban Council is to build ten houses at a cost of £280 each.

Housing Needs at Mildenhall

Ninety houses are wanted for the Lakenheath district, which is under the control of the Mildenhall District Council. The cost of building these would be £36,000.

Housing Schemes at Bath

The Bath Housing Committee has approved of schemes for the erection of eighty-six houses at Newbridge Road (£43,030), and twenty-four houses at Larkhall.

An Improvement Scheme for Bristol

The Bristol City Council has approved of a proposal to demolish the Weir public baths and to obtain plans and estimate for a rebuilding scheme.

A New Theatre for Willington

A new theatre to accommodate 1,000 persons is to be built at Willington on the site of the present auction hall in the High Street.

Housing at Leeds

The Leeds Corporation has decided to erect seventy-two houses in connection with four separate schemes at Wyther, Meanwood, Hawkesworth, and Cross Thorpe Lane, Middleton.

A Cinema for Glasgow

A new £40,000 company has been formed in connection with the proposed erection of a dance hall on the site of what was formerly Hengler's Circus, in Sauchiehall Street, Glasgow.

Aberdeen's Application for a Loan

The Aberdeen Town Council has been recommended to apply to the Scottish Board of Health for sanction to borrow £355,000 in connection with housing schemes.

A Big Nottingham Hospital Scheme

An approximate expenditure of £130,000 is involved in a scheme at Nottingham for the erection of a children's hospital, a new pavilion, extension to the nurses' home, and the erection of a staff home.

Housing at Richmond

The Ministry of Health has approved of the proposals of the Richmond District Council to grant sums not exceeding £75 per house for the erection of 120 additional houses.

School Proposals in Yorkshire

The West Riding County Council proposes to erect new technical schools at Brighouse and Barnoldswick, at a cost of £75,000, and a combined elementary and middle school, to cost £30,000.

A Bishopsgate Site Sold

The site of Devonshire House, Bishopsgate, has been sold for £185,000, and is to be used for the erection of an office building. The construction of a shopping arcade from Houndsditch to Devonshire Place is also contemplated.

Improvements at St. Pancras

The St. Pancras Borough Council has resolved to acquire further properties at a cost of £20,000 in connection with the Wolcot Street area improvement. The Housing Committee is considering a site at Highgate Road for a housing scheme.

A New Sheffield Housing Estate

The Sheffield Corporation has made an order acquiring by compulsion a large area of land in the vicinity of the Brushes and Stubbin housing estates for the purpose of forwarding a new housing scheme. Altogether, 208 acres of land have been acquired.

Proposed Schemes at Bristol

The Bristol Housing Committee proposes to erect eighty-eight additional houses at Knowle, Avonmouth, Shirehampton, and Bedminster, at a total cost of £43,200, and 1,000 additional houses and shops on the Sea Mills estate.

Proposed School at Bushey

A boys' school is to built at Bushey for the Royal Masonic Boys' Institution, of Great Queen Street, Kingsway, W.C., the total cost of which is estimated at over £250,000. Messrs. Davis and Emanuel and Henry C. Smart are the architects.

The Purchase of Boston Dock

John Slater, Ltd., have made an offer to purchase Boston (Lincolnshire) Dock for £120,000. The firm is prepared to spend another £100,000 on dock improvements and to build 500 houses for the accommodation of the workpeople.

A Big Newcastle Scheme

A Ministry of Health inquiry was recently held into the application of the Newcastle City Council to borrow £192,583 for a public hall and baths on the site of the baths in Northumberland Road. It was estimated that £86,720 would be spent on the proposed new concert-hall and £105,863 on the baths.

The Wolverhampton Technical College

The engineering and technological block of the new Wolverhampton Technical College has just been completed at a cost of £50,000. The plans for the full college, which will cost a further £112,000, have recently been approved by the Wolverhampton Corporation and the Staffordshire County Council.

LAW REPORTS

WATER SUPPLY: QUESTION OF OWNER

The Mayor and Corporation of Kensington v. *Allen. Before the Lord Chief Justice, and Justices Salter and Branson*

This was an appeal by the Corporation of Kensington against a decision of the local justices in favour of Mr. M. J. Allen, the assignor of the lease of a dwelling-house at Testerton Street, dismissing an information against him for having failed to provide an adequate water supply to the different floors of his tenement house.

Mr. Montgomery, K.C., for the Corporation, said Mr. Allen let the house on a weekly tenancy, and the tenant sublet the various floors to other tenants, living in the basement himself. The house came within the meaning of the Public Health (London) Act, 1891, which stipulated that a tenement house not having an adequate water supply to each floor was a nuisance, and was regarded as not being fit for human habitation, and the owner could have served upon him a notice to abate the nuisance and install the water supply. The definition of "owner" was "the person receiving for the time being the rack rent," and rack rent was defined as "the rent which was not less than two-thirds of the full annual value of the premises out of which rent arises." The rents the tenant received were £1 2s., and he paid £1 1s., and either sum was more than two-thirds of the annual value. In the circumstances, it was contended before sessions that Allen was not owner, but that the tenant Allund was, and it was he who should have received the notice. The Corporation contended the opposite, but the sessions held that Allen's argument prevailed, although the nuisance was there. Counsel submitted that Allen was the owner within the meaning of the statute, and that the justices arrived at a wrong conclusion.

Mr. Macmorran, K.C., for Allen, said the tenant received the rack rent, and he, therefore, became the owner within the meaning of the Act of the floors he let, and was liable for any nuisance.

The Court allowed the appeal and remitted the case to the justices to deal with as the law directed.

The Lord Chief Justice, in giving judgment said it was apparent that the water supply in the house was sufficient for one tenant, but not for tenants on several floors. Since the passing of the L.C.C. General Powers Act, 1907, it had been impossible to argue that the house as a whole was not a nuisance because of the defects in the various floors above the basement. So that the sole point was: "Who was the owner?" The argument of Mr. Macmorran, and it was an ingenious one, that if the weekly tenant could let the whole or part of the premises to sub-tenants, he became the person who would receive the rack rent notwithstanding that, at that particular time, he had sublet, not the whole, but almost the whole. Such an argument would have the effect of putting every tenant who sublet into the position of owner of the premises. There was one serious objection to that argument. It seemed to be plain that the alternative in the Act, "or who would so receive the same if such premises were let at a rack rent," was an alternative only in the case where, in fact, such premises were not let at a rack rent. If the premises were let at a rack rent it was useless to look further to see if there was anybody else who might let the premises at a rack rent under certain circumstances. The only person who received the rack rent was Mr. Allen, and, therefore, the appeal would be allowed.

Justices Salter and Branson concurred.

BUILDER AND RESTRICTIVE COVENANT: AN INTERESTING POINT

Frampton v. *Gillison. Chancery Division. Before Mr. Justice Lawrence*

This was a motion in the action by Mr. Jenkin, K.C., on behalf of Mr. Albert Frampton, of Bromley Hill estate office, Bromley Hill, against Mr. James Allan Gillison, of Ashgrove Parade, Bromley Hill, for a declaration that the establishment of a post office by the defendant at his premises at Ashgrove Parade was a breach of the agreement entered into between them in August, and he also asked for an injunction to restrain the defendant from using the premises as or for the purposes of a post office, and from carrying on upon the premises any trade other than that of a chemist, druggist, dentist, or doctor.

Mr. Jenkins said the point raised by the motion was an unusual one. The plaintiff had erected shops at the Parade, and it was his intention to restrict the use of the shops for certain trades. The defendant agreed to purchase one of the shops, and its use was restricted to that of "chemist, druggist, dentist, or doctor." Notwithstanding that the conveyance of the premises had not been completed, the defendant had applied for and obtained a branch post office at the shop, and had been appointed sub-postmaster. It was true that the defendant had approached plaintiff in regard to the matter, and plaintiff had told defendant that he objected to his having the post office as he intended one of the shops to be a stationer's, where every facility would be given for postal accommodation and future development. The motion was launched on the ground that the defendant had committed a breach of his covenant, and that he had no right in using the premises for a post office.

Counsel read an affidavit by the plaintiff in support of the motion.

Mr. Stamp, for the defendant, argued that the post office was not a trade within the meaning of the contract. It was a public service, and defendant was a servant of the Crown, doing the work of the post office. A post office could not be said to be a trade within the meaning of the restrictive covenant.

His lordship ordered the conveyance to be completed in the form agreed between the parties. The writ and notice of motion were to be amended by adding another party as defendant. The motion would stand over for the completion of the conveyance, with liberty to apply for a day for the hearing of the motion.

BUILDING SCHEME: QUESTION OF GUARANTEE

Bodle, Ltd., v. *East Sussex Estates Ltd., and others. Official Referee's Court. Before Sir Edward Pollock*

The plaintiffs, Messrs. Bodle & Co., Ltd., builders and contractors, of Eastbourne, sued the defendants and its two directors, Mr. J. M. Sly and Mr. P. C. Thomas, to recover £1,161, balance of account on three building contracts in 1921 for a private hotel at Pevensey Bay for £4,340, for three cottages for £3,149, and for a detached residence to cost £2,394.

Mr. St. John Field, for the plaintiffs, contended that the wording of the guarantee bound Mr. Sly to whatever was accepted by the defendant company, and the defendant company and Mr. Thomas did not defend. Mr. Sly admitted the guarantee but denied that the money was due. The guarantors, on the document, agreed that the builders should, until payment, have against them the same rights and remedies of recovery as if they were principals. The wording of the material clause was "we further agree that any account settled by you or stated by you or between you and the company or admitted by the company may be adduced by you and received as conclusive evidence against us of the balance or amount appearing due from the company to you and shall not be disputed or questioned by us or our representatives except so far as the company shall be entitled to dispute or question the same." The position was that the company were not entitled to dispute any questions, because they had written that they were willing to submit to judgment and had put in no defence. Mr. Sly, by what he had signed, had agreed that the company's admission should be conclusive evidence against him.

Mr. Sly appeared and asked to be struck out of the action as his guarantee was a pure formality.

Mr. St. John Field said the villa was built at the height of the building prices, and sold at a loss of £700, whilst the plaintiff took over the hotel at £1,500, crediting defendants with £1,100, a solicitor having a charge on it for £400.

The Official Referee gave judgment for plaintiffs against all three defendants, holding that their action and form of guarantee bound them.

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
A₃	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
B₃	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W.Counties	1 8	1 3½
A₃	Atherstone	Mid. Counties	1 6½	1 2
B₃	Aylesbury ..	S. Counties	1 4½	1 0½
B	BATH ..	S.W.Counties	1 6	1 1½
B₃	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
B₃	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
A₃	Bewdley ..	Mid.Counties	1 6½	1 2
B₃	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
B₃	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W.Counties	1 8	1 3½
A₃	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
A	Bradford ..	Yorkshire	1 8	1 3½
A₃	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
B₃	Brixham ..	S.W. Counties	1 4½	1 0½
A₃	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
A₃	Buxton ..	N.W.Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₃	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
A	Carnforth ..	N.W. Counties	1 7½	1 2½
A₁	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
B₃	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
A₃	Crewe ..	N.W.Counties	1 6½	1 2
A₃	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W.Counties	1 8	1 3½
B₃	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
A₃	Driffield ..	Yorks	1 6½	1 2
A₃	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 & Mon. Valley	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
A₃	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W.Counties	1 8	1 3½
B₃	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W.Counties	1 8	1 3½
B₃	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
A₃	Grantham ..	Mid. Counties	1 6½	1 2
A₃	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
B₃	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
A₃	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
A₃	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
B₃	Lewes ..	S. Counties	1 4½	1 0½
A₃	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W.Counties	†1 9	1 3½
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
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester ..	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₃	Margate ..	S. Counties	1 4½	1 0½
A₃	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
A₃	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
A₃	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
A₃	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
A₃	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₃	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
A₃	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₃	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
A₃	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	E. 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 4½	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
A₃	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
A₃	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
A₃	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, 1*s.* 9*d.*

† Carpenters and Painters, 1*s.* 8½*d.*

‡ Plumbers, 1*s.* 9*d.*

§ Painters, 1*s.* 6*d.*

‖ Carpenters and Plasterers, 1*s.* 8½*d.*

¶ Painters, 1*s.* 7*d.*

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

Broken brick or stone, 2 in., per yd.	£0	10	0
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	16	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	5	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.
DO. in upper floors, add 15 per cent.
DO. in reinforced-concrete work, add 20 per cent.
DO. in underpinning, add 60 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
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.*

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.*

London stocks, per M.	£4	7	0
Flettons, per M.	3	6	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	22	0	0
DO. *headers, per M.*	21	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	12	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 enquiry.

MASON

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

Portland Stone:			
Whitbed, per ft. cube	£0	4	4
Basebed. per ft. cube	0	4	7
Bath stone, per ft. cube	0	2	9½

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.

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:

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.*

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

7×3, per std.	£23	0	0
11×4, per std.	33	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.	33	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	6	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., 1¾ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1¾ in., per ft. sup.	0	3	3
If in oak multiply 6 times.			
If in mahogany multiply 6 times.			
If in teak multiply 7 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, 1*s.* 9½*d. per hour*; MATE OR LABOURER, 1*s.* 4½*d. per hour.*

Lead, milled sheet, per cwt.	£2	5	6
DO. *drawn pipes, per cwt.*	2	7	0
DO. *soil pipe, per cwt.*	2	9	0
DO. *scrap, per cwt.*	1	4	0
Copper, sheet, per lb.	0	1	3
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	6
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	2
DO. *4 in. per yd.*	0	5	1
R.W.P., 2½ in., per yd.	0	1	10
DO. *3 in., per yd.*	0	2	2
DO. *4 in., per yd.*	0	3	0
Gutter, 4 in. H.R., per yd.	0	1	10
DO. *4 in. O.G., per yd.*	0	2	0
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	3
DO. 3 in., per ft.	0	2	8
DO. 4 in., per ft.	0	3	0
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, 1*s.* 9½*d. per hour (plus allowances in London only)*; LABOURER, 1*s.* 4½*d. per hour.*

Chalk lime, per ton	£2	12	6
Hair, per cwt.	0	18	0
Sand and cement see EXCAVATOR, *etc., above.*			
Lime putty, per cwt.	£0	2	8
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	4
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, 1*s.* 8½*d. per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	5
DO. 26 oz.	0	0	6
Cathedral white, per ft.	0	0	5½
Polished plate, British ¼ in., up to 2 ft. sup.	0	2	5
DO. *3ft. sup.*	0	3	2
DO. *7 ft. sup.*	0	3	9
DO. *25 ft. sup.*	0	4	3
DO. *100 ft. sup.*	0	5	1
Rough plate, ⅜ in.	0	0	5½
DO. *¼ in., per ft.*	0	0	6
Linseed oil putty, per cwt.	0	16	0
GLAZING in putty, clear sheet, 21 oz.	0	0	10
DO. 26 oz.	0	0	11
GLAZING in beads, 21 oz., per ft.	0	1	0
DO. 26 oz., per ft.	0	1	3

Small sizes slightly less (under 3 ft. sup.).

Patent glazing in rough plate, normal span 1*s.* 5*d.* to 2*s.* per ft.

LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, and up, per ft. sup.	£0	3	6

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

DECORATOR

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

Genuine white lead, per cwt.	£3	5	0
Linseed oil, raw, per gall.	0	4	0
DO., *boiled, per gall.*	0	4	3
Turpentine, per gall.	0	6	6
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	5	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	10
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	4	0	2
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* 1*s.* 9½*d. per hour*; MATE, *do.* 1*s.* 4*d. per hour*; ERECTOR, 1*s.* 9½*d. per hour*; FITTER, 1*s.* 9½*d. per hour*; LABOURER, 1*s.* 4*d. per hour.*

Mild steel in British standard sections, per ton	£12	10	0
Sheet steel:			
Flat sheets, black, per ton	19	0	0
Do., Galvd., per ton	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	27	0	0
DO., in small sections as reinforcement, per ton	17	0	0
DO., in compounds, per ton	18	0	0
DO., in bar or rod reinforcement, per ton	20	10	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, fixed on, but not including studs or grounds, per ft. sup.	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	17	0	0
DO., *red*	19	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	3½
¾ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½