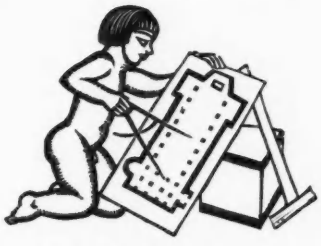
THE ARCHITECTS' JOURNAL



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CHRISTIAN BARMAN, *Editor*

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

WEDNESDAY, SEPTEMBER 28, 1927. NUMBER 1706: VOLUME 66

PRINCIPAL CONTENTS

[A working detail of these premises appears on the following page]

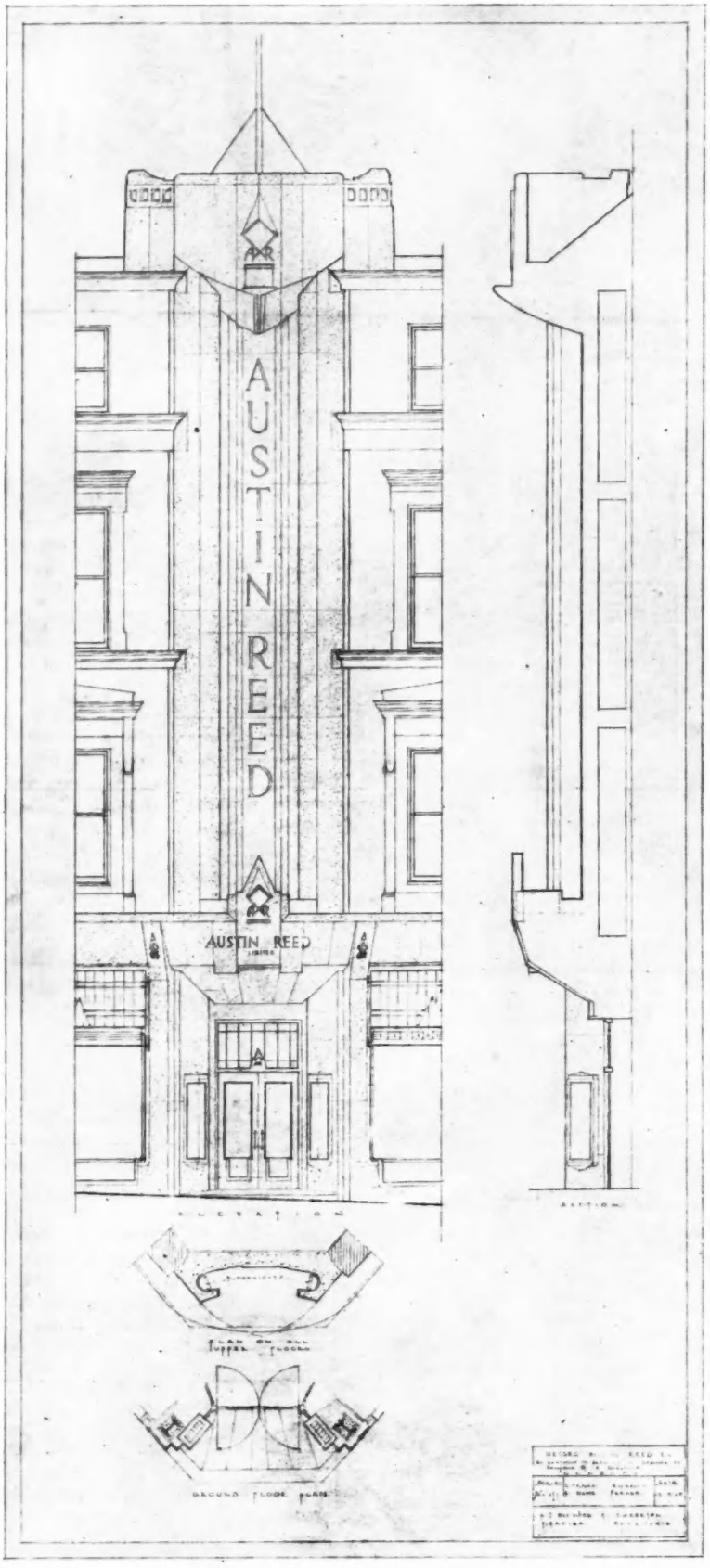
MESSRS. AUSTIN REED'S
PREMISES AT GLASGOW

[BY P. J. WESTWOOD AND EMBERTON]

THE WEEK'S DETAIL

[BY P. J. WESTWOOD AND EMBERTON]

The site of Messrs. Austin Reed's in Glasgow is one of the most prominent in the city, adjacent to the Central Station and at the corner of Renfield Street and Gordon Street. The building in its original condition was in a state of considerable dilapidation, and the problem was to make it modern and attractive without rebuilding it entirely. It was eventually decided to cut out the whole corner and reconstruct it in Roman marble, concealing floodlighting thrown on to the firm's name, executed in gold mosaic. Up to the present time Messrs. Austin Reed have developed the lower ground floor, ground and first floors, and have workrooms in the attic. Columns and stone piers were removed and new steelwork introduced as well as new floors. The basement and ground floors are finished in Travertine marble, and the first floor in teak laid in narrow widths. A new passenger lift and staircase serve the floors, and new ceilings and decoration have been installed throughout. All the interior fittings, panelling and staircase, have been executed in Ancona walnut.



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

THE ARCHITECTS' JOURNAL

Wednesday, September 28, 1927

THE WHITE MAN'S BURDEN

One of the most frequent manifestations of the confusion of thought which exists concerning architecture is the protests which are made, chiefly by tourists and casual visitors, at the sight of European architecture in Eastern dominions or colonies of the British Empire. One such, which appeared recently in an Indian paper, has come to our notice. The writer is truly upset because the design of the new Delhi does not make more concessions to Indian architecture. Yet he is probably unmoved by the fact that the Viceroy makes even fewer concessions in his clothes to the dress of the country which he rules.

To us this whole matter of dominion and colonial architecture is comparatively straightforward. If architecture is in any sense a reflection of the culture and civilization which produced it, then wherever that civilization and culture spread its architecture must go with them, but it must, of course, make such concessions to climatic and other local conditions and to the available materials as may be necessary. If those who made these criticisms would pause for thought, seeking, perhaps, analogies in the other arts and in other facets of life, they would see the unreasonableness of their objections. Eastern painting, sculpture, and music differ no less than architecture from Western products, yet no European practising these arts in the East would be subjected to hostile criticism if he failed to make use of the native idiom. But perhaps even better analogies are to be found in the matter of dress and language. The European, living in his Eastern dominions or colonies, is not expected to adopt the native dress; on the other hand, he does not persist in wearing his European clothes without any modifications, but those that he makes are, for the most part, due to climatic conditions. And into the governing language we find certain words insinuating themselves, but they are words which denote some thing, some condition, or some reaction peculiar to the people or the country and for which the mother tongue can provide no equivalent.

Those Europeans who have knowledge of the East, and whose expressions are not mere doctrinaire opinions tinged with a vague sentimentalism, know that the Eastern outlook, standards of life, conduct, and aspirations are so different from their own as to be almost incomprehensible; at any rate, so different as to afford scarcely any points of contact. How, then, can there be a similarity in architectural expression? The machinery of government, the mode of life of the European, could neither express themselves nor accommodate themselves in an architecture which has been evolved by a race differing completely in temperament, ideals, habits, and ambitions.

Viewed in this light, then, the offending European buildings cease to be a manifestation of aggression, an avowal of purblindness, a symbol of insularity, or a monument to prejudice, unless the presence of the European in these countries is in itself regarded as an act of aggression, in which case the discussion is at once removed from the realm of æsthetics to that of politics, where it is not our concern to follow it.

In those parts of the Empire whose inhabitants possess no developed architecture, this same question does not arise, and the European is not upbraided because he does not utilize the local building tradition in all its primitiveness of mud or timber. Here he is free to go ahead and build in his own fashion, but modifying his home practice to meet any differences of climate, material, and labour.

For the most part the architecture which the European plants wherever he goes had its origins on the sunny shores of Greece, so that it is well suited to brighter climates than our own. But there is a tendency to exaggerate the importance of the influence of climate upon architecture. The fact is that the European architecture adapts itself almost as readily as the European himself to climatic variations.

This question of climate is one that the amateur critic of architecture seizes upon with avidity. Its obviousness appeals to him. Yet, once again, were he to pause for thought and to seek for analogies he would see that in his daily life he is surrounded by foreign importations. The hen that lays his breakfast eggs is not indigenous to Europe, neither is the potato, neither are many of the most familiar trees and plants in the garden. And so it will be seen that this relation between climate and architecture is not nearly so important as the layman would have it to be.

The fact of the matter is that wherever the European goes he carries with him his flag, his language, and his architecture. That this architecture may often be bad is beside the point. It is no reflection on the language that at times it may be misused. Here is a right field for criticism, yet it is not here that it is for the most part directed. It is directed against the fact that the European builds his hotels, his government offices, his business premises, his banks, and even his houses in his own style instead of the country's in which he is building. It is a criticism typical of the confused thinking of today, in which, as has been remarked elsewhere, our growth of knowledge exceeds our growth of intelligence.

D

NEWS AND TOPICS

NEW BY-LAWS FOR THE NEW MATERIALS—THE DUBLIN TOWN PLANNING EXHIBITION—ARCHITECTURE AND THE NEW PRAYER BOOK.

OF recent years new materials and new methods of building have accumulated so rapidly as to necessitate considerable changes in the building by-laws. Architects and builders had realized, through harassing experience, that the old regulations were so sadly out of date as often to operate in restraint of trade, which is certainly not their function, but is too often their effect. Cautious hesitation about altering them is, of course, commendable when it can be shown to be reasonable and equitable. If it were really necessary to choose between two evils, it were surely better that by-laws should be a little too stringent rather than that they should be so lax as to menace public health and safety. That consideration certainly commands the fullest respect. By all means let us put "safety first," whether that somewhat hackneyed watchword be applied either to communal health or to structural stability. Yet salutary by-laws need not, and should not, "impede building development," as they are said to have done. Hence I must confess to some slight misgiving with respect to the statement that in the past three years a thousand new series of by-laws have been confirmed by the Ministry of Health. No doubt the obsolescent by-laws teem with anomalies that should be ruthlessly pruned away, but it must be borne in mind that excess of zeal may occasionally tend to feebleness, even as it formerly made restrictions too severe. Revised by-laws that are so fortunate as to hit the happy mean may possibly render true and laudable service to the building industry, and consequently to the State. Builders have been too long in bondage to by-laws that were either oppressively strict or feebly ineffectual. I trust that the new regulations may dexterously steer clear of both Scylla and Charybdis. And fervently I hope that they have been judiciously freed from the heartbreaking legal verbiage that no Fellow can understand.

* * *

In the August number of *Habari*, a newspaper edited by the Department of Education at Nairobi for the natives of Kenya Colony, I discovered an article on the building of houses. The writer emphasizes that it is important to note that cement, concrete, brick, plaster walls and tiled roofs do not make a clean house. "There are many houses in England properly built of these materials swarming with vermin, and in all respects filthy, because the people living in them are filthy themselves." He then describes a house built in Kenya of stone 20 ft. by 16 ft. with walls 2 ft. thick. It took five men and two boys fourteen days to build and an ox-cart twelve days for carting the stone. Pointed with a sticky white mud that is sometimes found in the bottom of streams in the stone districts of Kenya, with unglazed doors and windows and a grass roof, its cost was £10. It is stated that the most economical roof for Kenya is that of corrugated galvanized iron, which in the Highlands will last for twenty-five or thirty years. Experiments are also being made of building walls of sun-dried bricks, or of earth rammed solid and dressed with crude oil. It is difficult, however, to make these walls proof against white ants, rats, and damp.

An old friend of many in the architectural profession, Mr. Manning Robertson, has successfully carried through as hon. director the Housing and Town Planning Exhibition at Dublin, which closed last Saturday. This was arranged by the Civics Institute of Ireland and was part of the Dublin Civic Week. The new town plan of Dublin and maps of the Civic Survey were exhibited, while there was an admirable exhibition of students' drawings from the School of Architecture that has existed in University College, Dublin, since the foundation of the National University of Ireland, and has been considerably enlarged since the appointment to the Chair of Professor R. M. Butler. But the Irish were quite ready to study recent work carried out in England, including lay-out plans and designs of the L.C.C. Housing Estate at Downham, Roehampton, and Watling; diagrams illustrating the regional survey in the Thames Valley, mid-Surrey, and around Welwyn. The Ministry of Health lent some of the maps prepared by the South Wales Regional Survey Committee, which, it will be remembered, recommended the creation of new residential towns away from the coal measures, where subsidences are a serious danger and where steep and narrow valleys do not afford suitable sites for homes. The exhibition included plans from Germany, Denmark, and New York City. Mr. Manning Robertson's energy and skill have already had considerable influence upon architectural developments in Ireland, and now he is becoming an apostle of town planning.

* * *

The Scottish National War Memorial, designed by Sir Robert Lorimer, has aroused a far greater interest among the public than any building of recent years erected in Scotland. It is estimated that over 20,000 people have each week made a pilgrimage to it since it was opened by the King in July, and on Sundays the queue extends from the entrance, which is on the highest point of the castle, right down to the drawbridge. A feature of the memorial that is much admired is the amount of colour, not only in the stained glass windows, for which Mr. Strachan is responsible, but also on the various monuments to the regiments and other units of the army. Visitors, too, seem to be hushed by the reverence of the architecture, and speak in whispers as if at a service in a cathedral. The impression made is a tribute to the genius of Sir Robert Lorimer, who, by the way, is now busy on some new buildings for Edinburgh University.

* * *

The descent of showers of hot ashes which rendered Pompeii uninhabitable in A.D. 79, and preserved so many vessels of bronze and pottery for nearly two thousand years, had also the effect of igniting and destroying many wooden articles and leaving an impression that little wooden furniture was used in the houses of the period. At last, under a protecting arch, in a house in the street known to guides as the "Via dell' Abbondanza," a large cupboard or wardrobe of carved wood has been brought to light. The find is hailed as unique, though other inflammable objects have been discovered from time to time. In general, these have been small in size and have been taken from within ovens or jars of pottery in which they were more or less efficiently protected from the heat and from ignition, if not from desiccation. One swallow does not make a summer, and, although we must visualize

the possibility of a certain amount of wooden furniture together with the bronze and pottery, there is every probability that woodwork did not play anything like so prominent a part in the homes of Pompeii as in our more tree-clad northern land.

* * *

Soon the last vestiges of Christ's Hospital in Newgate Street will have been carried away to limbo in a house-breaker's lorry. No tangible trace will then remain to remind us of the old school except Christchurch, which Wren built in 1687 on the site of the ancient church of the Priory of Grey Friars, which church was destroyed in the Great Fire. Since the Bluecoat School was removed to Horsham (in 1902) the church has been but a *simulacrum*. Nevertheless, its very respectable associations should protect it from the ruthlessness of the crass utilitarians who are too impatient to await the earthquake effects of traffic vibration and of subterranean delvings. Buried in Christchurch are many worthies, including the Rev. James Boyer, sometime headmaster of Christ's Hospital School. Lamb and Coleridge were among his boys. It was Coleridge (it ought to have been Lamb !) who said of Boyer that " it was lucky the cherubim who took him to heaven were nothing but faces and wings, or he would infallibly have flogged them by the way."

* * *

Now that the internal affairs of the Established Church of England are so much in the public eye it has become a matter of some interest to speculate upon the possible effect upon church architecture of the Revision of the Book of Common Prayer. The avowed purpose of promoting discipline within the church is hardly an architectural theme, and most architects, like other laymen, will wonder how the possession of two Prayer Books will ensure any more respect for episcopal authority than the possession of one. Discipline is a matter of leadership, and a bishop of character who knows his job will maintain it in his diocese whether he has twenty different Prayer Books, or none ; though it should be apparent at a glance that the more Prayer Books he aspires to use, the more will his resources be taxed.

* * *

The other avowed purpose of enriching the church services is distinctly an artistic question which must interest the architect as an art lover, and possibly also in his professional capacity as church builder. A growing love of enrichment in church furniture has been apparent in some parishes, but the provision of gilded candlesticks imported from Rome and of mother-o'-pearl altar decorations from Bethlehem has often sufficed to gratify this desire without the intervention of the architect. In other cases, a scheme of redecoration has been carried out to harmonize with the valued movable accessories of worship. New lighting schemes with theatrical glare effects are also much in evidence, though architects may wish to plead " not guilty " of these incongruities. Where a new church is erected it is often the reverse of rich, though its simplicity may be not merely a question of parsimony, but of calculated design to show up elaborate vestments and ornate ecclesiastical equipment. On the whole, this simplicity of architectural framing for a gorgeous pageant is artistically sound. Something must be stark and fundamental, or the value of the greatest contrast is lost. If the church is itself ornate a priest clad in sackcloth would be needed to set off its glories in the most impressive manner.

Some time ago a photograph of Tokyo was published on the back page of the *Times*, showing the characteristic " advertising towers." Four towers were included in a view that subtended an angle only of about fifteen degrees, suggesting that the completed city will display a large number of such towers ranging in height from 200 ft. to 300 ft., and varying in designs which, though strange to a western eye, owe nothing to the pagoda. As I was anxious to know what all this might mean, I manœuvred to bring off a collision with a native of the country, whom I spied upon the golf course I most frequent. A Japanese, it may be remarked, can be identified in the open by a skilled eye at vast distances without telescopic aid, because of his legs, which, with all respect, if I may be allowed to say so, bend in the wrong place; the Japanese shank being shorter in proportion to its related thigh than the ideal favoured by Western races and commemorated in their sculptures. To this Japanese sportsman, then, I addressed myself; and, after introductory salutations touching the state of the greens, won permission to put certain questions. Did such towers exist before the earthquake ? The reply came without hesitation—Yeg ! (I trust that I quote my friend correctly; at any rate his reply was an affirmative.) Was their purpose to advertise shops ? Nog ! To carry advertisement signs, then ? Yeg ! Illuminated, like the Highlander across the river ? Yeg ! Yeg ! Were there a great many of them ? Oh, yeg ! So that soon it would not be necessary to die in order to experience Hell ? My companion grinned and nodded; he understood the aspirations of his Western brothers better than he did their tongue.

* * *

Consider this case ! We have here a people which—from the barbarism of squatting-mats, hand-woven and embroidered kimonos, rickshaws, ivory chopsticks, and a diet of rice, fish, and fruit—have scarcely yet raised themselves to the civilized dignity of chairs, trams, plus-fours and billycock hats, white metal spoons and forks, self-raising flour, egg powder, glucose, and other scientifically prepared delicacies, cutting out the British Empire in that industrial enterprise in which it is its pride to excel all other nations. We see the Japanese erecting costly edifices of elaborate design solely to sustain their commercial reputation, while we avail ourselves of temporary hoardings, blank walls, and derelict shot towers and smokestacks. Among the many instances cited in recent years to point the decay of British industry, I have never seen this devastating fact mentioned. The truth is we are altogether too well pleased with ourselves; we are too cocksure that we are *the* first chop. For instance, Sir Frank Dicksee is reported to have claimed that our Piccadilly Circus reached the highest pinnacle of vulgarity known to the world; but in this Sir Frank allowed his patriotic feelings to lead him astray. Piccadilly Circus, greatly as we may pride ourselves upon it, belongs, in fact, to a quite second-rate order of spiritual squalor. Although it is the best our merchant princes have been able to achieve in the face of refractory and difficult circumstances, it is a botch, a makeshift, and a mere improvisation beside what has been done in Japan. We must look to the Japanese if we would learn those methods which alone hold out a definite promise that the graces of life may, by the exercise of courage and initiative, one day been tirely wiped out. Architects who are the designers of towers will be among the first to ask " can nothing be done ? "

ASTRAGAL

SIGNS, NUMBERS AND NAMES: ii

[BY V. M. CHRISTY]

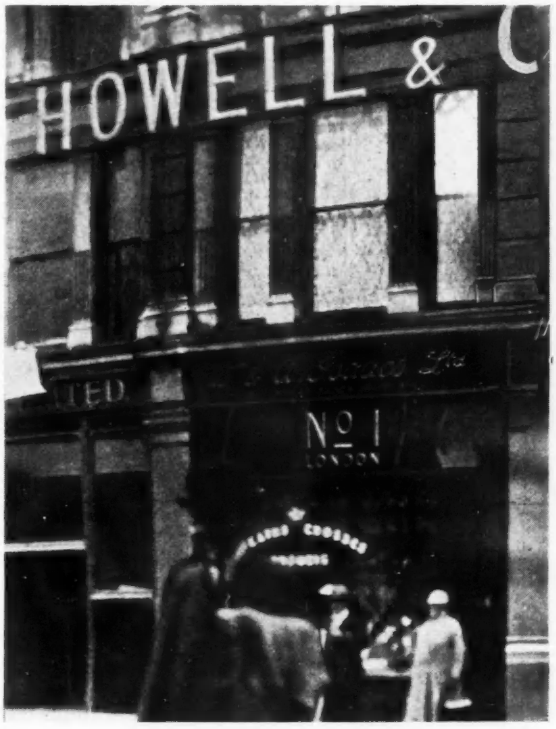
THE inscribing of numbers upon buildings in regular streets as a means of identification is a matter of greater importance than might be supposed from the small amount of attention generally bestowed on it. There are two essential points without which numbering is senseless: first, it must be remembered that the number denotes membership of a community, and is not simply an individual eccentricity; secondly, the number should be legible at all times, and this may depend upon its position upon the building. A house name may quite reasonably appear in almost any postion desired; but the number, whose very existence presupposes the existence of others, should admit the fact. In the case of buildings exactly similar to one another it produces a more harmonious effect if the position, size, shape, and style of the numbering are exactly similar on each unit. Punctilious orderliness is as essential for the appearance of a number of uniform house fronts as it is for a platoon of soldiers. Yet to those who know, each house can still retain its individual entity. Even the tenth house in Downing Street may be known familiarly as " No. 10."

It is interesting to notice the numbering of new Regent Street. It might be supposed that so obvious an opportunity for a reasonable degree of uniformity might have been utilized, at least in each separate block. But the street of today seems more and more to become a species of club composed of unrelated buildings, where no one speaks to anyone, rather than a family, where all recognize themselves as related parts of a closely-knit whole. " No. 100 " uses its number as a name; " 98 " marks its aloofness from its brethren in the same block by sloping its figures in a reverse direction from theirs; while the position in which the figures are placed on ninety-something-else brings the eye down with a jerk to a lower level. Elsewhere, both on shops and private houses, the same state of things is found. In one cursory glance six different methods were noticed: white figures on a glass fanlight, dark figures on a dark fanlight, brass figures on the door, painted figures on porch columns, figures carved on stone gate-posts, and figures wrought into the intricate pattern on a lamp above the door. In the last case the figures are hardly perceptible at all, as the ironwork is all the same colour. The numbering of shops and offices is often complicated by the existence of a private door, or by an entrance to offices separately occupied. Such expedients as a notice-board and pointing hand indicating " No. 70 entrance " is only liable to confuse the issue when the doorways and the shop already bear that number in triplicate.

There is no definite rule about the position in which badges should be worn on civilian dress, but, owing to a convenient position existing in the otherwise useless buttonhole, it has become general to wear badges there. Time and patience might be saved if some such convention were usual with regard to the distinguishing marks on buildings. Moreover, a greater harmony would appear in our streets. The rule need not be strict; indeed, elasticity would be desirable lest originality of design should be crippled. But to prevent the necessity for putting our street buildings into uniform, more attention must be given to the practical and the æsthetic aspects of this system of distinguishing buildings.

In an age when all can read, lettering is a natural means to employ for attracting attention, for imparting information, and for identifying buildings. Letters are everywhere, sometimes an advantage, often a curse, too rarely an unmixed blessing. The method of placing the lettered inscription on a building may be of two kinds: permanent and applied. The position in which it appears and the relation between one word and another, or one letter and its neighbours, must vary with the form of the building. It may be that the inscription conforms to the curves of a circular tower, or sets itself in opposition to an angle; it may be that the spacing of windows or the existence of some dominant central motif governs the arrangement of the lettering. The type of lettering, the decorative value given to inscriptions, the materials used, and the setting are matters which are gradually receiving more attention from the architect and the business man; but the public

The number on the lintel is small and neat, but perfectly clear and legible.



The form and scale of the large letters are appropriate to their position on the building.

Numbers and names in the Strand.

Inconspicuous but tasteful lettering of a former age.

Another example of numbers used as signs, and an elaborate clock and barometer as a sign.

A spectacle sign is both simple and effective. The next shop uses its number as a sign.

All kinds of goods and services are brought to public notice by lettering of many varieties.

as a whole is not yet sufficiently alive to the importance of the matter as it affects its own comfort, its own pleasure, even its own sanity. Too often a good or mediocre building is completely disfigured and its unity of composition shattered by the independent work of the sign-writer or the publicity poster-man called in to give the finishing touch. An astonishing variety of method and style of utilizing twenty-six letters can be seen. Some firms secure to themselves the distinction of a kind of "sign" owing to the peculiar way in which they write their name or the name of the commodity they offer. This is especially possible in the case of multiple shops. The form of lettering adopted may have few merits in itself, but as a "sign" it is useful, and may become familiar to the public it is desired to attract. In some cases it would seem as if legibility were of no account so long as the "label" succeed in catching the eye, whether for pleasure or pain. A few individual firms, with perhaps only one establishment, adopt a form of sign made by some peculiar arrangement of the letters. Occasionally this is inoffensively done; too often the reverse. It may be by means of distorted alphabets producing an uncomfortable sensation of disorder; it may be by a species of disturbing nightmare puzzle, or the dazzling lines of quivering electric colours.

Banks may usually be trusted to achieve good lettering, even if dignity is bought at the cost of unimaginativeness. Banks may be regarded as holding in trusteeship the purity of the alphabet, even as the Law and the Church are popularly supposed to preserve the integrity of the King's English. In some sad cases the trust is betrayed. Failure to reach perfection, with otherwise unimpeachable lettering, arises sometimes from the fact that the wording on the fascia seems unable to "hit it off" with the piers over which it occurs. To avoid the feeling of discomfort and oscillation, groups of letters should have some point at which their connection with the surface of the building is apparent, otherwise the lettering may seem to be on the building, but not of it.

The use of flowing script on name labels is in certain cases appropriate and pleasing. In others it is mere affectation. A small, neat, flowing signature has about it a touch of intimacy, almost of femininity, which may be used at times very effectively. It is suited, for instance, to shops where objects of luxury or adornment are displayed, or where delicate fabrics are fashioned into elegant garments. The tailor needs to write his name in sturdier style than the court dressmaker. The plumber's alphabet should differ from that of the music-seller or the tobacconist. The dealer in *objets d'art* will legitimately call attention to his wares by adopting some form of antique alphabet for designating his shop. The man who has struck a new note in curtain fabrics may perhaps set up his name in colours that are a trifle bizarre; while an "oriental" atmosphere may be suggested by the form of the letters above a window-show of Eastern fabrics. Printers and stationers might be expected to show some discrimination in their choice of lettering, but, unfortunately, it is not always so. As for a book shop, one may usually look there with confidence for suitability and good taste in lettering. Many booksellers' signs suggest the discretion of the family lawyer—indeed, they verge upon the professional. The medical man desires his consulting-room to be easily found by his patients, and his plate must therefore be lettered legibly, without overstepping the narrow bounds of professional reserve. It is unfortunate that the dentist has often so much less reticence than any other public benefactor.

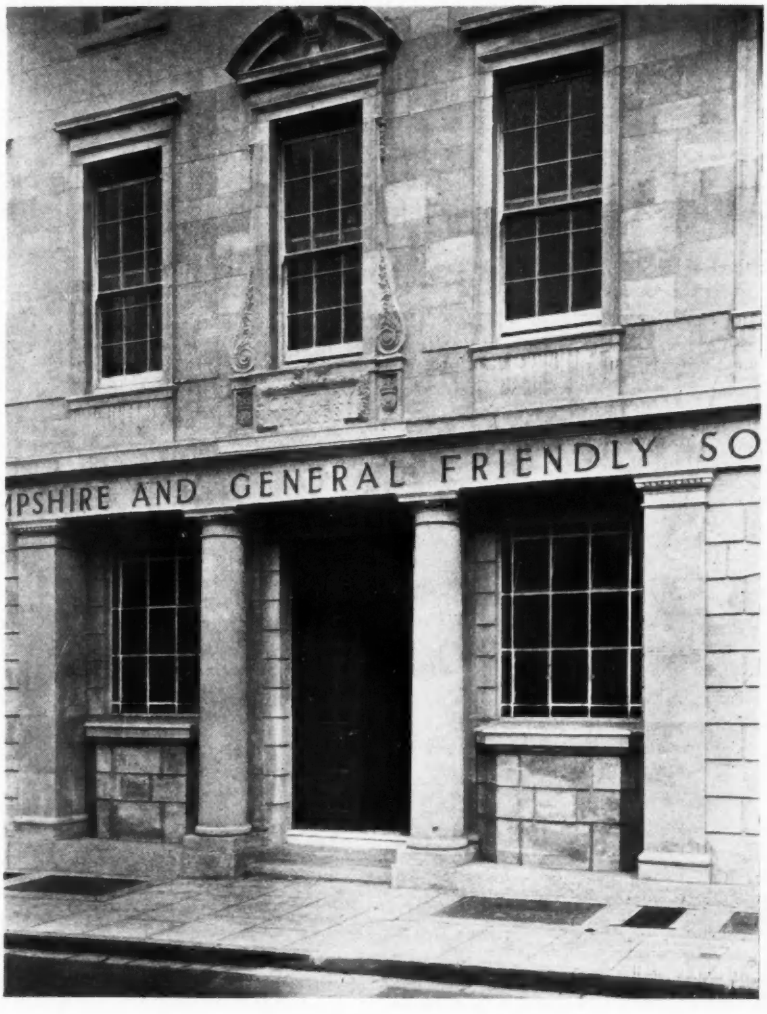
A few cheering examples of what can be done, and is being done here and there, indicate a tendency towards greater simplicity and clearness in inscriptions, such as those discussed above. But there is room for reform in all branches of the design of identification marks on buildings. To bring it about the architect must not be ashamed to study the science and art of modern publicity, nor must the business man be afraid to trust him in this matter. Only by means of such give and take can we be delivered from the curse of letters. Only thus can our architecture receive its due, and the distinguishing marks on buildings become once more real works of art, fulfilling their function but not usurping an unwarranted position of importance.

A PROVINCIAL INSURANCE OFFICE

[BY NATHANIEL LLOYD]

THE rebuilding of an ancient city is a process one views with interest tempered by apprehension. Two courses may prove disastrous: the familiar invasion of the shop front consisting of glass and an aggressive fascia, or the adoption of imitative and pseudo-Gothic treatment under the mistaken idea that this will be in harmony with the ancient buildings. The one is often vulgar and unpleasing; the other irritating and equally deplorable. Our remoter forefathers had no difficulty in solving the problem. They built in the manner of their times upon the secure foundation of traditional development, and if we walk through the streets of Winchester we find that in the eighteenth century and in the early years of the nineteenth century new buildings were created in the manner of the Renaissance as seen by contemporary eyes and modified to meet current requirements. In Jewry Street all buildings having any pretensions to architectural character are of this kind, and it is in Jewry Street that the new premises for the Hampshire and General Friendly Society have just been completed. This old-established society occupied offices in its own building in High Street, erected perhaps fifty years ago. The style of this old building is that bastard Elizabethan, embodying gables and mullioned windows, built (as no Elizabethan builder would have built it) in the belief that it was particularly well suited to the old city. The effort to please is obvious, as is the incongruity of such very intimate and domestic architecture for the housing of an insurance and friendly society—such an exterior (if it suggests anything) suggests cosy rooms tenanted by staid but sleepy occupants; in fact, the impression created upon the minds of passers-by must be that of domesticity instead of the solidity of a house of business.

It is evident that Mr. T. D. Atkinson had clearly in his mind the right type of building for the new office in Jewry Street, and how that building should express function. The street elevation conveys an impression of grace, order, and stability, to attain which Mr. Atkinson has marshalled his elements in masterly fashion. The treatment of the ground floor by rustications and substantial piers, the setting back of the principal entrance and flanking this by



The Hampshire and General Friendly Society's Building, Winchester. By T. D. Atkinson. A detail of the entrance.

columns, produce an impression of stability. The grouping of windows, the graceful accentuation of one as a focal point; the slight shadows produced by the entablatures, and the deeper ones by the main cornice and set-back entrance are all "tricks of the trade," it is true; but they are tricks well done, not tricks bungled. The result is an elevation which, with no apparent effort, attracts the eye, not by the vulgarity of startling novelty, but by sheer merit produced by virtue of proportion, and combination of units. It is difficult, and perhaps ungracious, to find fault with such a design, but perhaps exception may be taken to the provision of cills to the windows on each side of the entrance, which are already protected from weather by being set back; yet these are so happily done and serve so well as cappings to the projecting bases that one forgives the technical solecism. It would also be interesting to know why Mr. Atkinson solved

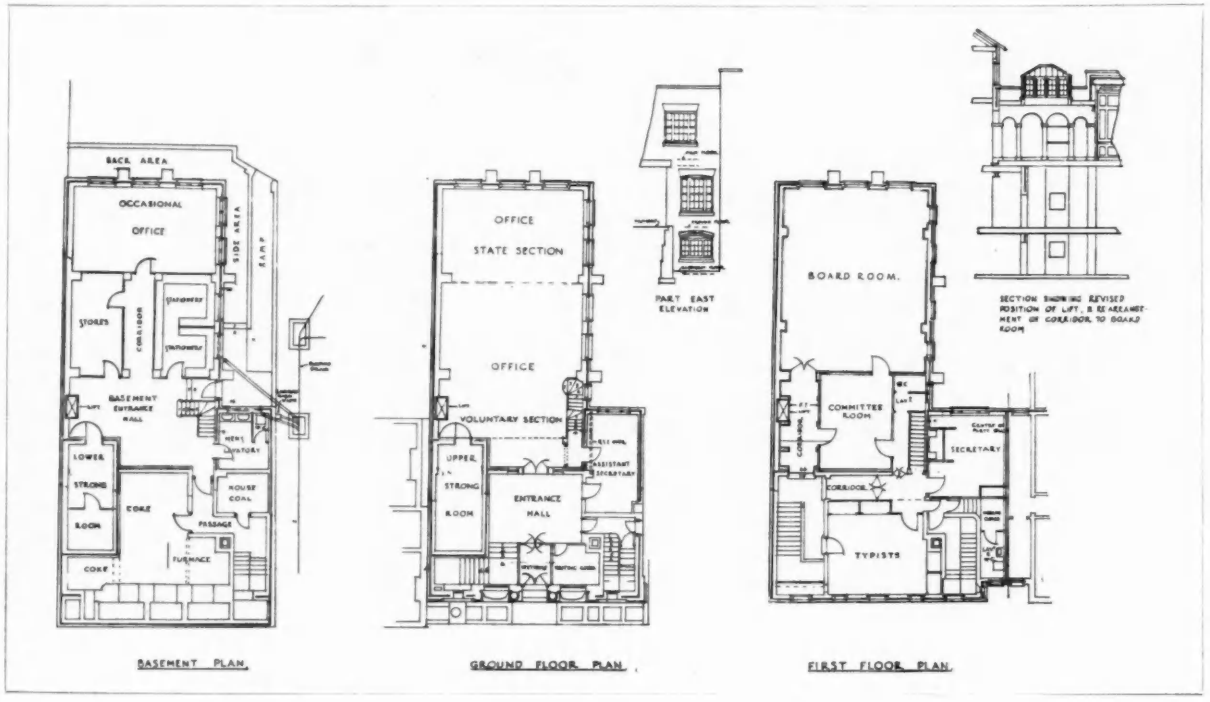
The Hampshire and General Friendly Society's Building, Winchester. By T. D. Atkinson. Above, a general view. Below, the plans.

the problem of glazing these wide windows by introducing narrow marginal squares of glass; a treatment scarcely in keeping with the earlier and more robust character of the rest of his fenestration.

Latin inscriptions have often resulted in the humiliation of architects using them, but in the use of the word *Incohatum*, Mr. Atkinson has avoided a subtle trap into which he would have fallen had he employed the more popular but quite incorrect *Inchoatum*. His inscription therefore reads:

Incohatum MDCCCXXV
Aedificatum MCMXXV.

We all know Mr. Atkinson as an archæologist and as an authority upon Gothic architecture. We know the professional interest he shows in everything appertaining to a modern building which he may be shown, and also how immediately he is taken to a medieval building he brightens up, plunges into close examination, and fairly sparkles with knowledge and enthusiasm. Now he has shown us he can make effective play with very different factors and produce with them a building not only



The Hampshire and General Friendly Society's Building, Winchester. By T. D. Atkinson. Two views of the entrance hall.

admirably suited to its situation and purpose, but which is as scholarly as it is charming.

One of the commonest faults to be noticed in modern buildings is failure to dispose of soil and other pipes, which, for lack of forethought, disfigure elevations. An ingenious method is adopted by Mr. Atkinson, who has carried the pipes from w.c.s and lavatories down an air shaft in the centre of the building. The V.S.P. seen in the illustration of the Jewry Street elevation belongs to the adjoining building, and so is beyond control. This air shaft measures some 3 ft. 6 in. by 2 ft. It starts over the vanway entry, and is carried up in brickwork through the roof. Easy access is provided from each floor, and the space provided is ample for a man to work.

The planning of the offices is well suited to the double functions performed by the Society. The basement is given over to storage, lavatories, etc. Entering the ground floor from the street we pass through a vestibule into the entrance hall, off which rises the principal staircase, having a bronze and iron balustrade at the top landing and a somewhat uninteresting raking handrail, which can be seen in the bottom illustration on page 411, which also shows the entrance from the street, the graceful treatment of the lunette glazings, the large oak panelling, and the oak radiator cases. The top illustration on page 411 shows the doors from entrance hall to offices.

The board room measures 36×28 ft., but, with a height restricted to 15 ft., Mr. Atkinson wisely carried his order and oak panelling the full height of the room; indeed, not to have done so would have dwarfed and spoiled the spacious effect. Before the dais provided for chairman and officers is a wide counter-table, furnishing ample space for handling plans and documents. Before this, in concentric semicircles, are the tables provided for members of the board, whose convenience has been consulted further by provision of good top light. The treatment of the order and panelling behind the chairman's seat should prove a most dignified background. The detailing of the back stairs newels, the architraves to painted doorways and other mouldings is always refined, and it is obvious that such results can only have been achieved by unremitting personal attention.

No doubt Winchester, like other cities, will be entirely rebuilt (so far as its business quarters are concerned) during the lifetime of the present generation. Elsewhere, our great banks have set good examples in erecting new branches in harmony with their situations, and now we find public-houses (long notorious for their abominable elevations) being built with equal regard to architectural amenities. It is hoped that the large retailers will follow by abandoning the glass and gilt theme for the fronts of their branch shops—an example that cannot fail to influence private traders also. The Hampshire and General Friendly Society has now shown its appreciation of building responsibility, and their new building in Jewry Street may prove a guide and set a standard as rebuilding the rest of the street proceeds in its inevitable and natural course. Should this desirable end result, the new Winchester should attain rank as high amongst provincial cities for its modern buildings, as it has long enjoyed in respect of its ancient ones.

The Hampshire and General Friendly Society's Building, Winchester. By T. D. Atkinson. The Board Room.

THE MAKING OF SANITARY WARE

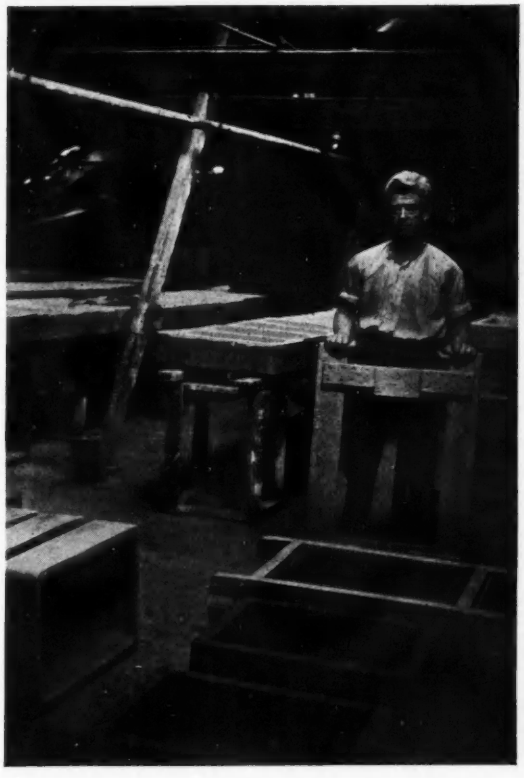
[BY KENNETH GLOVER]

THE manufacture of glazed fireclay wares is of an interesting nature, and a knowledge of the processes should prove of value to those who have to select such articles for use in buildings. Glazed fireclay ware is a strong, semi-vitreous material which is covered with a glaze and fired in kilns at a very much higher temperature than earthenware, with which it is not to be confused. It is rather "tough" than hard and, therefore, lacks the brittleness of pottery or earthenware, and is not so easily broken.

The first link in the chain of operations which leads to the completed article consists in the mining of the clay, which is usually found in seams lying next to the coal, whence it is dislodged by firing. The clay naturally varies in localities and requires different handling to bring it to the proper condition for working. When it is delivered into the works it arrives in fairly large lumps of varying size, and these have to be broken up for examination. The clay is, of course, not entirely free of matter (such as coal or iron nodules) which is not only not needed, but which would actually be detrimental to the production of sound wares. This foreign matter must therefore be eliminated, and the clay is broken up and examined lump by lump, those containing any appreciable amount of coal or iron being discarded and thrown on one side. Men who are constantly employed on this work become expert in the detection of suitable material.

The suitable lumps are dropped into the barrows and wheeled away to the rolling mill, but the clay is not ground down alone; it is mixed with a certain amount of "grog," which is nothing more than broken, burnt fireclay. The object of adding "grog" is to open out the pores of the clay, and makes for easier egress of gases and moisture. It also induces contraction of the clay, which, from moulding to burning, contracts no less than 1 in. to the foot. After the "grog" and clay have been sufficiently mixed together into a mass of proper consistency (not unlike coarse porridge) the mixture is then ready for the moulder. We do not pretend here to describe the methods of manufacture used in all factories; that would be too lengthy a task, because methods vary, partly owing to the nature of the clays and partly owing to the differing ideas of manufacturers as to consistency of mixture, relative value of moulding or casting and ingredients, and number of coats of body and glaze.

Two methods of forming the articles are in use—hand-moulding and casting. Probably the simplest operation in hand-moulding is the making of the ordinary shallow scullery-sink. The illustration which appears on this page shows a moulder standing by some hand-moulded sinks, while in his hands he holds a bottom frame, which is placed on the floor, and into the open part of which he flings the clay. He then levels the mass with a "fiddle" (which is really more like a bow): this simply amounts to wire-cutting the surplus material down to the proper thickness. He is then ready to build up the sides and round off the corners. In the illustration some sinks may be seen "finished off," ready for the glazing, and behind the workman other sinks are lying on the bench, glazed and ready for the kiln.



Hand-moulding sinks. The moulder is holding a bottom frame. This is placed on the floor and clay is flung into the open part. He then levels the mass with a "fiddle," builds up the sides and rounds off the corners.

A more elaborate piece of hand-moulding is seen in the top illustration (page 414); this shows very clearly the whole process of hand-moulding a lavatory basin. At the back is seen the mould over which the worker lays the clay to the required thickness of about ¾ in. Into the hole which is seen near the bottom of the mould the workman fits a plug (seen lying on the centre basin). The plug when fitted projects the required thickness above the general level of the mould, and the workman covers the mould with clay up to the plug top. The plug is, of course, nothing more or less than a gauge, and the workman's skill and experience count for as much as anything in getting the correct uniform amount of clay on to the mould. In the centre of the illustration we see a mould completely covered and ready for reversing; in the foreground is a lavatory basin removed from the mould and partly "leathered-off." The casting process is a variation of any other casting process, the clay being poured into plaster moulds. The interior surface of the plaster is smooth and has the appearance of a "matte" glaze. After a suitable time has elapsed the top half of the mould is removed and the article exposed. In casting water-closet pans by this process it is possible to get a water-rim of uniform thickness.

After the articles have been moulded or cast they have to be finished off with the leather, and they are then placed in the drying-room. The illustration at the bottom of page 414 shows a variety of articles stacked up in the drying-room, where they will remain until they are in a suitable condition to receive the glaze. Methods of glazing differ in the various factories. The glaze consists of a certain number of coats of "body" and a certain number of coats of "glaze." The glaze is mixed by hand, the various materials being passed through very fine copper sieves.

After glazing follows the firing in the kilns, and this is a matter of some five or six days. The goods are stacked up, propped on small bobbins of fireclay on shelves, until the kiln is full. Test pieces are withdrawn on iron rods through the trial-holes to test the progress of firing, which is also watched by the use of seger cones which drop gradually at varying temperatures. The glaze is quite dull before being fired. This is the final operation of the manufacturing of plain articles, but some have still to receive attention from the joiner or fitter.

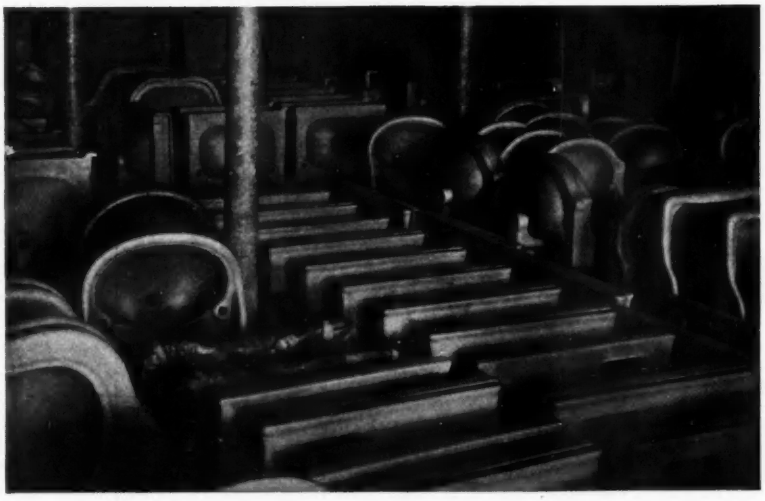
The resulting article should present a brilliant surface of *uniform* white, whether it be a creamy white or a bluish white. No traces of the clay beneath should be visible, nor should it be possible to detect any brush lines. The architect should reject pieces showing small cracks and pinholes, but he must not be hypercritical, particularly in examining very large articles. Greenish stains, for instance, if rather unsightly, do not detract from the serviceability of the ware at all. Where the object is, above all, hygiene, a dull, almost " matte " glaze should be avoided, as, of course, it retains dirt. A good test is to try and write upon the ware with a lead pencil; if this can be easily done the surface has not a sufficiently high gloss. A fine glossy, mirror-like surface will not take the pencilling and will not retain dirt. Obviously one must have in mind the price of the article; a first-class article cannot be obtained at a very low price.

An interesting feature of present-day manufacture is the large variety of goods which must be made in order to keep abreast of scientific and sociological progress. Among such productions may be mentioned pithead baths, factory, hospital, laboratory, and hairdressing saloon fittings, and drinking fountains. Articles which have appeared in this JOURNAL have discussed the equipment and arrangement of the modern bathroom and kitchen, and there is now a great variety of sanitary ware made for these departments of domestic life. In kitchen fittings, for instance, there are innumerable types of sink—rectangular, corner with high backs (a very useful type), with drainers of teak or fireclay, with lavatory basin combined, and so on.

Although catalogues of fireclay wares now generally leave little for complaint, sometimes important sizes are missing, as in the case of lavatory basins with leg supports. The height is obviously fixed, and the architect often needs to know the total height at the back of the basin, so that he may arrange for tiling, or for the sill height of a window or borrowed light to fit neatly on to the basin back.

I am indebted to Messrs. Adamsez for kindly allowing me to take photographs in their works.

Hand-moulding a lavatory basin. At the back is seen the mould. A plug fitted into the hole near the bottom of the mould projects the required thickness above the general level of the mould. The mould in the centre of the illustration is completely covered and ready for reversing.



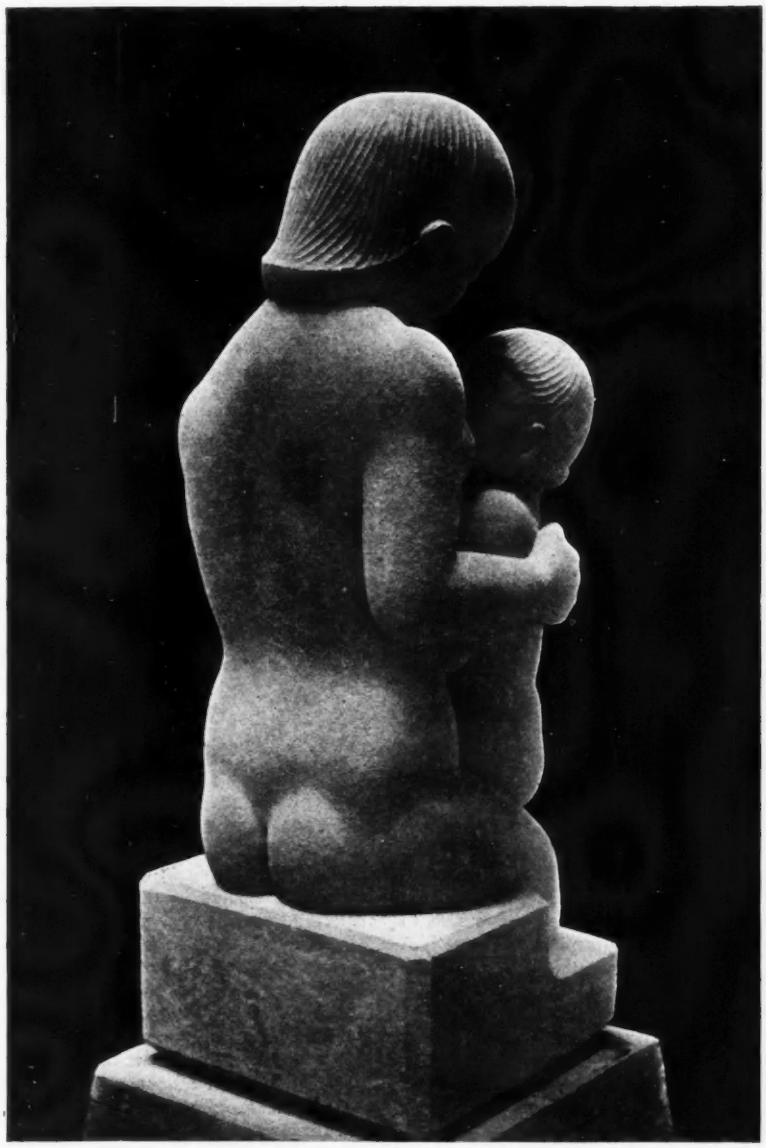
Articles stacked in the drying-room, where they remain until they are in a suitable condition to receive the glaze.

LITERATURE

THE CARVER-SCULPTOR

IF it is asked what is the most important function of the sculptor apart from his creative faculty, the answer is carving. If it is asked what is the most important function of architectural decoration, the answer is carving. The truth about carving is getting known. It has been obscured for centuries. The Greeks had it, the Gothic men had it. It was lost in the lavish and beautiful profusion of bronze casting of the Renaissance; it was prostituted at the neo-Classical revival and is only now once more emerging.

It is the more easily recognized because in this country there is a great carving artist in the person of Eric Gill, as there is in France in the person of Joseph Bernard. With two such artists to vindicate glyptic sculpture, there is hope for its general recognition. Eric Gill carves because he must; he is a brilliant master of line, and glyptic sculpture is in its essence applied drawing in line as opposed to the amorphous plasticity of modelling. Gill draws with a point, as his drawings, illustrated to the extent of two only in this interesting book, prove, as he cuts with the compound point which is the chisel-edge, and this is the way to practical authentic sculpture.



"Mother and Child" in Portland stone. Back view. [*From* Eric Gill.]

A technique cannot make an artist, however good a craftsman it may engender. Eric Gill is an artist by virtue of his imagination; his power of creating visions which his technique realizes as

he sees them, truly and authentically. His imagination is a riotous one, even tortured. His mind sways this way and that, but ever with a firm rhythm. It sways, but it does not swerve, for its owner sees as directly as he cuts. He sees emotion in form; he is Christian and Pagan so far as his mere subjects go. He has done two wonderful sets of Stations of the Cross; he has done two wonderful women doing the splits. It is feeling that commands his expressions, not labels. The Stations live and move because of their intensity of emotion; the splits women live and move because they also possess this quality.

Eric Gill expresses what he must, for he is the true and uncompromising artist as he is the true and uncompromising craftsman. His expressions of the emotions are supremely beautiful because they are supremely true and supremely intense. The artist has bent nature to his will; he is no realist, but he is a naturalist. He has distorted nature, but he has also given style to nature. Style is only the degree by which art separates nature from imagination.

Some of the figures illustrated are bad in style, because distortion has led the imagination astray, for distortion is a dangerous thing in the hands of anyone but a master. Even in the hands of a master it is dangerous, as witness Gill's "Tumbler," an unpleasant pattern; but look at the "Mother and Child," plate xiv, and the style of it in pure line derived from nature is absolutely convincing.

Eric Gill is a convincing stylist because he has but one style, which serves his whole purpose of expression, even in his modelled work, which by wise editorial decision is almost absent from this volume. Not that Gill's modelled work is not fine, for it is, indeed, more distinctive than most modelled work of our time, but because it is not plastic. The "Madonna and Child," plate xi, looks like a Gothic figure. Eric Gill's genius is entirely glyptic. One great value of this little book is its introduction of authentic carved sculpture to a public which is apt to assume that sculpture is modelling. Gill's work will convince that public that it is not.

Eric Gill. London: Ernest Benn, Ltd. Cr. 4to. Illus. pp. 30+ plates 34. Price 8s. 6d.

ARCHITECTURE AND SCULPTURE

Eric Gill has been lecturing at the University of Manchester under the auspices of the Royal Manchester Institution, that old and honourable society, the Manchester Society of Architects and the Manchester Branch of the Institute of Builders. No artist could hope for a better opportunity for propaganda, and Eric Gill made the most of it. He really lectured the trade, and, I should think, the trade relished his home truths. Briefly, his thesis was that sculpture is the shaping of things, architecture the constructing of them.

Eric Gill started his career as a carver of lettering, a craftsman in love with cutting, trained as to the hands. He soon discovered that he had a mind with imaginative perceptivity, and became an artist. A primitive lust for form expression drove him to sculpture and to drawing, and a further inspiration drove him into exposition, written and spoken, hence this admirable and useful address.

Eric Gill is an ironic quietist. He does not fulminate, but with a Jesuit's subtlety analyses the fallacies of the things he abhors and reduces them to absurdity, the more absurd in that these objects of his loathing are admittedly necessary. As he is no pessimist, however, he allows them to pass with a witty sneer.

His quietism is not perturbed by the unsuitable. But he is no architect by his own definition, for he is unwilling to co-ordinate, and the crying need of civilization today is co-ordination, the co-ordination of the arts with the lives we are now constrained to lead. He would be well serving humanity if he assumed the rôle of architect-sculptor, admitting the monogenesis of the two arts, and bringing sculpture once more into its effulgent own, equal to, and level with architecture.

He is too content to let it go; too confident of his own powers of glyptic expression to doubt that sculpture in its essence can ever really suffer, but we want sculpture to be as popular as architecture, for popularity is the breath of modern life. Unfortunately sculpture can and does suffer, for the minds of the people are not sufficiently attuned to the minds of the artists. The latter have neglected part of their duty—the education of every man in the appreciation of art. They have cast their burden on the critics whom very frequently deride, and it has returned to them after many days. In this Manchester address and in others Eric Gill has realized this, and has done his best to avoid the reproach.

KINETON PARKES

Architecture and Sculpture: A Lecture. By Eric Gill, T.S.D. Manchester: George Falkner and Sons, 170 Deansgate.

DISAPPEARING LONDON

In view of the rapidity with which London is changing its aspect, its citizens are fortunate in having a chronicler and recorder of the omniscience and diligence of Mr. Beresford Chancellor.

Time-worn and begrimed, but nevertheless rich in association and often beautiful, building after building disappears, not, however, before Mr. Chancellor has had time to attend to the obsequies and pen an obituary. This latest volume is a collection of twelve etchings, for in this record the author has sought aid from amongst the school of topographical etchers, of which, fortunately, there is no lack today. For the most part the familiar places are dealt with: Piccadilly and its Circus; Regent Street and its quadrant; the old G.P.O. and Waterloo Bridge; the Bank of England and Devonshire House; there are, however, some lesser-known views, such as that of the Savoy steps or the Cloth Fair.

As records of architecture the value of the sketches varies between the haze and delicacy of Walcot and the clear-cut precision of Schwabe. It is the sort of book, however, that we shall rejoice to look at in ten years and say to ourselves as we do so: "Was it really ever like that?" or, perhaps, with a sigh: "Ah, those were buildings!" The whole volume, with Mr. Chancellor's typically informative introduction, is a very good five shillings' worth.

H. J. B.

Disappearing London. By E. Beresford Chancellor. "The Studio," Ltd., London. Price 5s. net.

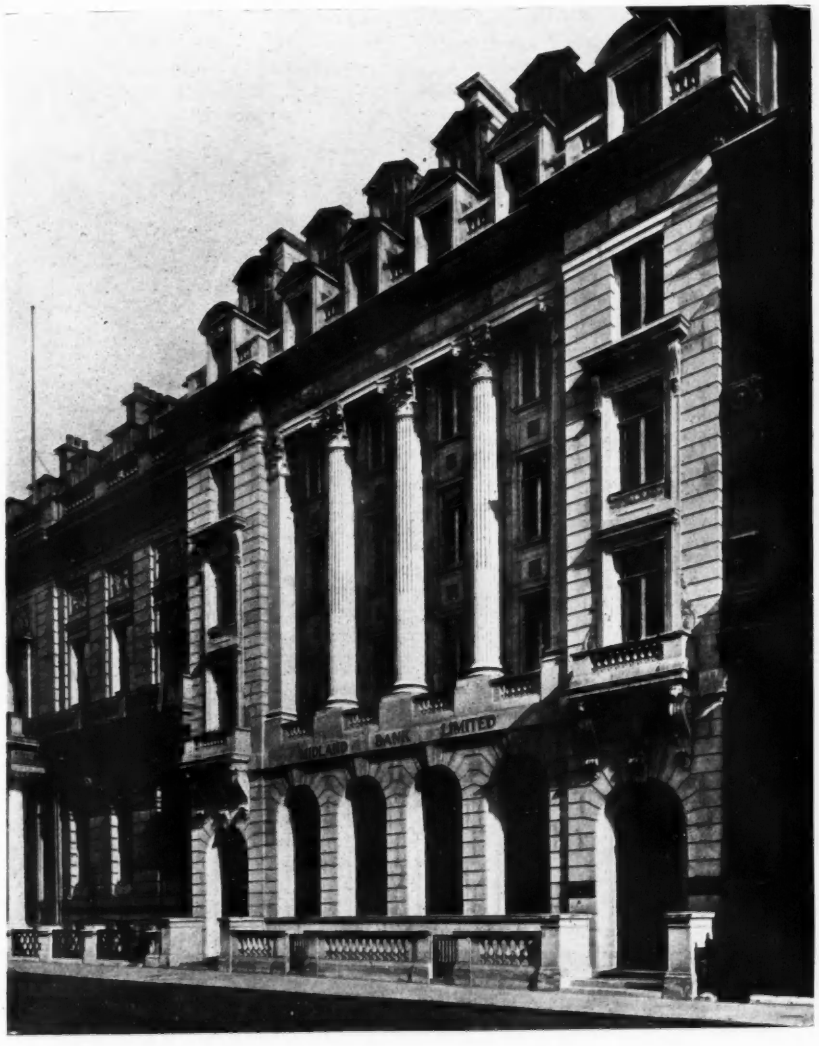
CONCRETE PRODUCTS AND CAST STONE

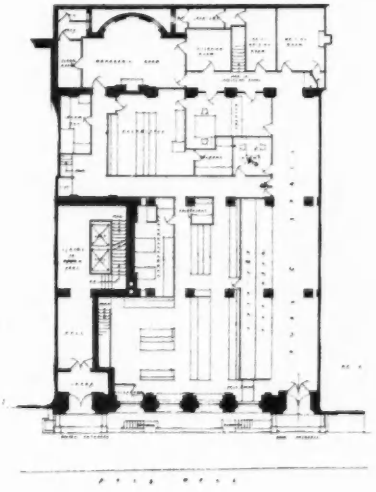
This is a new volume dealing exhaustively with every phase of the manufacture of pre-cast concrete, concrete products, and cast stone of every description and for all purposes. Throughout it is written in simple language, illustrated with photographs and clear drawings on practically every page. All the available information on pre-cast concrete, from tiles to architectural cast stone, is embodied in the book. The essentials of selection of materials, grading and proportioning, mixing, curing, etc., are fully covered. All the generally used methods of surface treatment (and many new ones) are described and illustrated in colour and half-tone, and the methods of making coloured concrete are explained.

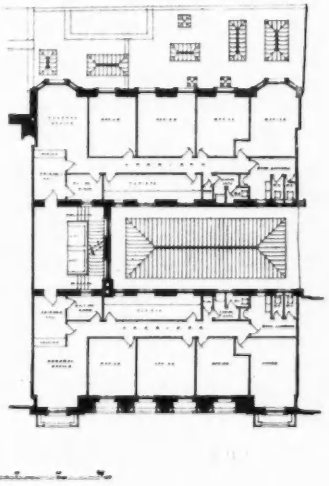
Various surface textures are illustrated, and the methods of obtaining them described. The design and manufacture of moulds for all types of concrete products and all shapes of cast stone are dealt with at length, the descriptions of the best and simplest moulds for each type of product being illustrated by more than fifty working drawings and illustrations of moulds in wood, plaster, sand, glue, concrete, etc. Working drawings are given of moulds for columns, cornice, posts, paving flags, kerb and channel, blocks and slabs, bricks, ridge and valley tiles, steps, sills, lintels, edging, balustrade, sundials, birdbaths, lettered panels, ornamental work, etc. Suitable proportions of cement and aggregate are given for all products.

Manufacture and Uses of Concrete Products and Cast Stone. By H. L. Childe. 256 pp.; 160 illus. London: Concrete Publications, Ltd. Price 5s. net.

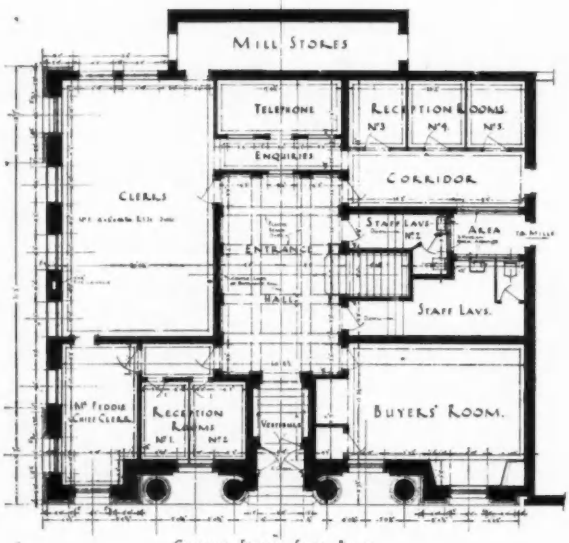
CURRENT WORK



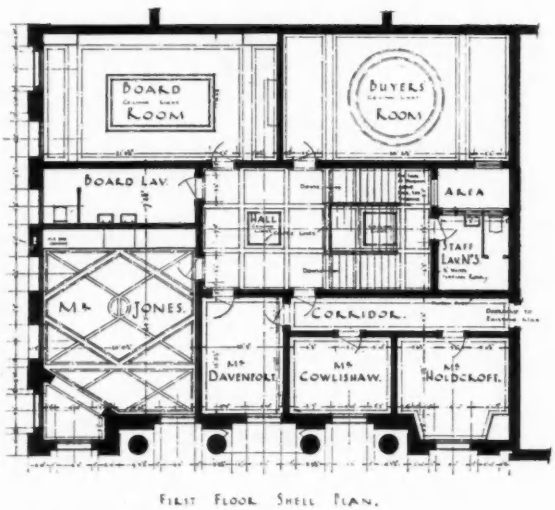




Midland Bank, Pall Mall. By Whinney, Son, and Austen Hall.



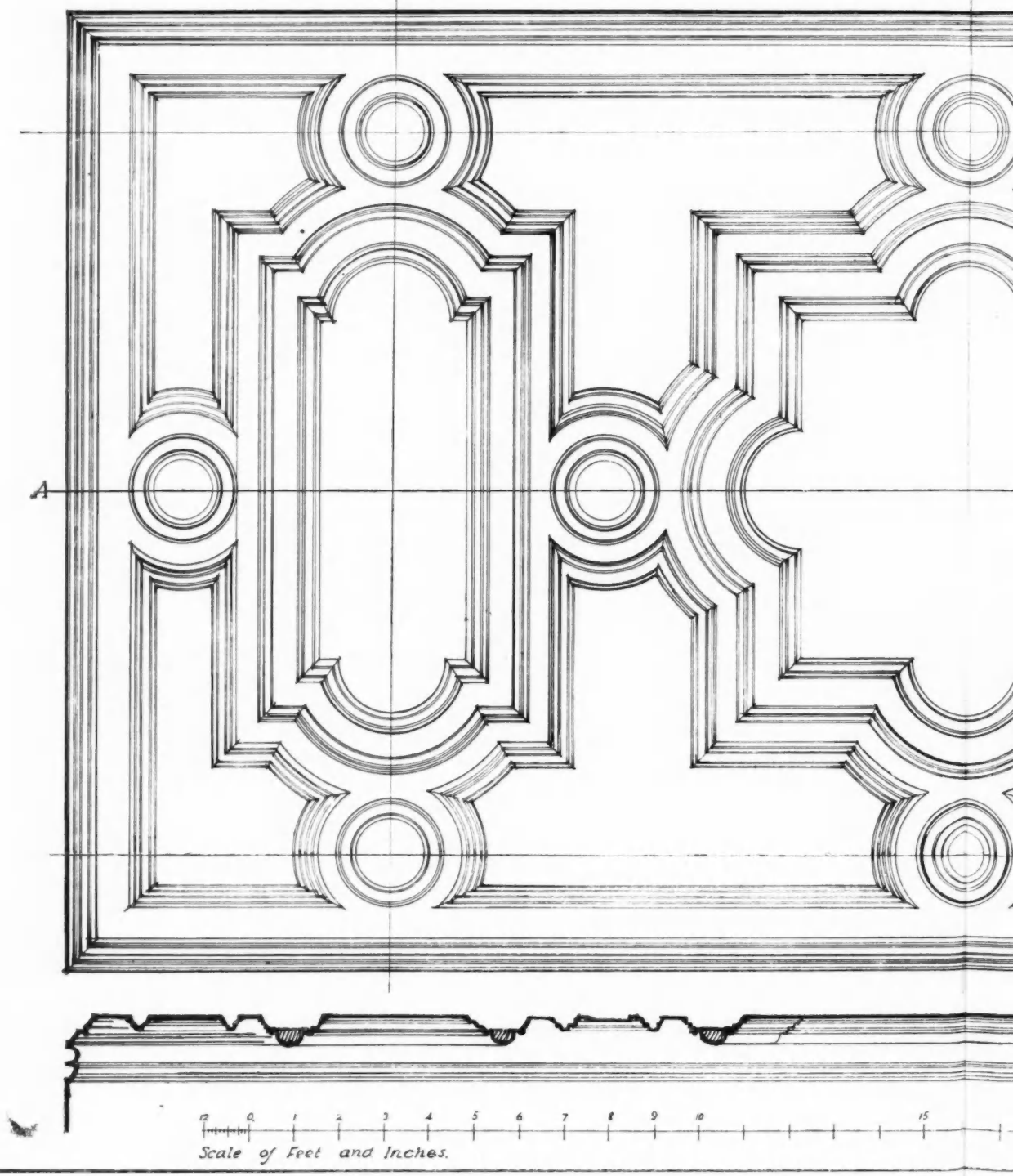
GROUND FLOOR. SHELL PLAN.



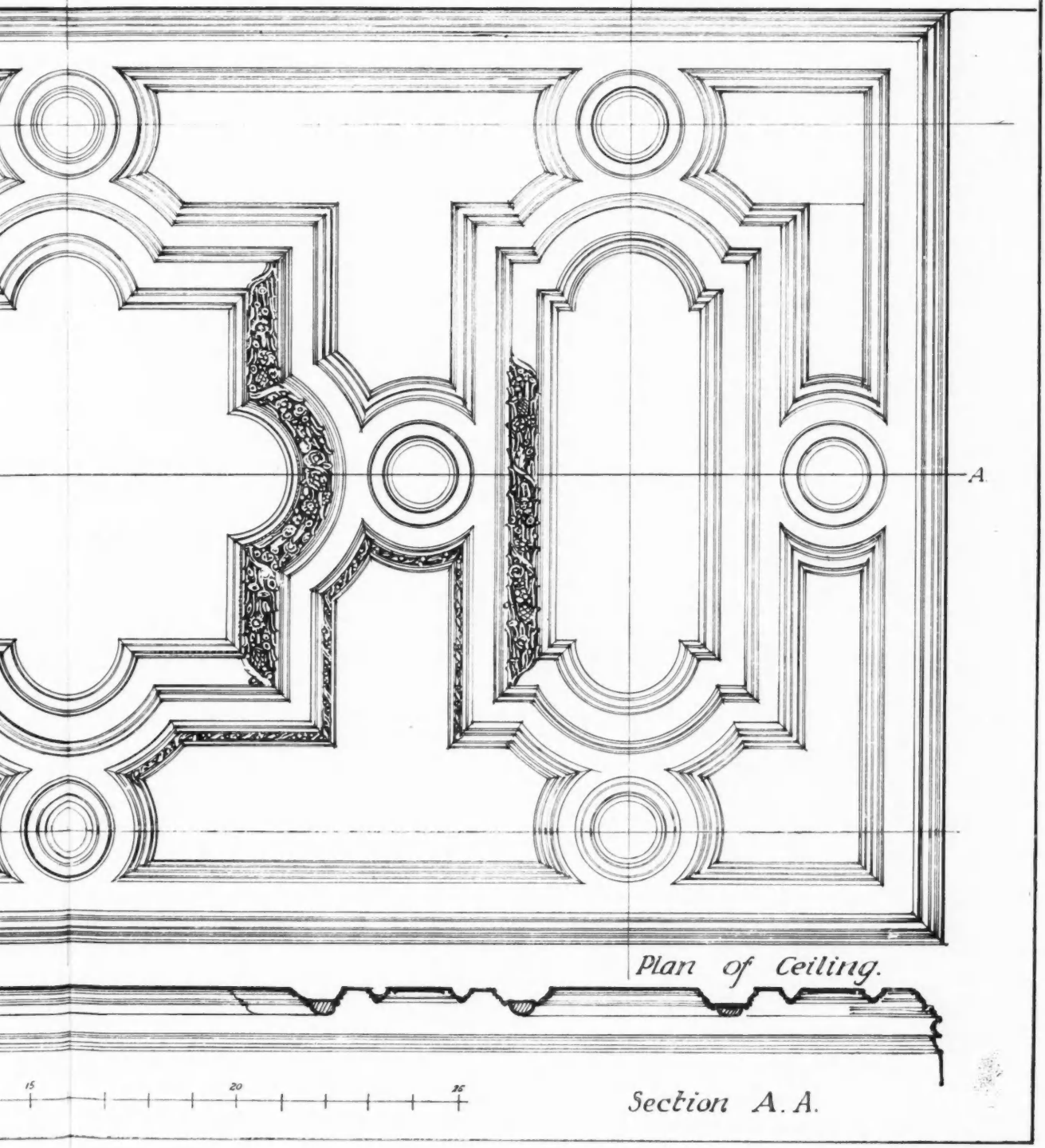
FIRST FLOOR SHELL PLAN.

Offices for Messrs. Wardle and Davenport, Belle Vue Mills, Leek. By Longden and Venables. Above, the main front. Below, the ground- and first-floor plans.

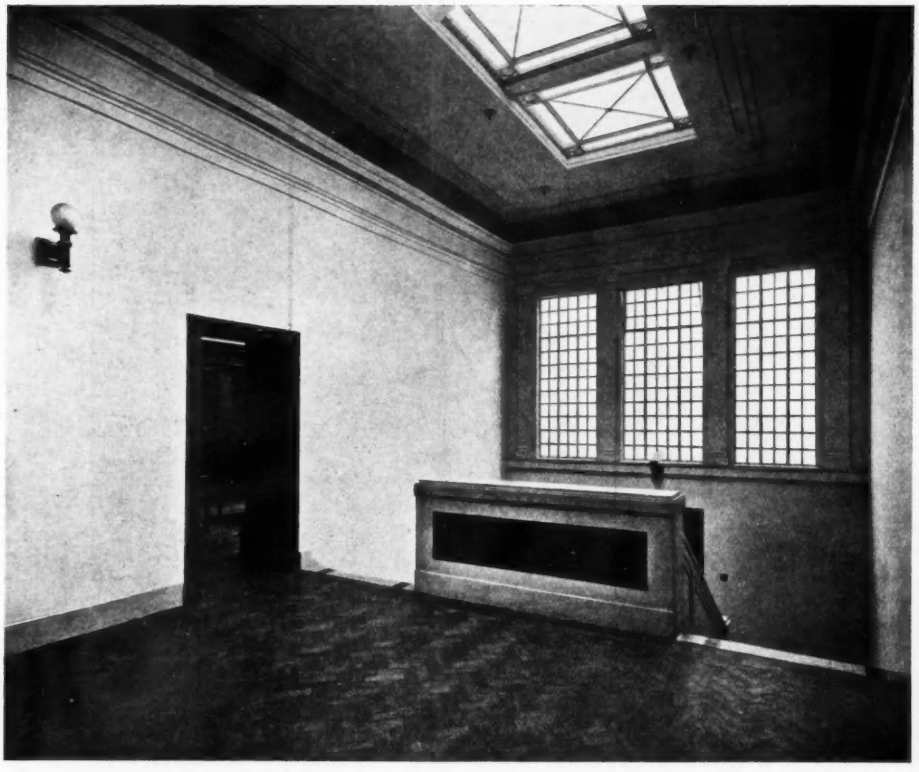
A Ceiling in

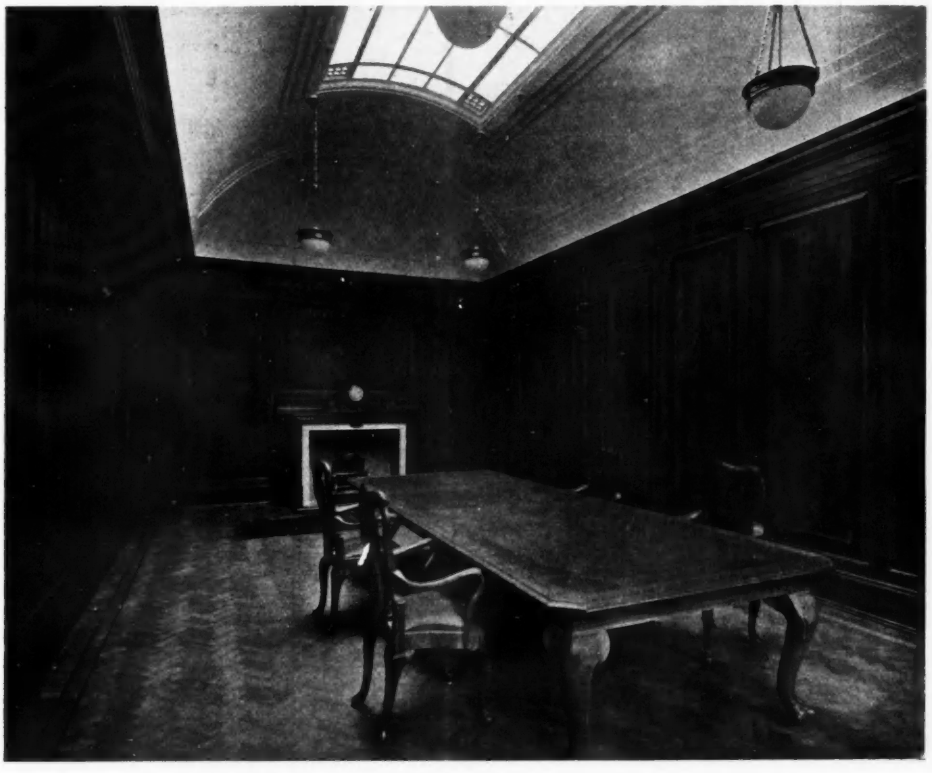


in High Relief.

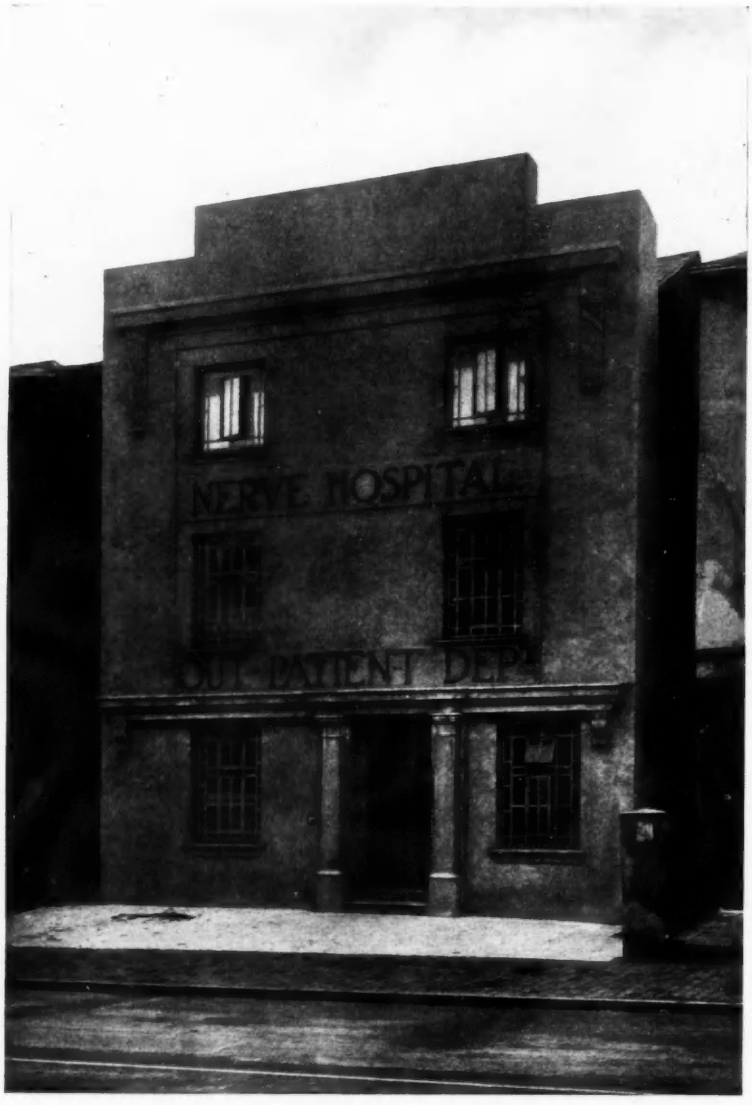


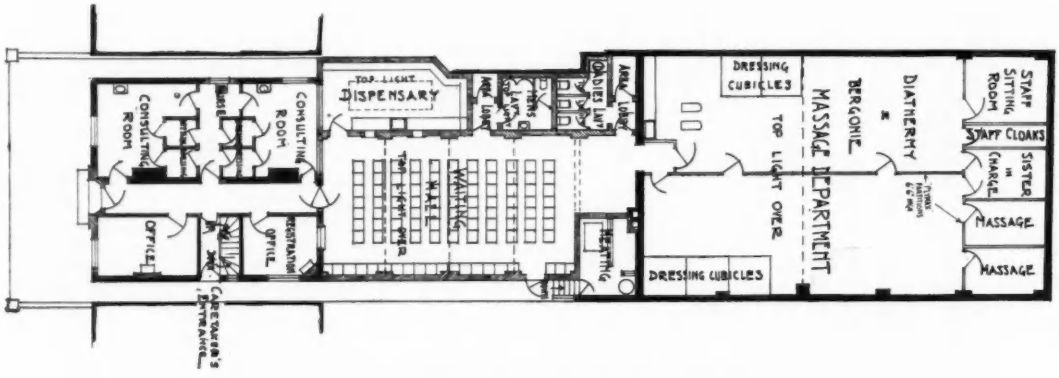
FOUR MODERN PLASTERWORK DESIGNS. 2: A CEILING IN HIGH RELIEF. BY GEORGE P. BANKART. PLATES 3 AND 4 OF THIS SERIES WILL APPEAR DURING OCTOBER.



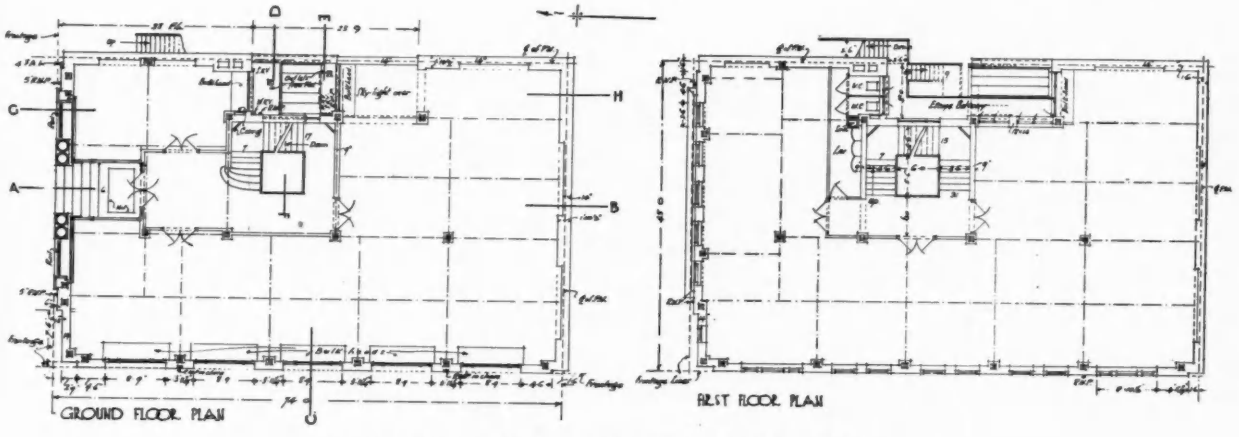


Offices for Messrs. Wardle and Davenport, Belle Vue Mills, Leek. By Longden and Venables. Above, the first-floor hall. Below, the boardroom.

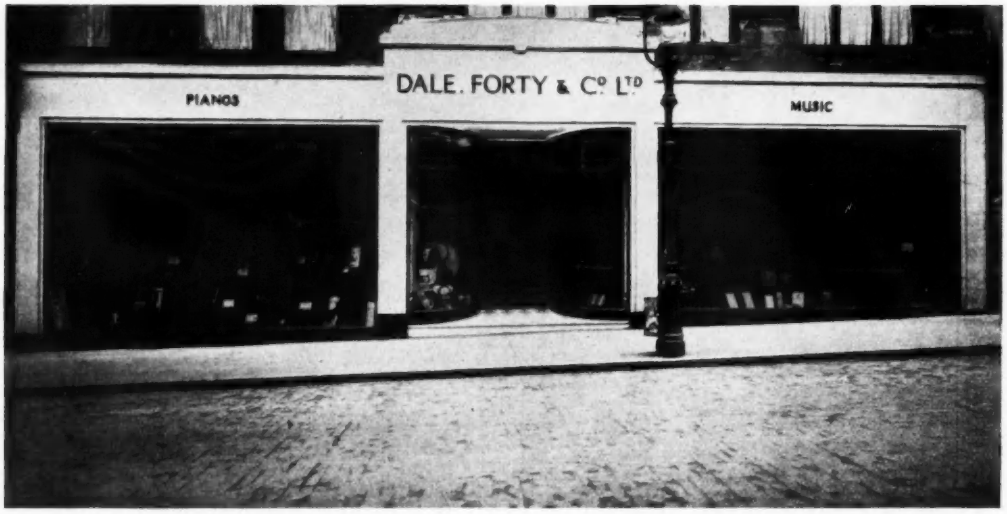




Alterations to the Nerve Hospital Out-Patients' Department, Bath Row, Birmingham. By L. L. Dussault.

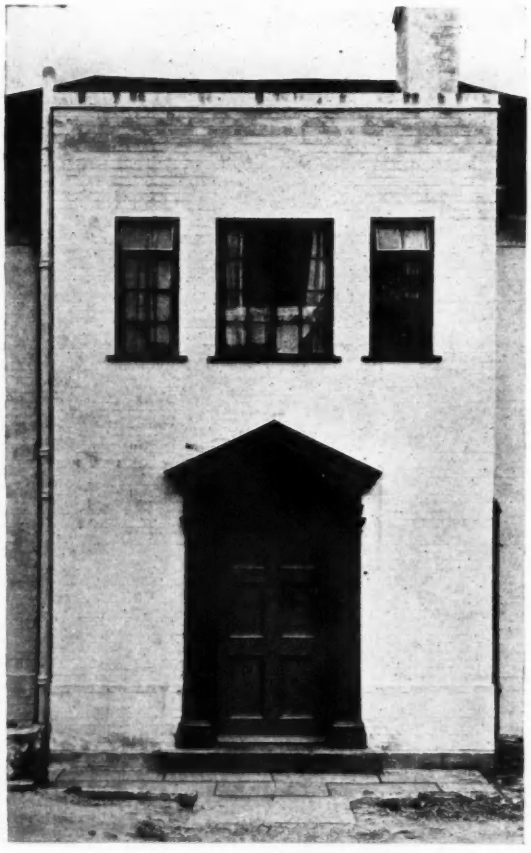


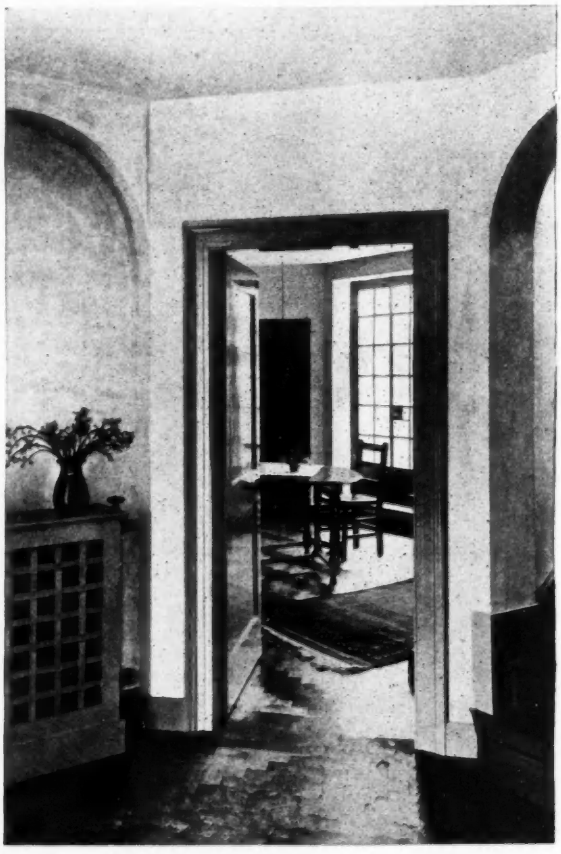
Transport House, Smith Square, Westminster. By Culpin and Bowers.



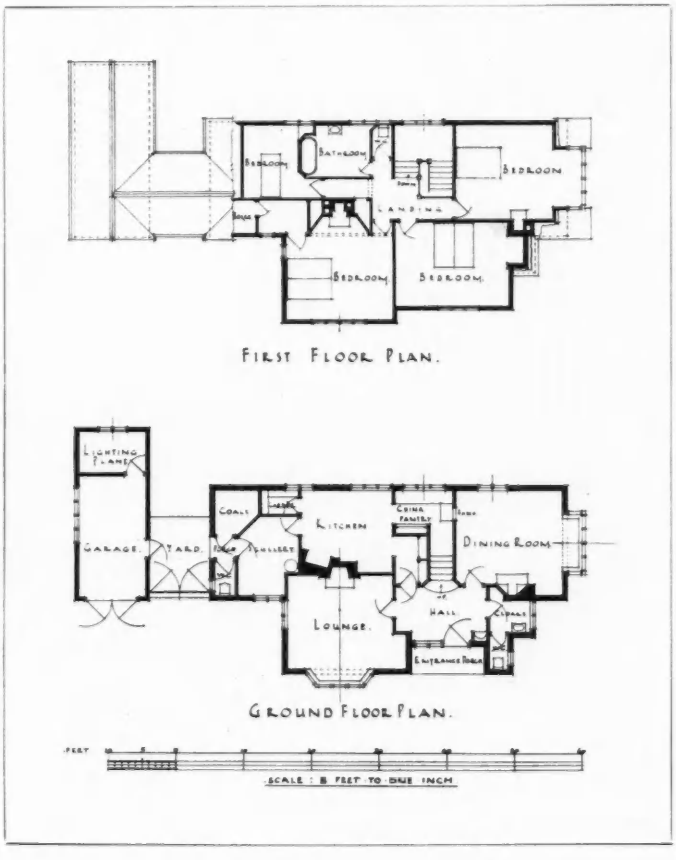
Above, the shop front of Messrs. Dale, Forty & Co., Ltd., Birmingham. By A. Edmonds. Below, Piccadilly Arcade, Birmingham. By James R. Shaw.

Above, Public Trust Office, Danneviske, New Zealand. By Gray Young, Morton and Young. Below, Westminster Bank, Hastings. By J. W. S. Burmester.

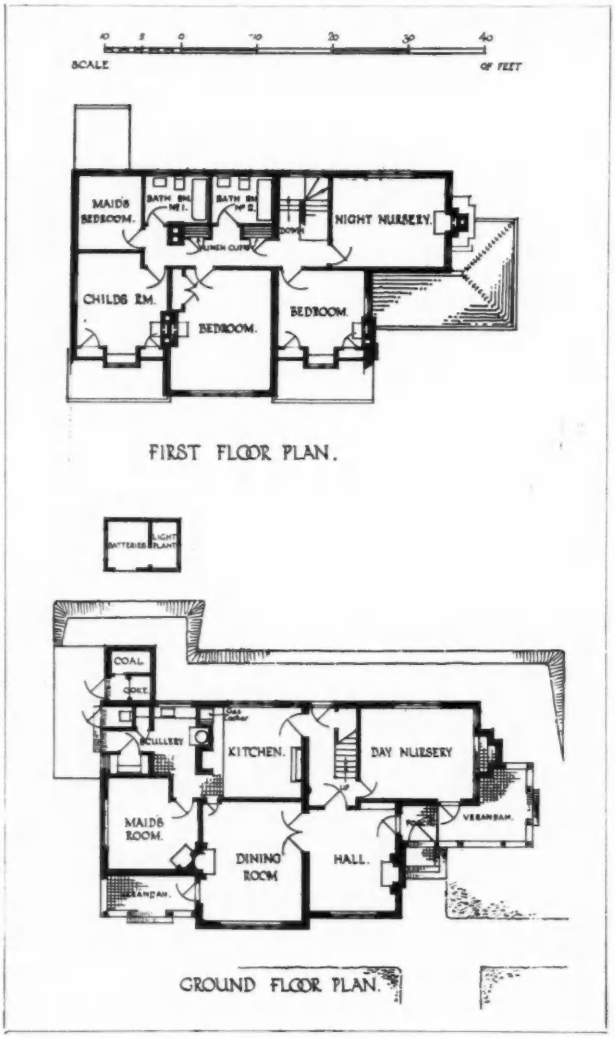




Clement's End, Cambridge. By Harold Tomlinson. Above, elevation to road. Below, left, the main entrance ; right, the dining-room, looking from the hall.



House at Leek. By Longden and Venables.



House at Wargrave, Berkshire. By Elgood and Hastie.

MEASURING, ESTIMATING, AND COSTING

[BY T. SUMNER SMITH]

iii : A USEFUL METHOD OF ABSTRACTING

THE best method to convert measurements into quantities of materials and labour, expressed in such a manner that all that is necessary in pricing is to fix or determine the unit rate, is to make an abstract of the results of the measurements ; that is, to proceed in the ordinary way of preparing an abstract. The next stage is to reduce the abstract ; and it is from this point onwards that we make a departure from the customary methods. Instead of reducing the items to terms of denominations of either supers or lineals in yards or feet or what not, we convert the items—their total measurements—into quantities of materials from constants, and deal with the labours separately. Constants, as we have said, when once they have been determined and agreed upon, are applicable to all cases; hence, reducing to quantities of materials in the abstract is quite as easy as reducing to yards, etc. Up to this point no extra time on the part of the surveyor is required save that of dealing with labours. Abstracting, however, calls for greater skill; but it has its compensation in that it is by far more interesting.

To enable an example of the actual process of abstracting to be worked out we give the constants for use in " reducing," using the example of slating for our illustration, to ascertain the amount of materials in the area of roofing, and the additional materials due to " cuttings " on slates.

CONSTANTS

a: Number of slates, 1·70 per square foot of area.

b: Feet run of " slate " battens, 1·65 ft. lineal per square foot of area, including waste.

c: Feet run of " slate " battens to ridge, twice the length of ridge in feet, or the length of single cutting in feet to ridge, plus 10 per cent. waste.

d: Weight of " batten " nails, ·000033 cwt. per square foot of area, including waste, and ·000065 cwt. per foot lineal.

e: Weight of 1½ in. compo " slate " nails, ·00023 cwt. per square foot of area, including waste.

f: Weight of cement mortar to verges—per lineal foot of length of verge multiplied by ·0963=cwt., including waste.

g: Weight of hair mortar bedding ridge and hip tiles—per lineal foot of length multiplied by ·089=cwt., including waste.

h: Weight of cement mortar pointing to ridge and hip tiles—per lineal foot of length multiplied by ·013=cwt., including waste.

And for " Cuttings," thus :

i: At eaves, ·56 slates per lineal foot, and ·000062 cwt. of " slate " nails per lineal foot.

j: At ridge and hips, ·28 slates per lineal foot, and ·000035 cwt. of " slate " nails per lineal foot.

k: At valleys, ·35 slates per lineal foot, and ·000045 cwt. of " slate " nails per lineal foot.

l: At verges, ·24 slates per lineal foot, and ·000033 cwt. of " slate " nails per lineal foot.

For the labour items we have: Laying per square, extra labour to eaves, ridges, hips, valleys, fixing and bedding and pointing ridge and hip tiles, and fixing hip irons. (See table in previous column.)

The simplicity of this analysis should appeal to all; that is its chief merit. It is quite patent that the proper place to analyse is in the abstract, and the right time to analyse is when abstracting. The extra time involved over and above ordinary abstracting is negligible, and is certainly far less than that expended by the estimator in making an analysis of the first item only in an ordinary slater's bill. Hence, the time saved to the estimator is incalculable. But it not only saves time, but frees him from doing all kinds of intricate calculations, besides having to search for data and information on many matters, which are a constant worry and anxiety to him. Often enough, due to pressure of time, he neglects these to his own undoing. Now, there can be no question that the accuracy of these analyses is of very great importance. It is, in fact, vital if estimates are to be framed upon a uniform basis. It is obvious that when the analysis is done by the surveyor all the contractors are put upon an equitable basis in tendering. They are relieved of the task of computing quantities (which is really the work of the surveyor), and are free to devote their attention to pricing.

Following are the quantities placed in the form of a bill. This is prepared from the abstract in the ordinary way:

BILL OF QUANTITIES.

	Quantity		MATERIALS	£ s. d. Labour	£ s. d. Materials
1	41·83	Thous.	20 in. by 10 in. slates ..		
2	3809	ft. run	"Slate" battens ..		
3	·082	cwt.	"Batten" nails.. ..		
4	1·01	,,	1½ in. compo "slate" nails		
5	4·63	,,	Cement mortar, pointing to verges (one of cement to one of sand)		
6	11·125	,,	Hair mortar, bedding ridge and hip tiles ..		
7	1·63	,,	Cement mortar, pointing to ridge and hip tiles (one of cement to two of sand)		
8	131	No.	Ridge and hip tiles, 12 in. long		
9	1	,,	Extra for angle piece to hip		
10	1	,,	Extra for solid hip end..		
11	3	,,	Hip irons		
12	12	,,	Screws to hip irons ..		
			LABOUR		
13	22·26	squares	Laying 20 in. by 10 in. slates and battens, slates centre nailed and 3 in. lap		
14	162	ft. run	Extra labour to eaves-course		
15	124	,,	Extra labour for single cutting to top edge ..		
16	126	,,	Extra labour for single bevel cutting to hips ..		
17	78	,,	Extra labour for single bevel cutting to valleys		
18	48	,,	Extra labour for single cutting to verges ..		
19	48	,,	Pointing to verges ..		
20	125	,,	Bedding and pointing hip and valley tiles ..		
21	3	No.	Fixing hip irons with four screws to each		
			GENERALLY		
22			Clean out all gutters, etc.		
			ON-COSTS—ON LABOUR COSTS		
23			Health and Unemployment .. .. %		
24			Third Party Risk %		
25			Workmen's Compensation .. .. %		
26			Plant .. .. %		
27			Temporary lighting and watching .. %		
28			Sheds .. .. %		
29			Rent, rates and taxes, and establishment costs %		
30			Staff salaries .. %		
31			Stationery, postages, etc. %		
32			Profit .. .. %		
33			Total of estimated cost £		

In the foregoing bill the items, though not always described in the fullest detail, suffice for the purpose of illustrating the principle. The details would have to be filled in to suit the particular case.

It should be noted that in the bill we have expressed parts of a whole number as a decimal in the items of quantity, so that in extending the price of an item we need only consider the rate per unit of term; thus, for slates, item 1, we have:

41 thous. at £11	13	4 per thous. = ...	£478	6 8
·83 thous. at £11	13	4 per thous.	9	13 11
(=[£11	13	4 × 83] ÷ 100) =		
			£488	0 7

This is quite simple, and may be done in little time, especially with a calculating machine. No mistake can arise in taking feet for yards, and so forth.

Items 3 and 4 may be expressed in terms of lb. if it is found to be more convenient. Items 9 and 10 being "extra" items may be written "short" in the usual way—a matter of taste. The items of labour are self-explanatory, but the item 13 may be split up into two items: (*a*) laying slates, and (*b*) fixing battens. This may be found to be the best course in costing.

On-costs are set out in detail (items 23 to 32 to indicate the matters that may have to be considered, either the whole or a part thereof, and they may have to be taken in conjunction with others, depending upon circumstances. These may be expressed in another form: they may be considered to be included, and which also might be said to include everything under the heading of "on-costs," in a comprehensive item of "gross profit," if it were thought that it would suit the purpose better.

[*To be concluded*]

CORRESPONDENCE

BODIAM CASTLE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—In your issue for September 14, page 345, Astragal writes of Bodiam Castle, and as what he says may give rise to misapprehension perhaps he will forgive me if I put him right. I do not think the late Lord Curzon intended to reconstruct the old trestle bridge, and if Astragal will refer to pages 90 and 91 of his book he will see that Lord Curzon mentions that the cills (or as he terms them—beams) were "impossible to re-use" and that "they were once more puddled up in clay, and consigned to an oblivion which will probably never again be disturbed." Astragal speaks of the cills being "wattled in clay." Probably he refers to the "puddling," for no wattles were used and they would be quite out of place.

Whether it is "old-fashioned" or not to regard plants on a building as picturesque, must, I suppose, be a matter of opinion and the preference a matter of taste. The Committee recognize that such growths on the walls are appreciated by the majority of visitors, and they try to retain the soft and fine-rooted plants, removing only the hard-rooted and more injurious ones. They propose to repoint the walls where necessary, doing a little at a time so as to allow such new work to weather as it proceeds. Should Astragal happen to visit some other of our old castles where repointing and weathering of surfaces with cement mortar has seriously affected the beauties of the structures for many years, I believe he would feel grateful to the Bodiam Castle Committee for their restraint. It is difficult to imagine who informed Astragal that there is "some doubt in the district as to the measures now being pursued for its preservation." I wonder if Astragal is satisfied that he was well-informed on this point?

NATHANIEL LLOYD

THE DAMP-PROOF BUILDING

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The article published under the above heading in your issue for September 7 is a very commendable effort to secure proper consideration of a most important aspect of building construction. Our very wide experience confirms Mr. Beeston's warning that even a 14-in. solid wall with good ordinary rough-cast on its outer surface cannot be relied upon to keep out the wet if it is exposed to very severe winds and rain.

There are, however, two recommendations in the article which we think should be slightly qualified. One is that a first coat of cement rendering should have its surface roughly trowelled with a steel trowel, in order to shut up the pores of the material. This very obviously adds to the damp-resisting properties of the rendering, but the smooth surface thus obtained will certainly offer less adhesion to the following coat than it would if it had been left rough. It is very instructive to watch a good plasterer at work when he applies his first cement rendering coat to the wall, the very action of pressing the cement mortar in place, with the trowel, leaves the rendering with a smooth skin. The plasterer deliberately removes this smooth skin by dragging the edge of his trowel over the surface, which is thereby roughed or dragged up in the same way that the surface of a brick is left rough when the plastic clay is cut with a wire.

Mr. Beeston also states the cavity in a hollow wall has valuable insulating qualities, *when a free circulation of air in it is assured by means of air bricks inserted at* dampcourse and eaves levels. Our own opinion is that such ventilation of the cavity is a mistake, because the circulation of air through the cavity will most certainly result in an increased rate of heat transmission through the inner leaf of the wall, which will make the rooms colder in winter than they would be if the cavities were not ventilated. The only good purpose that can be served by circulating the outside air through the cavity is to carry off any dampness that drives through the outer leaf of the wall, and which, owing to the inherent defects

of cavity walls, or careless workmanship in their construction, might find its way into the inner half of the wall.

We are in most emphatic agreement with Mr. Beeston's objections to the system of leaving a ½-in. cavity in the thickness of a well and grouting this up with waterproofed cement or any other waterproofing material. In the process of flushing up the cross-joints, and even in the laying of the bricks, there is a strong probability of this cavity being partially filled with material that will interrupt the continuity of the waterproofing. The best method of applying waterproofed cement is in the form of a continuous rendering. If this waterproofed cement rendering is substituted for the ordinary undercoats of the interior plastering to external walls, it not only ensures their weathertightness but expedites the drying of the house after construction. External walls are usually the thickest and contain the most moisture of construction, and as this moisture cannot pass through the waterproofed cement to the inside of the house it must dry outwards. The interior walls soon become dry because they are subject on both sides to the warmth of the house. The finishing coats of all interior plastering should be of absorptive lime mortar gauged with plaster, and not too smoothly trowelled. This provides a very effective safeguard against condensation.

L. E. WALKER (*Kerner, Greenwood & Co., Ltd.*)

COMPETITION NEWS

Nottingham Market Place

The *Nottingham Journal* offers £100 for the best scheme for the laying out of the Market Place. The plans will first be submitted to a committee consisting of the President of the Nottingham and Derby Architectural Society (Mr. J. Woollatt) and the immediate past president (Mr. H. A. Dickman), Mr. W. W. Gregory, F.R.I.B.A., Mr. J. Else, R.B.S., principal of the School of Art, and the editor of the *Nottingham Journal*. Theirs will be the responsibility of sorting out those which are technically impracticable, and the remainder will be submitted to Sir Edwin Lutyens, R.A. Particulars of the competition were published in the *Nottingham Journal* for September 15. The closing date for the competition is October 15.

COMPETITION CALENDAR

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

October 10. Designs are invited by the Herne Bay Urban District Council for the erection of municipal buildings and business premises on a prominent site at Herne Bay. The President of the R.I.B.A. has nominated Professor A. E. Richardson, F.S.A., F.R.I.B.A., to act as assessor. Premiums: £150, £100, £50. Printed conditions can be obtained from the Clerk to the Council, Westminster Bank House, Herne Bay. A deposit of one guinea is required for a set of the printed conditions, which will be returned upon the submission of a bona fide design.

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

ANNOUNCEMENTS

The President of the R.I.B.A. has been elected an honorary member of the Associazione Artistica Fra I Cultori di Architettura, Rome.

The R.I.B.A. Statutory Examinations for the office of district surveyor under the London Building Acts, or building surveyor under local authorities, will be held in London on October 19, 20, and 21. Applications for admission to the examinations, accompanied by the fee of £3 3s., must be received at the R.I.B.A. not later than Monday, October 3. Full particulars of the examinations and application forms can be obtained from the secretary, R.I.B.A.

SOME FACTS ABOUT CIMENT FONDU

SOME interesting facts concerning Ciment Fondu were given in a paper read by Mr. J. G. Kay, A.M.I.N.E., M.I.STRUCT.E., at the Birmingham Building Trades Exhibition. He pointed out that Ciment Fondu, translated, means "melted cement," and is so called because it is manufactured in a blast furnace, just like steel, and is poured out in an incandescent molten mass, cast into pigs, and subsequently ground—that is all. No doping takes place to control setting, no doping takes place to give early strength; the material is perfectly homogeneous, and, on the addition of water, a fierce chemical action is set up and the multitude of fine grains crystallize once more, interlocking not only one with the other, but seizing in their grip any particles of sand or stone with which they may be in contact. As these crystals are in themselves as hard and strong (and sometimes harder and stronger) than those particles of sand and stone which we call aggregate, it follows that synthetic stone, in the truest sense of the word, results. But why aluminous cement? Because the chemical nature of the material is an aluminate of lime. Among the many claims made by the speaker for Ciment Fondu were the following: "These aluminate of lime crystals of the cement (aluminous) only require one day to attain maturity. Piles made with it can be submitted to the heaviest driving when only one day old. My firm possesses samples of Fondu concrete which have been for nineteen years in chemicals and are as good today as when first made, in fact, very much better. A normal mix of Fondu concrete just laughs at frost. The chemical action is so rapid and intense that it gets warm—quite warm—during the vulnerable hardening time. Even with the thermometer at zero, any reasonable bulk of aluminous cement concrete feels quite warm to the touch, and is, consequently, not interfered with at all by atmospheric conditions. Concrete work stopped by frost should now be a thing of a bygone age.

"Fondu concrete is ready for any use whatsoever twenty-four hours after casting. Let us take the manufacture of pre-cast concrete units for instance. Acres and acres of ground are used in order to stock finished units during their period of waiting for maturity. Units made with Ciment Fondu are mature in twenty-four hours. Many manufacturers pride themselves on delivering no goods which have not been maturing for at least three months. They are compelled, therefore, to carry large stocks in order to be able to give reasonable delivery to their customers. The capital thus tied up is enormous, and not only limits development of business, but increases overhead charges. By using Ciment Fondu, delivery of any type of unit, of however complicated and unexpected a shape, can be given twenty-four hours after casting it. It never occupies the mould for more than twelve hours and usually only eight, and it is mature in twenty-four hours. Practically the whole of the capital previously tied up can, therefore, be released to do productive work. Not only therefore does the output of existing plant go up enormously, but overhead capital charges are reduced, and the capital previously tied up is available for investment in further plant.

"There is a delightful piece of concrete work being carried out at this moment a few miles from here, where every property of Ciment Fondu is being taken advantage of at once. A most complicated piece of shuttering is being used to cast a different section of distinctly delicate work every day. The mould is filled in every afternoon and stripped next morning, when the section, weighing many tons, is removed just as if it were eighteen years old instead of eighteen hours.

"There is only one way of finding out if a material is durable, and that is to wait and see. Fortunately the French discoverers did most of the waiting and seeing before they made their discovery public. Thus, even in 1918, they produced five year tests from the French Government and had ten years' experience themselves. When my company purchased the English rights and started manufacture near London, in January 1926, we had eighteen years of laboratory experience and eight years of public

use behind us. The fact that it is today being used all over the world, and, what is more, being used for the foundations of some of the most important structures being erected, not only in this country, but abroad, shows that engineers of note accept its durability as having been proved beyond the slightest shadow of suggestion of doubt."

TRADE NOTES

The travelling exhibit of the National Radiator Company Limited, which is fitted with a working installation of the Ideal Cookanheat and Ideal Classic Radiators, will be demonstrated on September 30 in the Garage Yard, adjoining War Memorial, Burton-on-Trent, and on October 3 in Bateman's Park, Matlock.

The Leeds Fireclay Company, Ltd. (head office, Wortley, Leeds), after having their London office in the Strand for many years, have followed the trend west and taken a block of premises at Leeds House, 2 Cavendish Place (Oxford Circus), London, W.1. The offices are now occupied and showrooms are being fitted up. The display of Leeds fireclay products will include Burmantofts terra-cotta. The ground floor front of the building is of this material. Messrs. Yates, Cook and Darbyshire are the architects. Other exhibits in the showroom will include glazed bricks and tiles and sanitary fittings.

The firm of Messrs. Archibald D. Dawnay and Sons, Ltd., has purchased the structural engineering works and equipment of Sir William Arrol & Co. (Swansea), Ltd., at King's Docks, Swansea. The acquirement of these works, it is stated, in addition to those already existing at Battersea, Welwyn Garden City, Cardiff, and Norwich, will enable Messrs. Dawnay to increase very greatly their capacity for the rapid fabrication of all classes of constructional steelwork for buildings of every description, factories, office blocks, mill buildings, hangars, cinemas, theatres, bridge-work, warehouses, dock sheds, power-houses, etc. It is the firm's intention to develop the Swansea works on the most up-to-date lines and particularly to pay special attention to the export trade, the works being in close proximity to the extensive docks at Swansea, with every facility for the transportation of material.

CURRENT WORK

Following are the contractors and some of the sub-contractors for the current work illustrated on pages 417 to 426.

Midland Bank, Pall Mall. Architects, Messrs. Whinney, Son and Austen Hall; general contractors, Messrs. Hall, Beddall & Co. Sub-contractors: Faldo & Co., asphalt; B.R.C. and Kleine, reinforced concrete; Moreland Hayne & Co., structural steel; Leeds Fireclay Co., Shepwood partitions; British Challenge Glazing Co., patent glazing; Excellence Wood Block Flooring Co., wood-block flooring; Rosser and Russell, central heating; Burn Bros., cast-iron drains; Sturtevant Co., ventilation; Geo. Jennings and Twyfords, Ltd., sanitary fittings; Marley Bros., Pirie & Co., Chas. Smith & Co., door furniture; W. T. Allen, and Haywards, Ltd., iron staircases; J. Avery & Co., sunblinds; H. C. Tanner, and Fenning & Co., marble; B. Cohen and Sons, furniture; Wm. Nicholson and Son, Leeds, office fittings.

New Offices, Belle Vue, Leek. Proprietors, Messrs. Wardle and Davenport, Ltd.; architects, Messrs. Reginald T. Longden, F.R.I.B.A., and William J. Venables, L.R.I.B.A.; general contractors, Messrs. T. Grace and Son; general foreman, Mr. A. Wright. Sub-contractors: A. D. Dawnay and Sons, Ltd., structural steel; B.R.C. Co., fireproof construction; Mellowes & Co., patent glazing; Art Pavements and Decorations Co., terrazzo flooring and marble; Saunders and Taylor, Ltd., central heating; Berry's Electrical Co., grates; Mellowes & Co., Ltd., casements and window furniture.

Alterations, Nerve Hospital Out-patient Department, Bath Row, Birmingham. Architect, Mr. L. L. Dussault, F.R.I.B.A.; general contractor, Mr. Geo. Mobbs; contract price, £4,350. Sub-contractors: Venesta, Ltd., partitions; Ideal, boilers; National Radiator, Ltd.; Parker, Winder and Achurch, sanitary fittings and door furniture; Bayliss, Jones and Bayliss, folding gates. The artificial stone was carried out in Atlas White cement (Adamite Company, Ltd.) and Leighton Buzzard sand.

Transport and General Workers' Union, Smith Square, London. Architects, Messrs. Culpin and Bowers; general contractors, Messrs. Troy & Co. Sub-contractors: A. T. Bradford, carving; Brookes, Ltd., glazed bricks; London Brick Co., general bricks; Stevens and Adams, wood-block flooring; Haden and Sons, central heating; Relay Automatic Co., telephones; Fennings, marble; Marryat and Scott, lifts; Central Joinery Co., Ltd., furniture; Gent & Co., synchronized clocks; Nash and Hull, signs.

Messrs. Dale Forty's premises, Birmingham. This shop front was carried out by Messrs. A. Edmonds & Co., Ltd., who produced all the material. The metalwork is in the firm's Edmobronze.

Piccadilly Arcade, New Street, Birmingham. Architect, Mr. James R. Shaw; general contractors, Messrs. Bovis, Ltd.; general foreman, Mr. R. Henderson. Sub-contractors: Braithwaite & Co., structural steel; Siegwart Fireproof Floor Co., fireproof construction; Bromsgrove Guild, lead lights; Henry Hope and Sons, Ltd., patent glazing; Haden and Sons, central heating; A. Edmonds & Co., Ltd., shop fittings; Waygood-Otis, Ltd., lifts.

Public Trust Office, Danneviske, New Zealand. Architects, Messrs. Gray Young, Morton and Young; general contractors, Messrs. A. H. R. Gillespie, Danneviske.

Banking Premises, Havelock Road, Hastings, for the Westminster Bank. Architect, Mr. J. W. Stanley Burmester; general contractors, Messrs. Holliday and Greenwood, Ltd., who were also responsible for the demolition and joinery; clerk of works, Mr. George F. Cox; general foreman, Mr. Thomas Reynolds. Sub-contractors: Asphalte, dampcourses; Standard Flat Roofing Co., asphalt; Redpath Brown & Co., Ltd., structural steel; Kleine for floors and roof; Shepwood partitions; Stevens and Adams, wood-block flooring; Stuart's Granolithic Paving Co., Ltd., patent flooring; Doulton & Co., sanitary fittings; N. F. Ramsay & Co., Ltd., door furniture; Haywards, Ltd., metalwork; Nine Elms Stone Masonry Works, stonework; Art Pavements and Decorations Co., marble; Farmer, Brindley & Co., carving; S. Elliott and Sons, Ltd., office fittings.

Private residence, "Shealing," Wargrave, Berks. Architects, Messrs. Elgood and Hastie; general contractor, Mr. W. H. Easterling; contract price, £2,350; price per foot cube, 1s. 6d. bare. Sub-contractors: Geo. Wright, stoves, grates, sanitary fittings, and mantels; Crittalls, casements; Stewart Turner, Ltd., electric wiring and installation.

A PROVINCIAL INSURANCE OFFICE

The general contractors for the offices of the Hampshire and General Friendly Society at Winchester, illustrated on pages 409 to 412, were Messrs. Mussellwhite and Sons, Basingstoke. The general foreman was Mr. George Crosswell; and the contract price was £16,394; and the price per foot cube, 1s. 7½d. Among the sub-contractors were the following: Mussellwhite and Sons, and Daneshill Co., bricks; Kleine, fireproof construction; Haywards, pavement lights; Stevens and Adams, parquet and wood-block flooring; G. N. Haden and Sons, central heating; General Electric Co., electric light fixtures; Art Pavements and Decorations Co., marble floor; Waygood-Otis, lifts.

THE WEEK'S BUILDING NEWS

The BARNSLEY Education Committee has obtained sanction to a loan of £11,725 for the erection of an elementary school at Ardsley.

*

Flats are to be erected on the site of 44 Pearson Street and 40 Shap Street, SHOREDITCH.

*

The "Old Basingstoke" public-house, Kingsland Road, HOXTON, is to be rebuilt.

*

The SHOREDITCH B.C. has passed plans for the reconstruction of the L.M.S. railway station.

*

The C.C.S of CUMBERLAND and Westmorland are calling a conference of various authorities to consider the acquisition of Prudoe Hall for the provision of institutional treatment for mental defectives.

*

The PORTSLADE U.D.C. has asked the surveyor to prepare a scheme for the erection of thirty-six houses on a site in Shelldale Road.

*

The SHOREHAM U.D.C. is seeking permission to borrow £20,000 for further housing advances.

*

The United Methodist trustees have acquired a site at LIPHOOK, Hants, for the erection of a church, for which plans are in preparation.

*

The HAYWARDS HEATH U.D.C. has decided to purchase seventeen acres at Bents Wood for a housing scheme.

*

The CHICHESTER Corporation is considering a scheme for the reconstruction of the railway bridge in Bognor Road.

*

Plans passed by DOUGLAS (I.-o.-M.) Corporation: Alterations to premises, Marina Road, for Mr. J. Sheard; frame building, Heywood Place, for Electricity Committee; frame building, Palatine Road, for Mr. Maddrell; extensions, workshop, Victoria Place, for Mr. J. Shimmin.

*

Mr. Ewart Musgrave has purchased two additional front building sites from the CARLISLE Corporation in Upperby Road.

*

In connection with the provision of a joint infectious diseases hospital, the city engineer of WAKEFIELD has been instructed to prepare an amended layout of the site at Snapethorpe.

*

The PORTSMOUTH Corporation has now acquired land for widening Fratton Bridge and are to invite tenders for the work.

The WAKEFIELD Corporation has asked the housing architect to prepare plans for the erection of twelve houses, suitable for aged people, in Brunswick Street.

*

The governors of WAKEFIELD Girls' High School have in view the provision of an assembly hall.

*

Plans passed by the PORTSMOUTH Corporation: Fifteen houses, Asylum Road, for Mr. A. R. West; billiard hall off Highland Road, for Mr. F. J. Privett; twenty-four garages off Granada Road, for Haig Motor Co., Ltd.; twelve houses, Winton Road, for Mr. H. Williams; seven houses, Sindram Avenue, for Mr. M. R. Berney; factory extensions, 116 High Street, for Messrs. W. H. Barrell, Ltd.; bank, Milton Road, Copnor, for Lloyds Bank, Ltd.; shop and offices, London Road, for Messrs. E. and A. Sprigings; fifteen houses, Donum Road, for Messrs. Wade and Connor; additional story, St. Andrew's Road, for Victoria Nursing Association; eighteen houses, Lichfield Road, for Messrs. McCarthy Bros.; hall, Besant Road, for Portsea Island Co-operative Society, Ltd.; alterations, Froddington public-house, Fratton Road, for Portsmouth United Breweries; presbytery, Havant Road, Cosham, for Roman Catholic trustees; parsonage, Copnor Road, for Rector St. Alban's Church; fourteen houses, Dartmouth Road, for Mr. T. H. Chandler; ten houses, Mayles Road, for Mr. J. May.

*

The HENDON U.D.C. is seeking sanction to borrow £17,000 for the erection of a fire station and firemen's dwellings.

*

The EALING Education Committee is to erect an elementary school at Greenford.

*

The BRIDLINGTON Corporation is to erect a welfare centre and school clinic on a site in Oxford Street.

*

The Glamorgan Education Committee is to proceed with the erection of an elementary school at PENCOED.

*

The YARMOUTH Education Committee has prepared plans for the erection of an elementary school for the North Denes district.

*

The DARLINGTON Corporation is to grant another 100 housing subsidies.

*

The PRESTWICH U.D.C. surveyor has prepared a tentative layout of Rectory Fields, and been asked to make provision for tennis courts and other sports facilities.

*

Messrs. Ambler and Waite are to develop the Singleton Park estate, PRESTWICH.

The BATH Corporation Housing Committee is to build 122 houses on the Southdown estate.

*

Plans passed by the PRESTWICH U.D.C.: Shop and house, Bury Old Road, for Messrs. Jones and Rawlinson, Ltd.; four houses, Woodhill estate, for Messrs. S. and S. K. Sambrook; two houses, Heywood Road, for Messrs. E. and S. Street, Ltd.; two shops and houses, Polefield Road, for Mr. E. Timewell; four houses, Hilton House estate, for Mr. H. Richardson.

*

The PRESTWICH U.D.C. has obtained sanction to grant another seventy-five housing subsidies.

*

The new building in BLOOMSBURY for the London School of Hygiene and Tropical Medicine is making good progress. It is costing £500,000 to build, which sum is being largely defrayed by a grant of 2,000,000 (two million) dollars from the Rockefeller Foundation, while it will be maintained by the Government through the University Grants Committee. The cure and prevention of tropical diseases will be an important part of the work, but its main object will be the teaching of hygiene and health research. The school will be ready for occupation in the spring of 1929 if the work goes on at the present rate.

*

Plans passed by the BEDFORD Corporation: Alterations, Southend Hotel, for Messrs. Usher and Anthony; alterations, "Nag's Head," Midland Road, for Messrs. C. Wells, Ltd.; rebuilding, office, Lurke Street, for Mr. H. E. C. Inskip; two houses, Beverley Crescent, for Mr. F. Ashwell; two houses, Beverley Crescent, for Mr. F. Corby.

*

Plans passed by the FULHAM B.C.: Rebuilding, West Kensington Station, North End Road, for Met. District Railway Co.; garage, between Landridge Road and Rigault Road, for Mr. W. J. Wilsdon.

*

Plans passed by the HACKNEY B.C.: Additions, old school buildings, Orchard Street, for Bruce Hall Plate Co., Ltd.; buildings, site of 138, 140 Stoke Newington Road, for Mr. A. S. R. Ley; additions, Messrs. Connell's premises, Amhurst Terrace, for Messrs. W. Shurmur and Sons, Ltd.; factory, Daubenay Road, for Mr. J. A. Bateman; two houses, Upper Clapton Road, for Messrs. E. Cannell and Son.

*

Plans passed by BERMONDSEY B.C.: New hospital over out-patients' department, Grange Road, for Mr. H. G. Cherry, for the Bermondsey Medical Mission; eight garages, Pedworth Road, for Mr. C. J. Johnson.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₂	Abergavenny	S. Wales & M.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W. Counties	1 8	1 3½
A₂	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B₂	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A₂	Atherstone	Mid. Counties	1 6½	1 2
B₂	Aylesbury ..	S. Counties	1 4½	1 0½
B₂	BANBURY	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₂	Basingstoke	S.W. Counties	1 4½	1 0½
B	Bath ..	S.W. Counties	1 6	1 1½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₂	Bewdley ..	Mid. Counties	1 7	1 2½
B₂	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	*1 10	1 4½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W. Counties	1 8	1 3½
A	Blackpool	N.W. Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₂	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W. Counties	1 8	1 3½
A₂	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
B₂	Bovey Tracey	S.W. Counties	1 5	1 1
A	Bradford ..	Yorkshire	1 8	1 3½
A₂	Brentwood	E. Counties	1 7	1 2½
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₂	Brixham ..	S.W. Counties	1 4½	1 0½
A₂	Bromsgrove	Mid. Counties	1 7	1 2½
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A₁	Buxton ..	N.W. Counties	1 7½	1 2½
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W. Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon	N.W. Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
A₂	Cheltenham	S.W. Counties	1 6½	1 2
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	*1 8	1 3½
B₂	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
B₁	Colwyn Bay	N.W. Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₂	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₂	Crewe ..	N.W. Counties	1 6½	1 2
A₂	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B₂	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W. Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W. Counties	1 4	1 0½
A₂	Driffield ..	Yorks	1 6½	1 2
A₂	Droitwich ..	Mid. Counties	1 6½	1 2
A₁	Dudley ..	Mid. Counties	1 7½	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EAST-BOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	*1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₂	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B₂	Folkestone	S. Counties	1 5	1 1
A	Frodsham ..	N.W. Counties	1 8	1 3½
B₂	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
A₂	Gloucester	S.W. Counties	1 6½	1 2
A₂	Goole ..	Yorkshire	1 7	1 2½
B	Gosport ..	S. Counties	1 6	1 1½
A₂	Grantham	Mid. Counties	1 6½	1 2
A₁	Gravesend	S. Counties	1 7½	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A	Hanley ..	Mid. Counties	1 8	1 3½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S. W. Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W. Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

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
B₁	Kendal ..	N.W. Counties	1 5½	1 1½
B₁	Keswick ..	N.W. Counties	1 5½	1 1½
B	Kettering ..	Mid. Counties	1 6	1 1½
A₂	Kidderminster	Mid. Counties	1 7	1 2½
B₂	King's Lynn	E. Counties	1 5	1 1
A	LANCASTER	N.W. Counties	1 8	1 3½
A₂	Leamington	Mid. Counties	1 7	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₂	Lewes ..	S. Counties	1 4½	1 0½
A₂	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W. Counties	*1 10	1 4½
B	Llandudno	N.W. Counties	1 5½	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₂	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₂	Margate ..	S. Counties	1 4½	1 0½
A₂	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₂	Middlewich	N.W. Counties	1 6½	1 2
B₂	Minehead ..	S.W. Counties	1 5	1 1
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 8	1 3½
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₂	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
A₂	Norwich ..	E. Counties	1 6½	1 2
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 8	1 3½
A₂	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₂	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	*1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₂	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₂	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₂	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₂	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
B₂	Salisbury	S.W. Counties	1 4½	1 0½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₂	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
A₂	South'pton	S. Counties	1 6½	1 2
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swadlincote	Mid. Counties	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W. Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
B	Teignmouth	S.W. Coast	1 6	1 1½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 4	1 0½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₁	Walsall ..	Mid. Counties	1 7½	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A₂	Warwick ..	Mid. Counties	1 7	1 2½
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₂	Whitby ..	Yorkshire	1 7	1 2½
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₂	Worcester ..	Mid. Counties	1 6½	1 2
A₂	Worksop ..	Yorkshire	1 6½	1 2
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3

* In these areas the rates of wages for certain trades (usually Painters and Plasterers) vary slightly from those given.

The rates for each trade in any given area will be sent on request.

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

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

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube . . 0 3 0
Exceeding 6 ft., but under 12 ft., add 30 per cent.
In stiff clay, add 30 per cent.
In underpinning, add 100 per cent.
In rock, including blasting, add 225 per cent.
If basketed out, add 80 per cent. to 150 per cent.
Headings, including timbering, add 400 per cent.

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

DRAINER

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

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

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

Note.—These prices include digging concrete bed and filling for normal depths, and are average prices.
Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

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

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

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

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

MASON

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

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

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

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

SLATER AND TILER

SLATER, 1s. 9½d. *per hour*; TILER, 1s. 9½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*
N.B.—Tiling is often executed as piecework.

Slates, 1st quality, per 1,200:

Portmadoc Ladies	£14 0 0
Countess	27 0 0
Duchess	32 0 0

Old Delabole	*Med. Grey*	*Med. Green*
24 in. × 12 in.	£42 11 3	£45 1 0
20 in. × 10 in.	31 4 3	33 0 6
16 in. × 10 in.	20 18 0	22 4 9
14 in. × 8 in.	12 1 0	12 16 3

Green Randoms, per ton	8 3 9
Grey-green do., per ton	7 3 9
Green peggies, 12 in. to 8 in. long, per ton	6 3 9
In 4-ton truck loads, delivered Nine Elms station.	
Clips, lead, per lb.	£0 0 6
Clips, copper, per lb.	0 2 6
Nails, compo, per cwt.	1 6 0
Nails, copper, per lb.	0 1 10
Cement and sand, see "Excavator," etc., above.	
Hand-made tiles, per M.	£5 18 0
Machine-made tiles, per M.	5 8 0
Westmorland slates, large, per ton	9 0 0
DO. *Peggies, per ton*	7 5 0

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

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

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

	Med. Grey	Med. Green
24 in. × 12 in.	£5 0 0	£5 2 0
20 in. × 10 in.	5 5 0	5 10 0
16 in. × 10 in.	4 15 0	5 1 0
14 in. × 8 in.	4 10 0	4 15 0

Green randoms	6 7 0
Grey-green do.	5 9 0
Green peggies, 12 in. to 8 in. long	4 17 0
TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	5 6 0
DO., machine-made do., per square	4 17 0
Vertical Tiling, including pointing, add 18s. 0d. per square.	
FIXING lead soakers, per dozen	£0 0 10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0 10 0
LABOUR only in laying slates, but including nails, per square	1 0 0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

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

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

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

continued overleaf

CARPENTER AND JOINER: *continued.*

SHUTTERING to face of concrete, per square	£1	10	0
DO. in narrow widths to beams, etc., per ft. sup.	0	0	6
USE and waste of timbers, allow 25 per cent. of above prices.			
SLATE BATTENING, per sq.	£0	12	6
DEAL boarding to flats, 1 in. thick and firrings to falls, per square	2	10	0
STOUT feather-edged tilting fillet to eaves, per ft. run	0	0	6
FEATHER-edged springer to trimmer arches, per ft. run	0	0	4
STOUT herringbone strutting (joists measured in), per ft. run	0	0	6
SOUND boarding, ¾ in. thick and fillets nailed to sides of joists (joists measured over), per square	2	0	0
RUBEROID or similar quality roofing, one-ply, per yd. sup.	0	2	3
DO., two-ply, per yd. sup.	0	2	6
DO., three-ply, per yd. sup.	0	3	0
TONGUED and grooved flooring, 1¼ in. thick, laid complete with splayed headings, per square	2	5	0
DEAL skirting torus, moulded 1¼ in. thick, including grounds and backings, per ft. sup.	0	1	0
TONGUED and mitred angles to do.	0	0	6
WOOD block flooring standard blocks laid herringbone in mastic:			
Deal 1 in. thick, per yd. sup.	0	10	0
DO. 1¼ in. thick, per yd. sup.	0	12	0
Maple 1¼ in. thick, per yd. sup.	0	15	0
DEAL moulded sashes, 1¾ in. with moulded bars in small squares, per ft. sup.	0	2	6
DO. 2 in. do., per ft. sup.	0	2	9
DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup.	0	4	6
MOULDED horns, extra each	0	0	3
DOORS, 4-panel square both sides, 1¾ in. thick, per ft. sup.	0	2	6
DO. moulded both sides, per ft. sup.	0	2	9
DO. 2 in. thick, square both sides, per ft. sup.	0	2	9
DO. moulded both sides, per ft. sup.	0	3	0
DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup.	0	3	6
If in oak, mahogany or teak, multiply 3 times.			
DEAL frames, 4 in. × 3 in., rebated and beaded, per ft. cube	£0	15	0
Add for extra labours, per ft. run	0	0	1
STAIRCASE work:			
DEAL treads 1¼ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1¼ in. thick, moulded, per ft. run	0	2	6
If ramped, per ft. run	0	5	0
SHORT ramps, extra each	0	7	6
ENDS of treads and risers housed to strings, each	0	1	0
2 in. deal mopstick handrail fixed to brackets, per ft. run	0	1	6
4½ in. × 3 in. oak fully moulded handrail, per ft. run	0	5	6
1¼ in. square deal bar balusters, framed in, per ft. run	0	0	6
FITTINGS:			
SHELVES and bearers, 1 in., cross-tongued, per ft. sup.	0	1	6
1¼ in. beaded cupboard fronts, moulded and square, per ft. sup.	0	2	9
TEAK grooved draining boards, 1¼ in. thick and bedding, per ft. sup.	0	4	6
IRONMONGERY:			
Fixing only (including providing screws):			
To DEAL—			
Hinges to sashes, per pair	0	1	2
DO. to doors, per pair	0	1	7
Barrel bolts, 9 in., iron, each	0	1	0
Sash fasteners, each	0	1	0
Rim locks, each	0	1	9
Mortice locks, each	0	4	0

SMITH

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

*

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

*

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

PLUMBER

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

*

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

*

MILLED LEAD and labour in gutters, flashings, etc.	3	2	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	0
DO. ¾ in., per ft.	0	2	3
DO. 1 in., per ft.	0	3	0
DO. 1½ in., per ft.	0	4	0
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
WIPED soldered joint, ½ in., each	0	2	6
DO. ¾ in., each	0	3	2
DO. 1 in., each	0	3	8
BRASS screw-down stop cock and two soldered joints, ½ in., each	0	11	0
DO. ¾ in., each	0	13	6
CAST-IRON rainwater pipe, jointed in red lead, 2½ in., per ft. run.	0	1	7
DO. 3 in., per ft. run	0	2	0
DO. 4 in., per ft. run	0	2	10
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	0
DO. O.G., 4 in., per ft.	0	2	3
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	4	6
DO. 3 in., per ft.	0	3	6
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS, with all joints	1	3	6
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

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

*

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

*

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	3
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	4½
DO. 26 oz.	0	0	5
Cathedral white, per ft.	0	0	7
Polished plate, British ¼ in., up to 2 ft. sup. per ft.	0	1	6
DO. *4 ft. sup.* ,,	0	2	9
DO. *6 ft. sup.* ,,	0	3	0
DO. *20 ft. sup.* ,,	0	3	7
DO. *45 ft. sup.* ,,	0	3	9
DO. *65 ft. sup.* ,,	0	3	11
DO. *100 ft. sup.* ,,	0	4	4
Rough plate, ⅛ in., per ft.	0	0	6½
DO. *¼ in., per ft.*	0	0	6⅝
Linseed oil putty, per cwt.	0	15	0

*

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

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

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

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

PAINTER AND PAPERHANGER

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

*

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

*

LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
WAX POLISHING, per ft. sup.	0	0	6
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity. The measured work price is on the same basis . . . per ft. sup.	£0	0	2½
FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . from	0	2	8
Asbestos sheeting, ⅛ 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, ⅛ in. punched per M. grey	16	0	0
DO., *red*	18	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work. unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7

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

PLYWOOD, per ft. sup.

Thickness	⅛ in.			¼ in.			⅜ in.			½ in.		
Qualities ..	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	9½	7	6
Alder	5½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon												
Mahogany	4	3	3	6½	5½	4	9½	7½	—	1 0½	10	—
Figured Oak												
1 side	6½	7	—	10	8	—	11½	—	—	1 6	—	—
Plain Oak												
1 side	6½	6	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5½	4	—	5½	5	—	6	—	—	—	—	—