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NEWCASTLE HOUSE

Nearly all old towns, and many villages, possess one house at least which was built before the influence of Sir Christopher Wren had left the practice of building, and while it was yet fashionable to place about the eaves a deeply-moulded cornice, with plain blocks or shaped modillions. Such houses seem conscious of their claim to be considered real architecture, and whether of stone or mellowed brick, they indulge in raised quoins at the angles, broad string courses, long sash windows, and generous doorways, and often a pediment to raise the cornice in an appropriate crown. It was still the habit of builders to make their roofs steep, the proper pitch for tiles, and the eaves cornice was made to set off the hipped roofs of the wings to admiration, these hips with the ridges and frequent dormers being liberally supplied with coverings of lead. Despite the claims of other styles, earlier and later, there is no type that combines so thoroughly and in so friendly a manner all the qualities that make for the English house at its best.

There is no need to remind the reader of the examples that will come readily to his mind, nor does any lover of our native architecture easily forget the relief with which he learns that in such and such a town the purchaser of the fairest house in its streets has bought it to tend and preserve it. We seem to remember not long ago a period of anxiety in Chichester, which possesses three such buildings, when it was rumoured that ruthless change might rob the city of its prized possessions. The West Sussex County Council, however, stepped in and saved the best and earliest of the three; and was it not a cinema which bought one of the others and was wise enough to preserve its fabric as the fore-building of its theatre? The third, a later type, is in the lovely precincts of the Pallant, where "improvement" has as yet held its hand.

It is strange, in view of this and of the awakened public conscience in these things throughout the country, that the sister County Council, that of East Sussex, should be meditating the destruction of Newcastle House at Lewes—meditating, that is, an almost mortal blow at one of the most beautiful town streets in England. The builder of Newcastle House, it seems, was probably a certain John Braman, a wealthy alderman of Chichester, who came to Lewes in 1696, and married the widow of a well-known citizen of the latter town. He must have watched with interest the building of the wonderful house in West Street, Chichester (now the County Hall), for it was completed in the very year that he left. He could not have come to Lewes with a better education in fine architecture, and he evidently had an eye to a good site when he bought the frontage on the High Street immediately west of where the old Town Hall and Sessions House stood in the centre of the road. Just over a century later the latter building was pulled down and the present County Hall erected side by side with Newcastle House, a circumstance that now threatens the older house. John Braman's widow survived him, and at her death, in 1711, Newcastle House was bought by Benjamin Court, a successful Lewes ironmonger. His son, John Court, married a Pellatt heiress in 1717, the date of the sundial in the pediment overlooking the High Street. In 1734 Benjamin Court surrendered the house to the great Duke of Newcastle, who converted it into "the New Coffee House and Assembly Rooms," and for forty years it became the headquarters of the Whig Party in Lewes.

The two buildings, the County Hall, with its excellent front of Portland stone, built in 1816, and Newcastle House, with its low proportions and rich detail, are integral parts of the beautiful architectural grouping of the High Street. To take away one or the other is to spoil all. The internal features of the house are full of interest. The main staircase is cleverly planned with an overhanging quadrant landing, and newels skilfully carved with a hollow spiral. A secondary stair is full of picturesque turns and unexpected directions. The rooms are panelled with the broad panels of the period, and the chief room on the first floor has two fine columns which reach the ceiling. Several excellent chimneypieces remain. The garden front, too, retains much of the dignity which the street front displays so well. Every part proclaims the artist, and tells of a period when designer and craftsman worked with knowledge, both feeling how well worth while it was to build a thing of worth, a monument not only for the day, but for the admiration of posterity.

It cannot be long before our local authorities begin to realize what the man in the street has already learned, that these works of art, once gone, are a real loss to everyone. It is not only the charm which time gives, nor is it merely the historic interest that calls for preservation. It is that a fine building is a part of our necessary education, and we cannot afford to lose the lesson which it gives, nor the kindly influence which it exerts over the progress of the art of building, which, in spite of changes in fashion, exhibits a unity of purpose throughout the ages.

NEWS AND TOPICS

WE certainly know less of the Picts and Scots than we know of the Aztecs and Mayans. But last week-end, newspapers chronicled discoveries that may serve a little to lighten our darkness about the obscure Picts. Graphic illustrations of the find suggest that we are soon to know more about the Picts than that—so the legend runneth—they owe this generic name to their practice of decorating their bodies with various tints of woad. That is perhaps why those early inhabitants of Skara Brae, as the village is called, sought underground shelter from weather and observation that were either too cold or too ardent. It is stated that whereas the rough-hewn stone roofs of the village rise not more than 4 ft. above floor-level, the explorers have found the skeleton of a woman who must have been at least 5 ft. 6 in. tall. Let archæologists explain this alarming discrepancy, if they can, when they vouchsafe an amplified account of these underground huts and narrow tortuous streets, which seem an eerie anticipation of our own not remote future, when the Peace Pact dissolves in gaseous tears. But it has been sometimes conjectured that the Picts were builders of nobly tall towers, rising proudly heavenward, and this attribution seems incompatible with the supposition that they are responsible for these lowly huts in exiguous underground streets. But other times, other methods.

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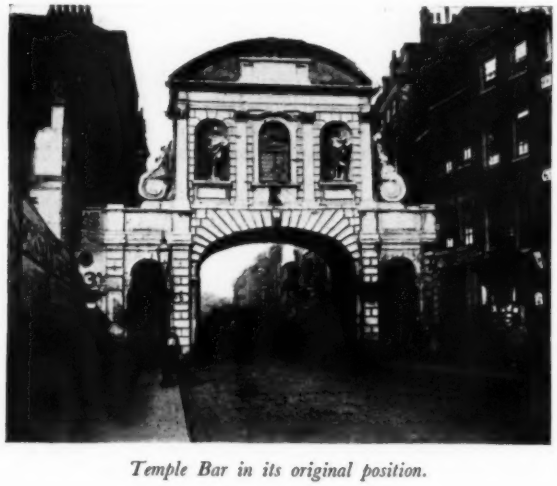
If you want to see Temple Bar today you must make a journey to Cheshunt, where it now forms the entrance to Theobald's Park, having been re-erected in that sylvan spot in the year of grace 1888—a year of disgrace to the City which permitted such a notable and architecturally interesting object thus to be carted away. In the little picture here given it is seen standing in its original position, dividing, at the junction of Fleet Street and the Strand, the jurisdiction of the Lord Mayor and Corporation from the West. I am old enough (alas !) to remember it there well, and as a child I have often passed (in a "growler") beneath it. It was originally set up (to replace an earlier barrier) by Wren, who designed it, during 1670-2. Until 1772 heads of malefactors were exhibited on it, and this custom once gave rise to a clever repartee of Goldsmith's to one of Dr. Johnson's sententious utterances. After that date this disgusting practice was discontinued, so when I sometimes think I have myself seen the gruesome sight, I must, I suppose, be wrong. Once there was a pillory close by in which such different delinquents as Defoe and Titus Oates stood; now the taste of our civic rulers is pilloried in the ridiculous griffin aimlessly clawing at the air, which has taken the place of Wren's beautiful gateway.



Temple Bar in its original position.

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When you steam out of the North Sea and enter the Skager Rack you enter into a new kingdom. It is a kingdom of beautiful country and fair cities whose rivalries are as eloquent in peace as they have been in earlier centuries in war. The Baltic, with its linked Hansa towns, is as full of romance as it has been full of trading activity and as it is now full of commercial enterprise. It is a geographical, industrial, and artistic entity, walled in on the north by ice, fringed on the south by the old European civilizations, closed to the world on the east by the vastness of Russia; its communications in the west most conveniently made by the sea. It is a world full of ships and seafaring ideas; a world of coasts on which European culture has fixed its outposts. Ethnographically it is not an entity, for it is by no means all Scandinavian, and there is a definite demarcation of the Scandinavians themselves. Norwegian, Swede, and Dane are different and vary almost as much as the Finn from the Slav of Estonia and the German of Danzig and Hamburg. But all these peoples are united in one expressed and unexpressed ideal, which is to make of the Baltic a united province of culture. The cities of the coasts have their museums in which the paintings and sculpture of the component nations are given a generous equality; they have their school of modern architecture in which there is a communal similarity and excellence, but not to the exclusion of national characteristics.

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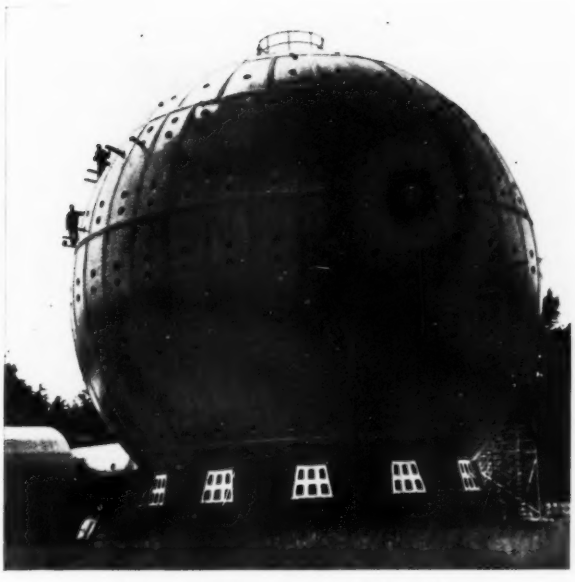
It is an astonishing architecture of which we know something "but not all" here in England. I was astonished at the intensive architectural activity of this fascinating region as I went from point to point on its shores, and I was no less astonished at the quality of the plastic and graphic arts, much as I thought I knew of all these things. In each city I was met by representative artists eager to show me their own works and those of their confrères; willing to extol those of the respective schools. Oslo I found a clean city of impressive vistas somewhat akin to the newer parts of Paris and Brussels. There is a fine new university library. At Copenhagen you are in the eighteenth century; the splendid period buildings gathered abundantly round the old squares and the two astonishing museums devoted entirely to sculpture—the Thorvaldsen and the Ny Carlsberg Glyptotek—in which the antique and the modern are housed in splendid style. At Stockholm the wonder grew. There Carl Milles, the sculptor, showed me all the marvels of this great progressive city, and Professor J. Tengbom told me more about its new architecture: the great Town Hall, the new churches, the remarkable commercial buildings in whose behalf the arts have been called on to do their best. At Helsingfors the striking new railway



The steel ball at Cleveland, Ohio, which is to be used as a "compressed-air hospital" for the cure of diabetes.

A spherical "sunlight house" at Dresden, Germany.

station emphasizes the charm of the older beauties. Tallin, once Russian, is a vigorous city with at least half a dozen modern structures of the first importance to its credit and a housing scheme which in a smaller way compares with that of Hamburg. Danzig is a lively city in which the old and the new are deliciously blended, but this characteristic is surpassed at Hamburg. The old canals and streets here are full of the old houses which have escaped the frequent conflagrations of the city; but towering over them, and over the elevated railway, are the huge but graceful modern apartment houses and offices—the Chilehaus, the greatest and most imposing of them all—truly an astonishing spectacle.

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At St. Andrews, Fife, the ghosts of antiquity cannot be exorcized. Bell, book, and candle cannot affright them, nor can the menacing golf-club, reinforced by the fearsome American twang, drive them back into limbo. For, as I meditated constantly while spending a few weeks in the ancient city, it is certain that the wide, open spaces of illimitable golf-links may not suffice to annul the hypnotizing charm of the noble ruins of a twelfth-century cathedral, or those fascinating fragments of an oft-captured and recaptured thirteenth-century castle, all complete with dungeon of despair. As for the University—"the college of the scarlet gown" poetized so wistfully by Andrew Lang—why that is a mere mushroom of the fifteenth century. Nor is the Town Church oppressively ancient. It was founded at about the same date as the University, and was, indeed, rebuilt within living memory by that scholarly ecclesiological architect, Dr. Macgregor Chalmers, with scrupulous faithfulness to ancient detail. But, to prevent a choking sensation from hoary mists, and slightly to relax the strangle-hold of the "dead hand," there are in this beautiful city fine buildings enow by Sir Rowand Anderson, by Sir Robert Lorimer, and other great moderns. For my part, I could for awhile shake off the uncanny influence of the ghostly presences to regard with as much interest as it deserves the stunted fountain erected to the memory of Major Whyte-Melville, cavalry soldier, novelist, song-writer, who died as the result of an accident in the hunting-field in 1878. Beneath the fountain there are drinking-places for dogs; but why did the designer omit to inscribe them with this quotation from Whyte-Melville's jolly hunting-song chorus, which, if memory serves me, runs thus:

> Drink, puppy, drink,
> And let every puppy drink,
> If he's able to lap and to swallow;
> For he'll grow into a hound,
> So let the toast go round.
> With a whoop, and a hark, hark, follow.

What a roaring chorus for Tony Lumpkin and his boon companions! With their whoop they would rattle the roof of the "Three Pigeons"! Lumpkin must have been the prototype of Whyte-Melville's "Galloping Squire."

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Significant art seems to have reached its destination in the two buildings which grace the local landscape of Cleveland, Ohio, and Dresden, Germany, respectively. The first is a hospital for those sufferers from diabetes who can be prevailed upon to take the compressed-air cure within its steel walls, and the second is actually a house, the home of the only true sun-worshippers of Dresden. The ball revolves so that all the inhabitants derive the maximum amount of sun, although I am not sure how the occupants of its antipodes are to catch the last beams of the sunset; but its main purpose is most naïvely evident. As I look at it I wonder in what relation it stands to the practice of what Sir James Fraser calls "imitative magic." Build a house in the likeness of the sun and the sun will return the compliment—and beam upon it. I don't pretend that this theory applies to the globular hospital of Cleveland, which I can only regard as a monument to the domination of medical science over mere ordinary reason.

ASTRAGAL

MR. FRITZ LANG'S WORK FOR THE CINEMA

[BY L. F. EDWARDS]

THE permanence of architecture makes it the most conservative of the arts. Further, the study of its practical application requires a skill and experience not demanded of novices in other arts. In consequence the career of a great architect is not overshadowed as is the career of many great painters, sculptors, and musicians, with the recurrent memory of youthful indiscretions. Furthermore, architecture is the most impersonal of the arts. Individual buildings stand out in the memory of the layman, individual architects, with the exception of world-famous names such as Wren or Inigo Jones, never. One speaks of Rodin, Picasso, Stravinsky, but, on the other hand, of Bush House or the New Liberty Building. Partly this is due to the inevitable slavery of tradition, partly to the long training in certain classical schools. In France and Germany certainly there are architects using new forms and new materials, but in this country architectural novelty is limited to details or to methods of construction. Of any outstanding originality which will catch the eye of this Proteus, the "Man in the Street," there is no sign. It is too expensive, too much depends on the results of an experimental technique, to be original.

It is through the medium of models that the architect carries out his original ideas. But models are unsatisfactory things. Even in the most imaginative mood it is difficult to conceive of everyday life in a building 18 in. or 2 ft. high, and models, even of interiors, of sufficient scale to take their part in everyday life are expensive things only to be carried out in huge exhibitions. Here is the value of the cinema to the architect. Here is a field in which, through the convincing flattery of the camera, even the most fantastic architectural creations bear the stamp of truth. Here, by a common trick of photographic technique, those same models whose small scale seemed so inadequate as models can be filled with a living, breathing throng. Here a period not only of the past, but also of the future, can be realized and reconstructed in a few well-chosen details which, to the looker-on, comprise a mansion, a palace, or even a whole town.

An architectural setting from the film Metropolis. *By Fritz Lang.*

Consider some film in which the architectural setting has appeared unusually vivid, and it will be surprising to realize with what a minimum of effort this has been achieved; here a window, there a doorway, perhaps a staircase or an interior, and, finally, a few distant shots of the exterior, taken probably of a model, whose appearance of truth is still further heightened by a life-size scene enacted outside the main gateway or on the garden terrace. A good example is the fantastic Russian architecture of the Ivan the Terrible episode in Paul Leni's "Waxworks." This is, however, unfortunately what the architect can do on the cinema rather than what he has done, and the average cinema set at present is chosen with a disregard of architectural possibilities that is truly appalling. Not that it is absolutely necessary for architectural beauty to be present in every set; clever camera work can do wonders, and some of the finest scenes I have ever seen have been taken of the Eiffel Tower by a camera-man with a sense of the grotesque. Nevertheless, architectural knowledge and architectural taste when they appear in the actual composition of a set, rather than merely in the choosing of an already existing scene to photograph, make an extraordinary difference to a film and can often lift it from the class of "moving pictures" into that of cinema art.

Among those directors whose taste and genius has made the film a new art form none has the same architectural sense, both of construction and composition, as Fritz Lang. Even without a reporter's notes about his varied life and early struggles it is easy to see that Lang was trained as an artist. As a matter of fact, his father was a prominent architect in Vienna, and he himself for some time studied painting. Then followed an adventurous and wandering life, with experiences of many countries and varied *milieux*, including some stage experience which has stood him in good stead, before he eventually "found himself" as the outstanding figure in the creation of the modern film.

Architectural settings from the film Metropolis. *By Fritz Lang.*

Architectural settings from the film Metropolis. *By Fritz Lang.*

His first film, "Dr. Mabuse," and, indeed, all his subsequent films, have been made for the great German producing company, the UFA, who were not slow to recognize his genius. "Dr. Mabuse," a shocker of the most vivid description, was mainly distinguished by an uncanny facility for camera technique; in it the most unusual tricks of the photographic trade of the time—just after the war—were incorporated so smoothly into the general texture of the film that art became in very truth a means of concealing art, and even today, when many of the tricks of the cinema have become common property, and the camera wonders of ten years ago are explained in every half-crown guide-book of "how it is done," the fluency and technique of "Dr. Mabuse" are still astonishing. (Of his second great film, "Destiny," known in Germany as "Müden Tod," I cannot say much here. It has extraordinary architectural interest, and it may even be revived in London shortly at the Avenue Pavilion, Shaftesbury Avenue, but as I am unable to obtain photographs I have omitted it rather than describe what I cannot illustrate.)

There was, however, nothing particularly striking architecturally about "Dr. Mabuse." It was not until Lang began the ambitious task of translating the "Nibelungenlied" into terms of pictures that his genius for architectural settings and groupings became apparent.

Taking the old German epic with its semi-historical basis and its setting in Burgundy, and the court of Attila rather than the Wagnerian epic of weltering gods and heroes, he has literally remoulded his period into a living essence of Romanesque which has nothing to do with architectural archæology or pedantic textbooks. And it is here where Lang's architectural genius is apparent. It would have been easy to utilize existing ruins of the period or of a period sufficiently akin; to have taken the epic in Ravenna and turned it into an ordinary and even commonplace story.

Siegfried, riding through the Black Forest, even at its mightiest, would never have conveyed the epic grandeur associated with him. Therefore forest, dragon's pools and cavern of the Nibelungs alike were built in the UFA studios and attain a simplicity and dignity impossible in ordinary natural surroundings.

The dragon itself, naturally the most popular part of the film, is a marvel of construction, but cannot be regarded as architecture, except, perhaps, internally! But the cathedral and the scene in the palace showing the arrival of Siegfried are masterpieces of historical reconstruction, reconstruction that has the spirit rather than the letter of the somewhat shadowy Nibelungen time. It is an interesting study in architectural film technique to compare the scene of the wedding in the first part of the "Nibelungs" with the praying priest taken from the second part of the film. They convey a totally different impression and yet were taken on the same set. Ardent film-goers may well recognize this set which in various transformations has served in other films also.

But it is not only in his sets of buildings that Lang shows his artistic talent. If you examine the groupings in any of the photographs illustrated you can see a constant and regular sense of design which is architectural in nature and

An architectural setting from the film The Spy. *By Fritz Lang.*

which, up to the present, no other film producer has achieved save by way of a passing inspiration. The sense of formality adds enormously to the power of the film and, by conventionalizing, renders the spirit of the courts of Burgundy and Attila more real to us and less wrapped in the dry bones of history. An example of the economy of sets, and also of the value of an architectural framework thought out beforehand in their construction, can be seen in the two photos from the second half of the "Nibelungs" —those of the ante-room and the fight on the stairs. Totally different in feeling and detail, they are nevertheless built on the same architectural motive.

After his great success in reconstructing the distant past of the Nibelung legends, Lang turned his attention to the almost equally distant future. "Metropolis" is the adaptation of a story by his wife, the novelist Thea von Harbou, describing the Armageddon of a city of the future. As story there is much to criticize in it. There are obvious improbabilities, several absolute impossibilities, and a good deal of dispute as to what direction the life of the metropolitan future will take. But, as a picturization of the tendencies of modern, particularly American, city architecture it is of extraordinary interest.

The "city of the future" does not break any new ground architecturally. Generally speaking it is a New York raised to the *n*th degree with overhead tramways, aeroplane landing-stages, moving sidewalks, and all the mechanical advances of which architects and engineers have dreamed, centering around an immense tower some hundreds of feet high. Save for the scale a clever photographer could make many of the scenes of "Metropolis" from New York today. Modern New York, however, has grown to some extent haphazardly. It is not, as "Metropolis" will be, the creation of a single will. In "Metropolis" town planners, or at least one supereminent and exalted town planner, wreaks his will. This is the logical development of present-day city architecture in the American style.

According to one's views it is either a warning or an inspiration, but the under-city, "the city of the workers," can be no other than a warning. Here Lang has pushed the "utility" idea of architecture to its final phase. Here are vast warehouses and tenements without eyebrows or eyelashes, undecorated, unrelieved, scandalously and brutally suited for their purpose: sleeping boxes. Certainly a warning this time. In some of the details, however, the warnings lose their terror and run close to inspiration.

An architectural setting from the film The Spy. *By Fritz Lang.*

An architectural setting from the film The Spy. *By Fritz Lang.*

The vast door against which Brigitte Helm is leaning is a fine conception, although some might say the knocker can only be regarded as ornamental! The Stadium, in the modern German style, is fine, and many of the engine-room scenes are magnificent. Incidentally "Metropolis" is a perfect example of the use of models in film technique.

In his last film, "The Spy," which should be shown in London for the first time about the time this article appears in print, Lang has returned to his "Dr. Mabuse" style. "The Spy" is a thriller, pure and simple, distinguished from other thrillers only by the masterly technique and production. Nevertheless, even in this somewhat lurid story of international spies, diplomatic complications and secret service agents in suspicious post-war Europe, there is ample evidence of a trained artist's work: for example, the grouping and arrangement of the scene of the girl in the chair, terrified at the struggle of the two men whose shadows magnified in her fear are cast on the wall behind her. Many of these subtle effects are the chance of the moment seized by the director with a quick brain and utilized as effective. This is the essence of good direction, and I am not in agreement with those film critics who say that a director consciously studies every movement of his actors in relation to their scene. Such a proceeding would result in stilted and lifeless pictures. But it is certain that a picture can, and in certain cases must, have an architectural scene behind it holding it together so to speak, and giving to the scenes alone, independent of the plot or action, a unity and purpose. All this would suggest that the cinema is a great field for the architect whose ideas for some reason or another cannot yet be carried out in lasting stone. Possibly extreme originality, possibly a dramatic feeling unsuited to present-day building, possibly, as in Lang's case, an instinctive feeling for the cinema would incline him this way, but the cinema has certainly an architectural importance which is bound to increase with the more intelligent present-day audience of film enthusiasts, and with the slow breakdown of conservative tradition among architects themselves.

Architectural settings from the film Nibelungen. *By Fritz Lang.*

Architectural settings from the film Nibelungen. *By Fritz Lang.*

A WORCESTERSHIRE MANOR HOUSE

[BY M. L. ANDERSON]

If you travel on the main road from Worcester, through Kidderminster, to the north, it will take you through Hartlebury village, where the Bishops of Worcester have kept open house time out of mind; and a little farther on you come to a fork where one branch follows on to the left into Kidderminster and the other runs away to the north-east to Stourbridge, Dudley, and the Black Country round Birmingham. At this fork the road begins to rise very gently until it comes to the hamlet of Stone.

Stone Manor stands on a shoulder, where the Clent Hills come rippling down into the valley of the Stour, and from its windows you look over the green fertility of this valley to the west, to Bewdley and Wyre Forest, to where the Clee Hills stand out of the blue horizon which is Shropshire.

Mr. Stanley Hall is no novice in the art of half-timbered building, but this particular house is probably his masterpiece. It is set back some considerable distance from the road, and thus provides scope for a fine sweep of carriage drive, and the fullest advantage has been taken of this possibility. The house itself is L-shaped in plan, the kitchen quarters being neatly bestowed in one arm and the living-rooms in the other; the dining-room serves, in a way, as the link between these two portions, while the entrance hall completes the arrangement. The greater part of the house is three stories in height, the topmost being lit by dormer windows; the kitchen wing, however, has only one clear story, the second being in the roof and lit by dormers. A point of particular interest lies in the use of materials. The front door is set in the angle between the two wings, and the walls on these two sides, facing north and east respectively, are of brick, while the rest of the house is of half-timbered work, except where a chimney-stack occurs on the outside, and here again the brick is exposed to view. The use of brick for the chimneys is, of course, traditional in such work; but the idea of making the frank distinction between the "warm" and "cold" sides of a house, if not new, is at least a little uncommon in vernacular design of this type; and the effect is not only pleasing, but logically expressive.

The habit, when designing in a certain traditional style, of deviating from and "improving" upon it is generally regarded as a thoroughly bad one; and in principle this bowdlerizing of forms and phrases which are in themselves complete, by generations of experiment and gradual development, is to be powerfully condemned; but there come times when certain problems have to be faced, certain compulsions to be accepted, and the direct and logical reply most usually has the effect of falling gently into line with the more rigid formulæ of the style and takes its place as part of its lore and fable. It is evident that this must be so, since the man saturated in the tradition and expressionism of the medium in which he is working, when he finds a problem, solves it in his capacity of true artist in that sphere.

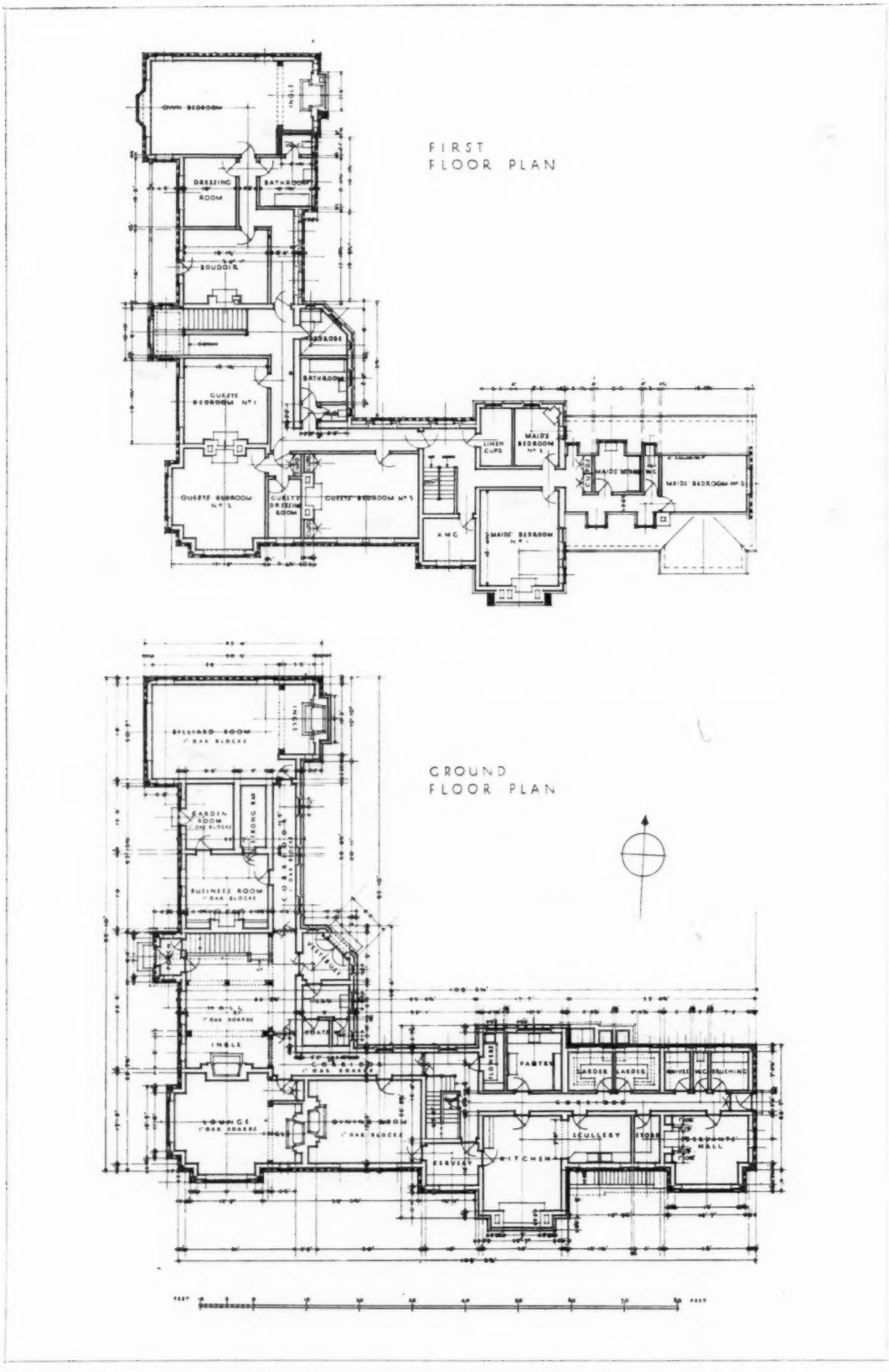
That is where Mr. Hall has achieved his success with Stone Manor. The design is anything but pure copyism;

The Manor House, Stone, Worcestershire. By E. Stanley Hall. A view from the south-west.

the house is a modern one and fulfils all those demands which are commonly made of the present-day house; it avoids being "Old World"; it gives all that modern civilization and knowledge suggest—light, air and airiness, warmth, and efficiency of arrangement and working; it is solidly and permanently built; but still it is essentially and absolutely in parallel with the articulation of the generations of workmen and designers who evolved the half-timbered style of architecture through the centuries; and Mr. Hall, by his sensibility and truthful contribution to the vernacular, has contributed also towards the ultimate perfection of this style.

The Manor House, Stone, Worcestershire. By E. Stanley Hall. Above, the entrance front, from the drive. Below, the entrance and the north wing.

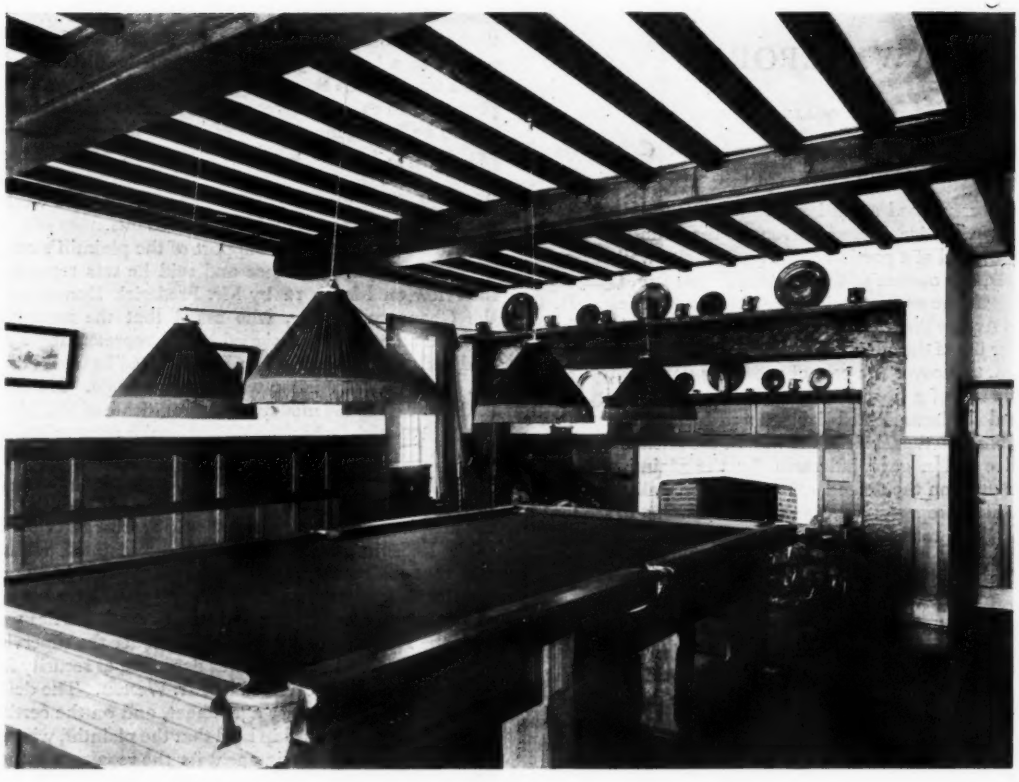
The Manor House, Stone, Worcestershire. By E. Stanley Hall. Above, a view from the south-east. Below, a detail of the west front.



The Manor House, Stone, Worcestershire. By E. Stanley Hall. Ground-floor and first-floor plans.

The Manor House, Stone, Worcestershire. By E. Stanley Hall. Above, the lounge hall. Below, the staircase.

The Manor House, Stone, Worcestershire. By E. Stanley Hall. Above, the dining-room. Below, the drawing-room.



The Manor House, Stone, Worcestershire. By E. Stanley Hall. Above, the billiard-room. Below, the stables.

LAW REPORTS

EXETER CITY WALL LITIGATION

St. Anne's Well Brewery Co., Ltd. v. *Roberts and others. Court of Appeal. Before Lords Justices Scrutton, Lawrence, and Greer*

The appeal concerned an action decided in the King's Bench Division by Mr. Justice Acton in favour of the plaintiffs and had reference to the fall of a portion of the ancient city wall of Exeter. The plaintiffs, the owners of the Custom House Inn, Quay Hill, Exeter, brought the action against the defendants, Messrs. R. C. Roberts and Arthur Webber, as trustees, and Mrs. Harriet Roberts, the tenant for life of the adjoining property which the wall divided from the inn, to recover the cost of repairing damage to the inn owing to the fall of a portion of the ancient city wall in March 1927. The defendants denied liability and blamed the plaintiffs for excavations into the fabric of the wall in the kitchen of the inn.

Mr. Justice Acton gave judgment for the plaintiffs, holding there was a duty on the defendants to keep the wall from falling on the adjoining property, but that they did nothing to see that it was safe and left it to chance. He entered judgment for plaintiffs. The defendants now appealed, and on their behalf Mr. Du Parcq, K.C., submitted that on the facts the appellants could not be held guilty of negligence and that they could not be held liable to the plaintiffs for the damage.

Mr. Holman Gregory, K.C., supported the judgment of Mr. Justice Acton on behalf of the respondent. He said that the wall in question was not a retaining wall, but was a battlement put up probably 500 or 1,000 years ago, and was retained for reasons of pride and interest and not for use or ornament. For hundreds of yards it was built on a sandstone ridge, and where the collapse occurred the sandstone ceased and, deprived of that foundation, it must have been apparent that with no proper provision made for drainage the fabric would become weakened and at some time the wall must collapse unless it was properly supported. The defendants had done nothing to protect the wall since they came into the property, and in these circumstances he contended that Mr. Justice Acton was justified in coming to the conclusion that reasonable and proper care on the defendants' part might have prevented the damage which had occurred.

The Court allowed the appeal.

Lord Justice Scrutton said it was impossible to hold that the defendants were negligent because they did not investigate in the inn kitchen to ascertain the condition of the wall. In his opinion the judgment of Mr. Justice Acton must be set aside and judgment entered for defendants, with costs.

Lords Justices Lawrence and Greer agreed.

REPAIRS: QUESTION OF AGREEMENT

Eddowes v. *Newland. Chancery Division. Before Mr. Justice Tomlin*

This action referred to terms concerning a certain amount of purchase money for the lease of a house at Shirland Road, Maida Vale.

Mr. Farwell, K.C., for the plaintiff, stated that his client was lessee of the premises, and in 1927 it had seven years to run. It contained the ordinary full repairing covenant. It appeared that the landlord was not satisfied with the state of repair of the premises and served the plaintiff with a notice (not a statutory notice) and a schedule of dilapidations. Mr. Eddowes consulted his surveyor, Mr. George Weston, and instructed him to examine the lease and property and advise him as to what work was necessary in order to comply with the covenants. Mr. Weston drew up a specification and obtained an estimate from a builder to execute the repairs for £110 7s. While the work was being done the plaintiff and the defendant entered into an agreement whereby the latter took an assignment of the lease and the goodwill of the business carried on at the premises for £550. On March 12 there was a meeting at the offices of the plaintiff's solicitors for the purposes of completion, and it was then agreed that out of the £550 the £110 7s. for the builder should be deposited in a bank in joint names, and the dispute was as to the terms upon which that sum should be released. The case for the plaintiff was that the agreement arrived at was that the £110 7s. was to be for payment of the repairs in progress when completed, and on Mr. George Weston's certificate, and the receipt given corroborated that contention. The defendant said that Mr. Weston's name was not mentioned and that the work done was not sufficient to comply with the covenants.

Evidence was called in support of the plaintiff's contentions.

Defendant gave evidence and said he was represented at the interview on March 12 by Mr. Frederick Donaghue Wright, of the Chancery Agency, who asked that the money should be released on a certificate signed by the representatives of the landlord and of the plaintiff. Mr. Lovekin said he would fix the matter up. Mr. Weston's name was not mentioned. He did not agree to the release of the money on the certificate of Mr. Weston alone.

Mr. Frederick Donaghue Wright, senior partner in the Chancery Agency, estate agents, giving evidence for the defence, said that nothing was said at the completion interview as to the terms upon which the money should be paid out. Mr. Weston's name was not mentioned and he did not see the receipt given for the money.

His lordship gave judgment for the plaintiff, with costs. He said that the receipt for the money deposited in the bank made it quite clear that Mr. Weston's name must have been mentioned at the interview. He was satisfied that the parties were dealing with the repairs actually in progress under the supervision of Mr. Weston and that the money was deposited as security for the work being executed and certified by Mr. Weston. The defendant had failed to prove any other agreement, and on the certificate given by Mr. Weston his lordship held that the plaintiff, who was responsible to the builder for payment for the repairs done, was entitled to the money in the bank and ordered the defendant to endorse the deposit note and all was to be done that was necessary to enable the money to be withdrawn from the bank.

NEW INVENTIONS

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

LATEST PATENT APPLICATIONS

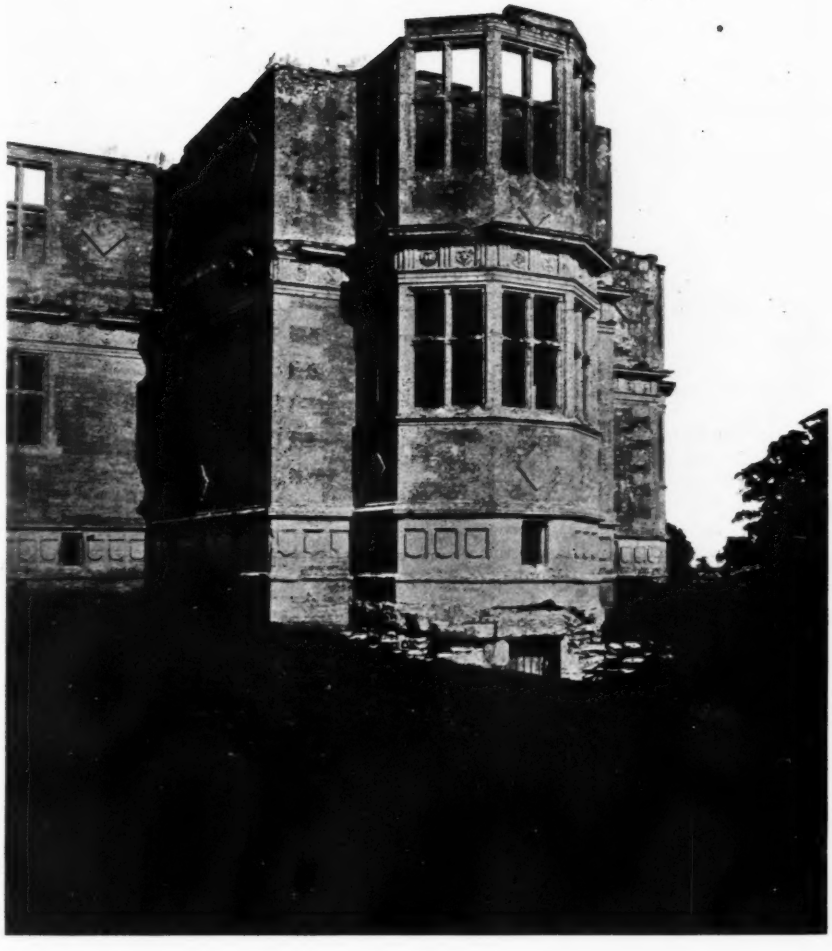
21786. Aldam, E. H. Fireplaces. July 27.
21583. Bessler, F. E. Stairways. July 25.
21232. Horrell, C. R., and Triplex Foundry, Ltd. Firegrates. July 23.
21689. I. G. Farbenindustrie Akt.-Ges. Production of porous building materials. July 26.
21696. Walden, E. Building-blocks, &c. July 26.

SPECIFICATIONS PUBLISHED

294345. Concrete, Ltd., Ambrose, J. G., and Matthews, C. B. Formation of blocks, monoliths, or the like to be used as stairs or steps.
294356. Piper, J. H. Automatic or self-acting mechanism for operating sliding windows and the like.
294364. Bard, P. Chimney pots.
294438. Donaldson Manufacturing Co., Ltd., and Hadden, W. J. Windows.
294407. Middleton, L. Doors for buildings.

ABSTRACT PUBLISHED

291852. Lambie, J. E., 5901 Hydraulic Avenue, Cleveland, Ohio, U.S.A. Moulding buildings *in situ*.



ENGLISH PRECEDENT

30 *Lyveden New Building, Northamptonshire. This is a cruciform building erected by Sir Thomas Tresham between 1600 and 1605. Tresham was a Roman Catholic of a mystical turn of mind, and this building is emblematical of the Passion. The topmost cornice bore texts relating to the subject; the middle cornice bears seven groups of instruments of the Passion, repeated in due order; the panels at the base were intended to be carved with coats of arms. At the end of each of the four wings is a bay window similar to that illustrated, the whole forming a simple but striking group. The detail of the stonework is unusually refined for that period, and the mason must have had some excellent profiles at his disposal.*—[J. A. GOTCH.]

REINFORCED CONCRETE MEMBERS: ii

[BY L. G. TAFFS]

COMBINED BENDING AND TENSION

As with combined bending and compression, the case in which the eccentricity of the load is so small that there is no compression in the member can be solved very readily by the usual methods, and is not dealt with in this article.

Where the eccentricity is sufficiently great to produce a compressive stress on one side of the member.

Case I. Area of steel in compression equal to area of steel in tension.

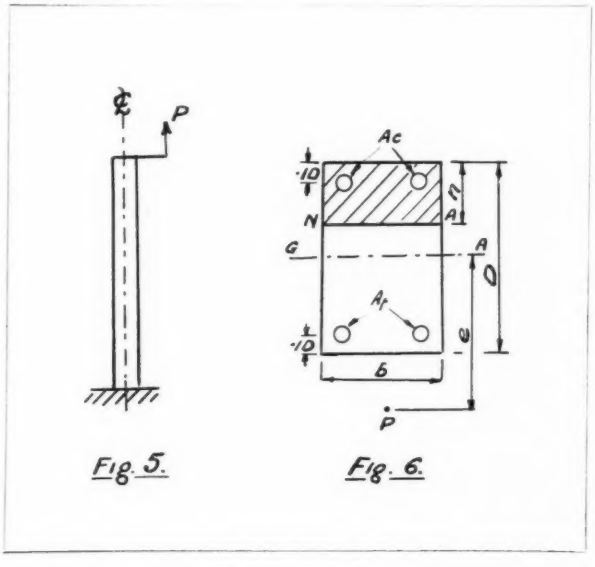


Fig. 5. Fig. 6.

Consider the equilibrium of forces

$P = T - C$

$$P = 15A_t\frac{(\cdot 9D-n)}{n}c - bn\frac{c}{2} - 14A_c\frac{(n-\cdot 1D)}{n}c$$

$$= 15\frac{pbD}{200}\frac{(\cdot 9D - n_tD)}{n_tD}c - bn_tD\frac{c}{2} - 14\frac{pbD}{200}\frac{(n_tD-\cdot 1D)}{n_tD}c$$

$$= bD\frac{c}{2}\left[\frac{15p}{100}\frac{(9-n_t)}{n_t} - n_t - \frac{14p}{100}\frac{(n_t-1)}{n_t}\right]$$

$$= bD\frac{c}{2}\left[\frac{p}{n_t}(\cdot 135 - \cdot 15n_t - \cdot 14n_t + \cdot 014) - n_t\right]$$

$$= bD\frac{c}{2}\left[\frac{p}{n_t}(\cdot 149 - \cdot 29n_t) - n_t\right]$$

$\therefore P = JbDc$, where $J = \frac{1}{2}\left[\frac{p}{n_t}(\cdot 149 - \cdot 29n_t) - n_t\right]$ . . . (1)

Now, as before, taking moments about the centroid, we have:

$Pe = T \times$ distance from centroid $+ C \times$ distance from centroid

$$= 15A_t\frac{(\cdot 9D-n)}{n}c \times \cdot 4D + bn\frac{c}{2}\frac{(D-n)}{2}\frac{(D-n)}{3} + 14A_c\frac{(n-\cdot 1D)}{n}c \times \cdot 4D$$

$$= \frac{15pbD}{200}\frac{(\cdot 9D - n_tD)}{n_tD}c \times \cdot 4D + bn_tD\frac{c}{2}\frac{(D-n_tD)}{2}\frac{(D-n_tD)}{3} + 14\frac{pbD}{200}\frac{(n_tD-\cdot 1D)}{n_tD}c \times \cdot 4D$$

$$= bD\frac{c}{2}\left[\frac{15}{100}\times \cdot 4p\frac{(\cdot 9-n_t)}{n_t} + n_t\frac{(1-n_t)}{2}\frac{(1-n_t)}{3} + \frac{14}{100}\times \cdot 4p\frac{(n_t-\cdot 1)}{n_t}\right]$$

$$= bD\frac{c}{2}\left[\frac{n_t}{6}(3-2n_t) + \frac{\cdot 4p}{n_t}(\cdot 135 - \cdot 15n_t + \cdot 14n_t - \cdot 014)\right]$$

$$= bD\frac{c}{2}\left[\frac{n_t}{6}(3-2n_t) + \frac{\cdot 4p}{n_t}(\cdot 121 - \cdot 01n_t)\right]$$

$$= bD\frac{c}{2}\left[\frac{n_t}{6}(3-2n_t) + \frac{p}{n_t}(\cdot 0484 - \cdot 004n_t)\right]$$

$\therefore Pe = K_cbD^2c$

Where $K_c = \frac{1}{2}\left[\frac{n_t}{6}(3-2n_t) + \frac{p}{n_t}(\cdot 0484 - \cdot 004n_t)\right]$ . . . (2)

Hence from (1) and (2)

$$\frac{Pe}{P} = \frac{K_cbD^2c}{J_cbDc} \qquad \therefore \frac{e}{D} = \frac{K_c}{J_c}$$

Thence, by taking a series of values of n_t for each value of p, we may obtain a graph between $\frac{e}{D}$ and K_c, from which the stress in the concrete may be found by the relationship

$$c = \frac{M}{K_cbD^2} \text{ from equation (2)}$$

In cases of combined bending and tension it is often necessary to find the tensile stress in the steel, and this may be found thus:

$$t = \frac{\cdot 9D - n_tD}{n_tD} \times 15c$$

$$= 15\frac{c}{n_t}(\cdot 9 - n_t)$$

$$K_t = \frac{15}{n_t}(\cdot 9 - n_t)K_c$$

and $J_t = \frac{15}{n_t}(\cdot 9 - n_t)J_c$

$$\text{Hence } \frac{K_t}{K_c} = \frac{K}{J} = \frac{e}{D}$$

and we may thus obtain a graph giving the relationship between K_t and $\frac{e}{D}$

Thence the steel stress may be obtained for any value of $\frac{e}{D}$ by the relationship

$$f = \frac{M}{K_tbD^2}$$

Example: A reinforced concrete tie-beam has to withstand a tensile load of 20,000 lbs., the line of action of which is 24 in. from the centre of the member. Assume the overall size of the member to be 16 in. deep by 6 in. wide, and to be equally reinforced on both faces. Find the stresses in the steel and concrete when 3½ per cent. of steel is used in each face.

$$M = 24 \times 20{,}000 = 480{,}000 \text{ lbs. ins.}$$

$$e = 3 \text{ in.} \qquad \frac{e}{D} = \frac{30}{20} = 1{\cdot}5$$

Then from diagram No. 5, $K_c = \cdot 56$ and $K_t = \cdot 022$

$$\text{Whence } c = \frac{M}{K_cbD^2} = \frac{480{,}000}{\cdot 56 \times 6 \times 16^2} = 560 \text{ lbs./sq. in.}$$

$$\text{and } f = \frac{M}{K_tbD^2} = \frac{480{,}000}{\cdot 022 \times 6 \times 16^2} = 14{,}200 \text{ lbs./sq. in.}$$

Case II. With the area of steel in compression equal to two-third times the area of steel in tension.

As in the case of combined bending and compression, once the area of steel in each side ceases to be equal, the position of the centroid no longer coincides with the geometric centre, and the necessary allowances must be made.

The distance of the centroid of a section from its geometric centre is, however, unaffected by the external forces which the member has to withstand, and consequently the value of e_t remains the same as in the case of $A_t = 2/3\,A_c$, but the centroid is now on the opposite side of the geometric centre.

If, therefore, equations are obtained in a similar manner as

case II of a member subject to combined bending and compression they will be as follows:

$$e_1 D = D\left[\frac{\cdot 0112p}{2 + \cdot 28p}\right]$$

$$J = \tfrac{1}{2}\left[\frac{p}{n_1}(\cdot 173 - \cdot 29n_1) - n_1\right]$$

$$K = \tfrac{1}{2}\left[\frac{n_1}{6}(3 - 2n_1 + 6e_1) + \frac{p}{n_1}\left\{n_1(\cdot 29e_1 - \cdot 027) + \cdot 06 - \cdot 173e_1\right\}\right]$$

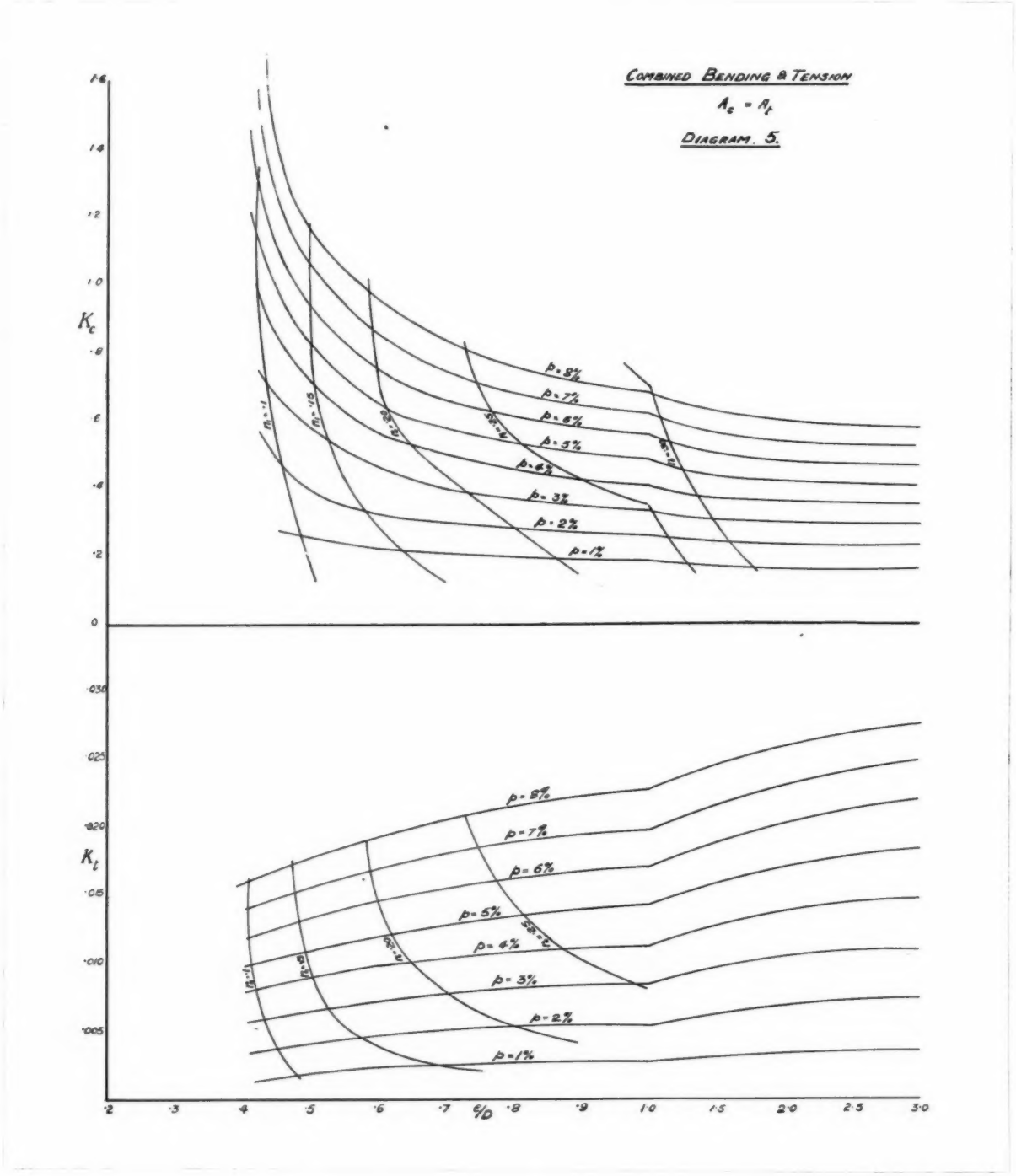
These equations have been graphed, and the results are shown in diagram number six.

Example: A tension member in a reinforced concrete roof truss has to withstand a tensile load of 20,000 lbs. and a bending moment of 160,000 lbs. ins. Assuming that the overall size of the member must not be more than 10 in. deep by 4 in. wide, find the area of reinforcement required:

$$e = \frac{M}{P} = \frac{160{,}000}{20{,}000} = 8{\cdot}0$$

$$\therefore \frac{e}{D} = \frac{8{\cdot}0}{10} = 0{\cdot}8$$

$$K_c = \frac{M}{cbD^2} = \frac{160{,}000}{600 \times 4 \times 10^2} = {\cdot}667$$



Whence from diagram number six using $A_c = 2/3\ A_t$

$p = 8$ per cent.

and $K_t = \cdot 025$

$$t = \frac{160{,}000}{\cdot 025 \times 4 \times 10^2} = 16{,}000 \text{ lbs./sq. in.}$$

$$A_t = \frac{3}{5} \times 8 \text{ per cent.} = 4{\cdot}8 \text{ per cent.}$$

and $$A_c = \frac{2}{5} \times 8 \text{ per cent.} = 3{\cdot}2 \text{ per cent.}$$

Case III. With $A_c = \frac{1}{2} A_t$.

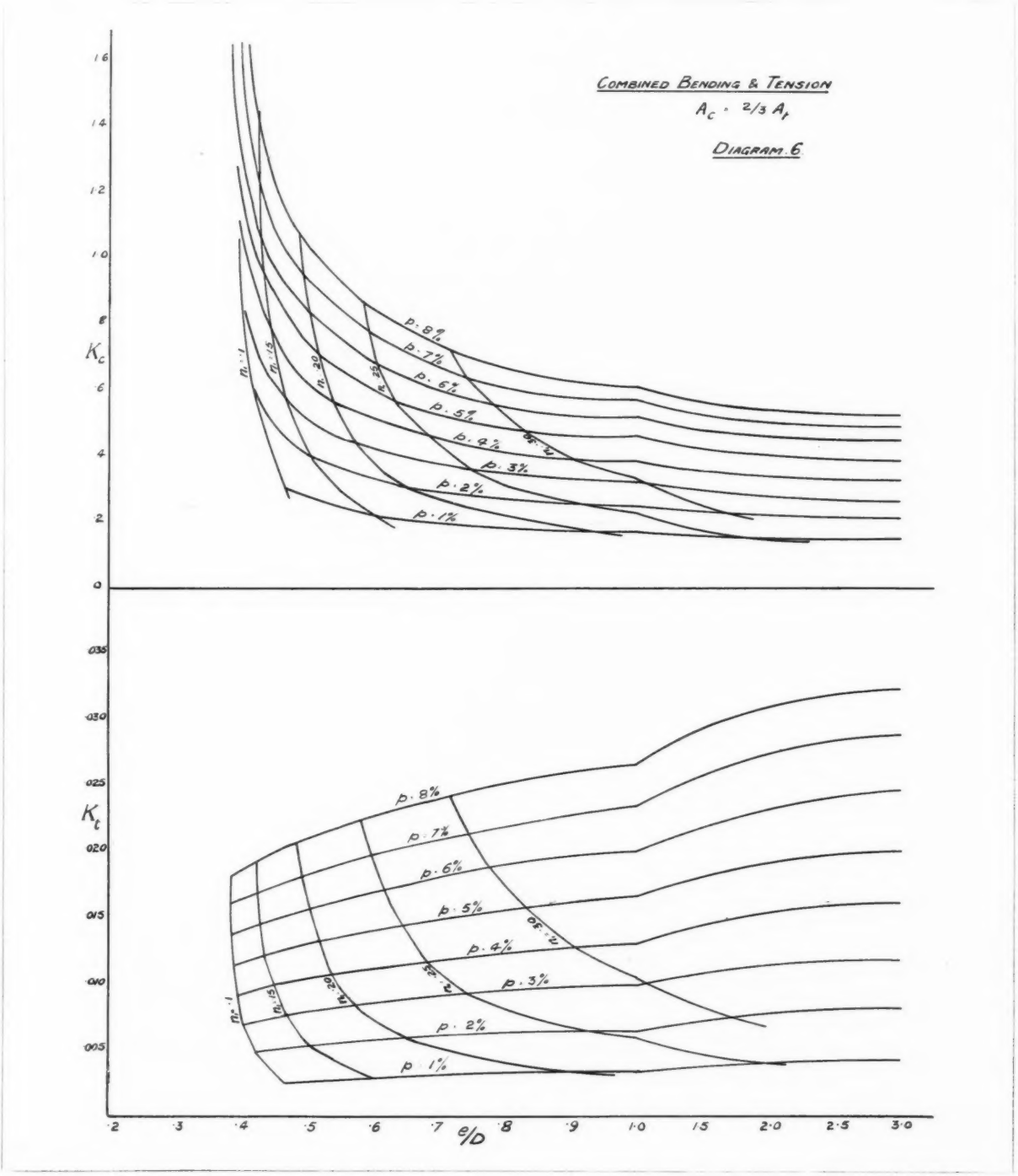
This may be treated in an exactly similar manner to case III of combined bending and compression, and the following equations obtained:

$$e_1 D = D \left[\frac{\cdot 0187 p}{2 + \cdot 28 p} \right]$$

$$J = \tfrac{1}{2} \left[\frac{p}{n_1} (\cdot 189 - \cdot 29 n_1) - n_1 \right]$$

$$K = \tfrac{1}{2} \left[\frac{n_1}{6} (3 - 2n_1 + 6e_1) + \frac{p}{n_1} \left\{ n_1 (\cdot 29 e_1 - \cdot 043 + \cdot 068 - \cdot 171 e_1) \right\} \right]$$

These quotations have been graphed, and the results are shown in diagram number seven.



Similarly, when the eccentricity of the load about the geometric centre of the member is known, the movement of the centroid due to the unequal distribution of the steel must be taken into account, the eccentricity of the load being equal to "e."

Where $e = ecc - e_1 D$

Example: A reinforced concrete tie-beam has to withstand a tensile force of 65,000 lbs., the line of action of this force being 12 in. from the geometric centre of the section. Assuming the maximum depth of the beam to be limited to 15 in., and using a total of 6 per cent. of steel, find the breadth of the beam.

$e_1 = \cdot 0305 D = \cdot 46$ in.

$e = 12 - \cdot 46 = 11 \cdot 54$ in.

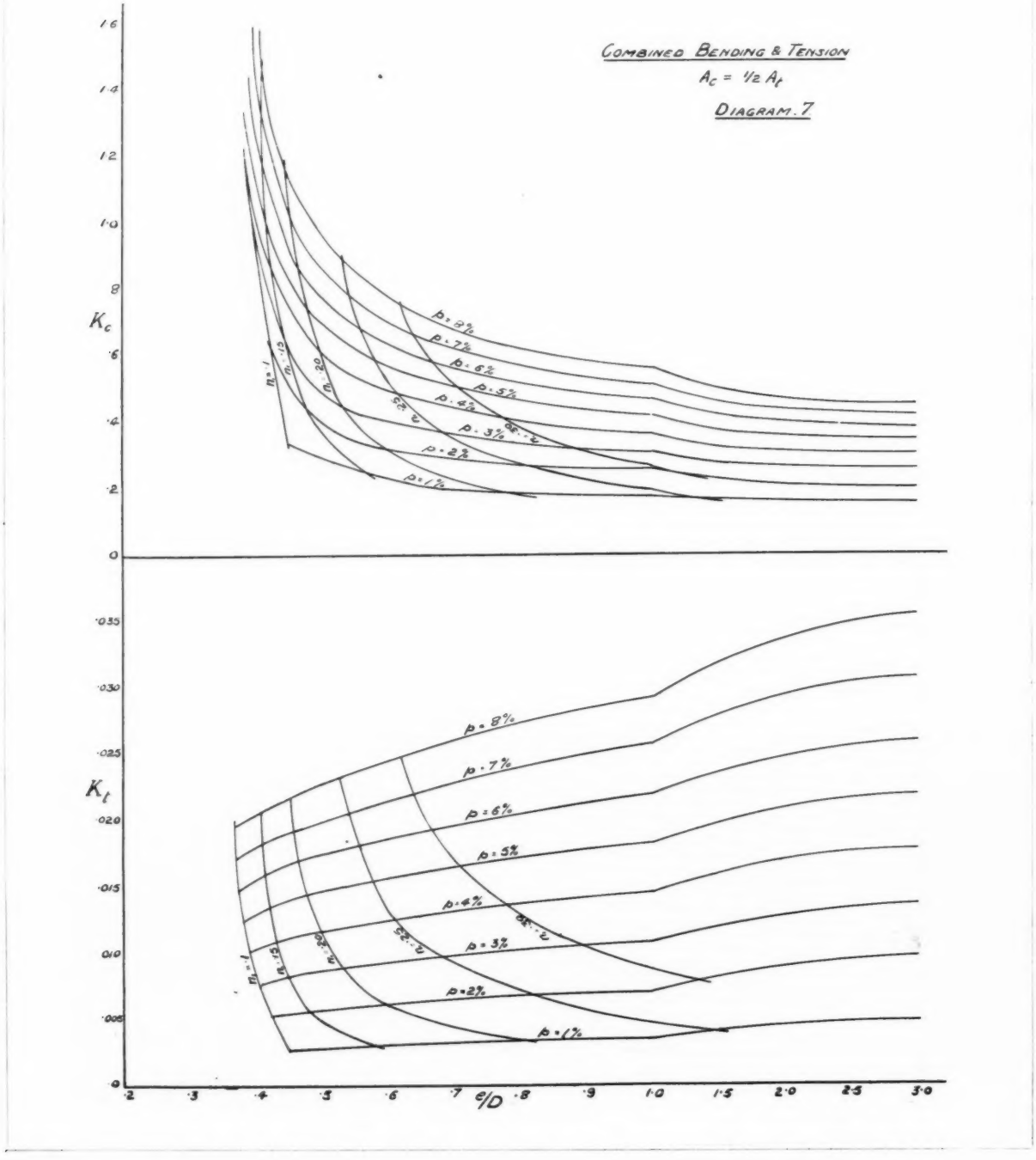
$$\frac{e}{D} = \frac{11 \cdot 54}{15} = \cdot 77$$

$K_t = .0203 \qquad K_c = \cdot 53$

$$b = \frac{M}{K_t f D^2} = \frac{65{,}000 \times 11 \cdot 54}{\cdot 0203 \times 16{,}000 \times 15^2} = 10 \cdot 30, \text{ say, } 10\tfrac{1}{2} \text{ in.}$$

$$c = \frac{M}{K b D^2} = \frac{65{,}000 \times 11 \cdot 54}{\cdot 53 \times 10\tfrac{1}{2} \times 15^2} = 600 \text{ lbs./sq. in.}$$

[*Concluded*]



NEWCASTLE HOUSE, LEWES

The following letters with regard to the proposed destruction of Newcastle House, Lewes, have appeared in *The Times* :

SIR,—Indignation against the intended destruction of Newcastle House, Lewes, has led many people to urge the Royal Institute of British Architects to do all that it can in defence of the building. I have, therefore, been asked by the President to state that the matter has been frequently put before the Art Standing Committee, of which I am chairman. The case for retention and that for destruction have been inquired into, and, upon the evidence brought to us, all practical considerations have appeared to be in favour of the former. It was stated, and well supported, that to remove the building was unnecessary and extravagant. We could learn of no satisfactory answer having been made to this statement.

The committee did not pass any resolution upon the subject, because the defence of buildings whose charm and beauty are more picturesque than architectural lies with other societies than ours. The charm and beauty of Newcastle House are undoubted, and no lover of England could hear of its loss without regret; but its claims are upon the citizen rather than upon the architect in particular. It is for the citizen to use every means in his power to procure further debate upon what still lies under the unrefuted accusation of being a wasteful and useless act of destruction.

H. S. GOODHART-RENDEL, Chairman of Art Standing Committee, R.I.B.A.

SIR,—Mr. Goodhart-Rendel, as chairman of the Art Standing Committee of the Royal Institute of British Architects, says: "The charm and beauty of Newcastle House are undoubted, and no lover of England could hear of its loss without regret"; but his committee did not pass any resolution on the subject because it seemed the business of other societies. If, as he says, it is the citizen who uses his power (or shall we say the ratepayer, who has to pay for the grandiose requirements of the town councillor), surely it is supremely the Institute's business, and more especially that of their Art Committee, to protest very clearly against such an outrage as this. The committee might with advantage have referred to the activities of Mr. W. H. Godfrey, who, I understand, has been at some pains to show by actual plans that the destruction is a pure piece of extravagance. Surely, too, the Institute's representative in Sussex might be stirred up to tell the citizen what bad business (to put it on the lowest grounds) it is to lose any authentic architectural note in this historic town. A citizen sometimes has the temerity to seek the advice of an architect—possibly if on occasions of this kind the official note was more resolute some humble but educated minds would feel more confidence in their good will.

I understand that the Society for the Protection of Rural England is a part of the Institute's propaganda; if so, they must be defending buildings of less charm and beauty than Newcastle House; but possibly the workings of this society do not interest the Arts Standing Committee. I understand the plans have been prepared for a building to occupy the site of Newcastle House, and it will be interesting to see who will undertake the new design. If it should be a member of the Institute, will they have anything to say?

P. MORLEY HORDER

SIR,—Mr. Horder's zeal for Newcastle House has led him into wrong assumptions. The Art Standing Committee of the Royal Institute of British Architects is very far from ignorant of Mr. Godfrey's suggestions and of the many other efforts that are being made to preserve the building, and has refrained from interference through no lack of sympathy for the cause. The functions of the R.I.B.A. are not an appropriate subject for discussion in the public Press, and I therefore do not propose to support by argument my committee's opinion that the defence of buildings whose beauty is picturesque rather than architectural is outside the province of an architectural society. If Mr. Horder does not agree with this, he will perhaps accept as good excuses what to us seem three sound justifications of our attitude. The first is that our time is fully occupied by our proper duties toward contemporary architecture. The second is that in cases like the present one we cannot sift evidence in the thorough way possible to societies whose whole business is safeguarding antiquity. The third is that by frequent intervention in matters not especially concerning us we should

Newcastle House, Lewes, attributed to John Braman, is shown on the right-hand side of the illustration.

dissipate the force of our protests when a monument of first-rate architectural importance is threatened.

H. S. GOODHART-RENDEL,
Chairman of Art Standing Committee, R.I.B.A.

Mr. P. Morley Horder, in a further letter sent to *The Times*, wrote :

Sir,—I trust you will find space for a reply to Mr. Goodhart-Rendel. This subject touches issues far beyond the facts of Newcastle House, my zeal for which, I am told, has led me into wrong assumptions. Mr. Rendel does not answer my very pertinent questions as to why the Institute professes grave concern regarding the preservation of rural England, and considers a vague expression of regret sufficient evidence of interest regarding an urban building of real character.

What are the duties of an Art Standing Committee? I quote from the Institute by-laws:

"There shall be a standing committee for the promotion of the art, science, literature, and practice of the profession of architecture, and they shall be appointed annually."

I agree this is rather meaningless, and one gathers that the duty of the committee is more to support the merely professional side of architecture than the constructional.

I have not had the pleasure of seeing Mr. Godfrey's scheme for adapting Newcastle House to its required purposes, but his experience and knowledge are well known. The Institute is fortunate in having a representative in Lewes so capable of advising in such a matter; why do they not support his proposals with courage? I regret I do not agree that the matter is not suitable for discussion in the public Press. The Institute used the Press for its recent rural propaganda, and Mr. Rendel forgets that Newcastle House belongs to a street, and is part of a very noble feature of Lewes and its castle. By no kind of argument can he assert that it is outside the province of an architectural society to discuss and form very definite views on such a matter. Mr. Rendel admits that there is a considerable body of educated people who are indignant that this building should be destroyed, and that the Institute has been urged to use its official status to assist them. He admits its destruction is wasteful, but he pleads that the official time is too occupied with contemporary architecture to sift evidence, but all the other societies are eloquent as to preservation. Why this negative attitude by the makers of modern architecture?

Newcastle House may not be an example of first-rate architectural merit, but the official local body who propose to destroy it should be officially condemned by an Institute whose primary duty is to educate public taste.

P. MORLEY HORDER

COMPETITION NEWS

Garage in the Theatre Area of London

The attention of the assessors has been called to references in the Press to the R.I.B.A. Competition for a Design for a Garage in the Theatre area of London. The assessors wish to point out: 1: That the whole competition is hypothetical; 2: That there is no intention on the part of the R.I.B.A. to convey the impression that the building will be executed; 3: That the designs and drawings will remain the property of the competitors. The site is purposely left indefinite so as to give full scope for new ideas on this interesting subject.

The Columbus Memorial Competition

More than eleven hundred architects in fifty-six countries are receiving copies of the book containing the conditions of the architectural competition for the Columbus Memorial Lighthouse, which will be erected on the coast of the Dominican Republic. The Permanent Committee of the Governing Board of the Pan-American Union at Washington, entrusted with the carrying out of the project, fixed September 1 as the date on which the competition will begin. The programme and rules which are now being distributed by the Pan-American Union state that the architectural competition will be divided into two stages, the first of which will be open to all architects without distinction of nationality, and will continue from September 1 to April 1, 1929. An international jury of three, which will be selected by the competing architects, will select the ten designs possessing the greatest merit, the authors of which will each receive $2,000. These winners will then recompete for the final award. In the second competition $10,000 will be paid to the author whose design is placed first, who will be declared the architect of the lighthouse; $7,500 to the author of the design placed second; $5,000 to the design placed third; $2,500 to the design placed fourth; and $1,000 to each of the other six competitors. In the first stage of the competition the architects will be surrounded with a minimum of restrictions, the competitor being allowed the utmost freedom to express himself. The only mandatory requirements are that the memorial shall stand on a mound, or terrace or terraces, about 40 ft. high, in order that its base may be visible over the tree-tops from every direction; that the structure shall contain a chapel large enough to receive the Columbus Monument now in the Cathedral at Santo Domingo; that a museum be provided either as part of the chapel, or elsewhere, to contain such appropriate relics as may become available over a long term of years; that it shall support at least one great lantern. It is further suggested that the total height of the monument should not exceed 600 ft.; and that it be constructed on a properly protected structural steel frame, of reinforced concrete. In addition, the competitors are requested to indicate a comprehensive development of the 2,500-acre tract which will be set aside for the monument and adjacent park, providing for an official and residential centre and for an air port measuring at least 2,000 by 3,000 ft., and with a runway about a mile long, indicating a mooring-mast, hangars, repair shops, etc.

COMPETITION CALENDAR

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

September 29. The British Portland Cement Association, Ltd., is offering awards for the best concrete houses erected during the current year. These awards are offered for work that has been actually designed and constructed. The prize awards will be as follows: To architects, 1st prize, £100; 2nd prize, £50; to builders, to the builder of the house awarded the 1st prize, £50; 2nd prize, £25. Assessor: Mr. E. Guy Dawber, A.R.A. Any concrete house or bungalow, the contract price of which is from £500 to £2,000, designed and erected in Great Britain under the supervision of an architect, is eligible. Houses must conform to the following requirements: 1: Only cement of British manufacture shall have been specified and used, with the exception of white cement which only may be used for obtaining special effects: 2: Concrete must be used for the roof of houses where a flat roof is called for. The covering for other types of roof must be pre-cast concrete tiles except where extra expense is entailed by the employment of this latter form of covering. The actual construction must be completed by the end of 1928 in order that the prizes may be awarded early in 1929. Further particulars from The British Portland Cement Association, Ltd., 20 Dartmouth Street, London, S.W.1

No date. The Corporation invite from architects, surveyors, and others plans, layout of Harbour Station site fronting the sea, in swimming bath, shops, ornamental sub-tropical garden, roads, and bathing establishment for the Borough of Ramsgate. First prize, £250; second prize, £150; third prize, £100. A plan of the land can be obtained at the office of the borough engineer situate at 16 Albion Place, Ramsgate, on payment of the sum of £1 1s. For further information and for conditions under which plans, drawings, and schemes are to be submitted, application must be made to Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate.

No date.—Entertainments pavilion to seat 1,000 persons and café on a site adjoining the Esplanade for the Exmouth Urban District Council. Premiums: £100, £50, and £25. Assessor: Mr. C. Cowles-Voysey, F.R.I.B.A. Particulars from Mr. B. Benoy, Clerk, Council Office, Exmouth. Deposit £1 1s.

R.I.B.A. EXAMINATIONS

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 at the R.I.B.A., London, on October 17, 18, and 19, 1928. The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is October 1, 1928. Full particulars of the examinations and application forms can be obtained from the secretary, R.I.B.A.

THE WELSH SCHOOL OF ARCHITECTURE

Lord Treowen, Lord Plymouth, the Lord Mayor of Cardiff, local Members of Parliament, Sir Goscombe John, and other representative men, including distinguished architects, have addressed a letter to the Press to draw public attention to the Welsh School of Architecture, Cardiff, and to the remarkable progress which has been made. In the course of the letter it is stated that great as were the hopes for its future at the outset, it is gratifying to record that these have been far surpassed by actual achievement. As it has become much more than a local institution, being the only one of its kind in the whole of Wales, the new title of "Welsh School of Architecture" has been adopted. The R.I.B.A. has recently granted to the school the fullest possible measure of "recognition," with the result that students who pass successfully through the full five years' course of instruction are exempted from the final examination of the Royal Institute, which leads to the degree of A.R.I.B.A.

The letter states that the training at the Welsh School is very thorough and progressive, and, before obtaining either the diploma of the college or the degree of the Royal Institute, each student has to spend six or twelve months, as the case may be, in the office of a practising architect. Not only the Royal Institute, but its applied society, the South Wales Institute of Architects, has given full support to the school. Short as is the history of this new institution, four of its students have already been admitted to the Rome Competition in Architecture, and during the past session one of them was the only candidate out of London in any of the arts to receive commendation in the final round for the Rome Prize. Another student has won the silver medal and certificate of honourable mention for the Alfred Bossom Travelling Scholarship, and of three provincially trained students who passed successfully through the preliminary stage for the competition for the R.I.B.A. Soane Medallion, two were from the Welsh School. For the initiation and building up of the school much credit is due to the Cardiff City Council and to principal Charles Coles, B.SC. (head of the Technical College), but the notable success achieved is largely due to the energy and wide experience of the head of the school, Mr. W. S. Purchon, M.A., A.R.I.B.A., whose efforts have been ably supported by his assistants, Messrs. R. H. Winder, M.A., A.R.I.B.A., and Lewis John, M.A., A.R.I.B.A.

A WORCESTERSHIRE HOUSE

Following are the names of the general contractors and sub-contractors for the house, garage, stables, and lodge known as The Manor House, Stone, near Kidderminster, Worcestershire, erected from the designs of Mr. E. Stanley Hall, M.A., F.R.I.B.A., F.R.SAN.I., and illustrated on pages 367 to 373: General contractors, Henry Martin, Ltd., Northampton; clerk of works, Mr. Thomas P. Fox; general foreman, Mr. E. S. Dunkley. Sub-contractors: Thomas Faldo & Co., Ltd., asphalt; Daneshill Brick and Tile Works, Ltd., bricks and tiles; Wainwright and Waring, Ltd., glass; British Challenge Glazing Co., patent glazing for garage wash roof, and window furniture and casements; J. L. Emms, cast lead; Acme Flooring and Paving Co., Ltd., wood-block flooring; Smith Bros. (Northampton), Ltd., central heating, electric wiring, ventilation, plumbing, and bells; G. Matthews, Ltd., and Smith Bros. (Northampton), Ltd., stoves and grates; Cecil Ern & Co., Ltd., electric light fixtures and metalwork; Shanks & Co., Ltd., sanitary fittings; Yannedis & Co., and Cecil Ern & Co., Ltd., door furniture; Dennison, Kett & Co., Ltd., rolling shutters; Milner's Safe Co., Ltd., fireproof doors; Laurence A. Turner, decorative plaster; Henry Martin, Ltd., joinery; Martin Van Straaten & Co., tiling; Browne and Lilly, Ltd., greenhouses; Bakers, of Codsall, near Wolverhampton, garden layout; Le Grand, Sutcliff and Gell, Ltd., artesian well, water supply.

A LONDON WORKS EXTENSION

The accompanying illustration shows a part of the large extension which has just been completed at the works of Messrs. G. A. Harvey & Co. (London), Ltd., of Woolwich Road, London, S.E. The new structure is 500 ft. long, 250 ft. wide, and 38 ft. high. It is built of brick and roofed with glass and corrugated asbestos sheets. The floor area is divided into four bays, each over 60 ft. wide, running the entire length of the building. S. H. Heywood electric cranes ranging from five to ten tons lifting capacity have been installed in each bay, and plant of the latest type is shortly to be installed for the production of sheet metal work on a largely increased scale. This new section of the works will provide employment for an additional 500 to 600 people.

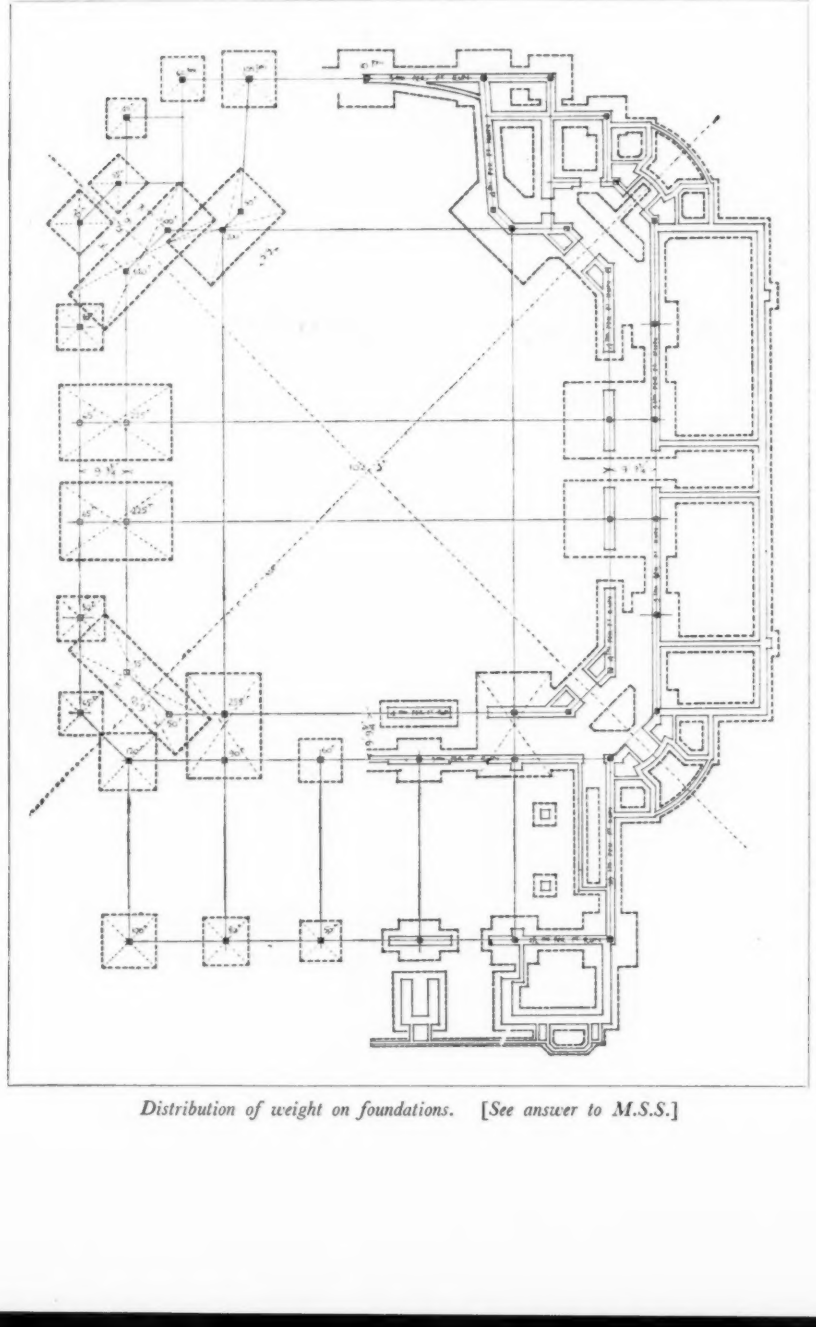
The extension to the works of G. A. Harvey & Co. (London), Ltd.

READERS' QUERIES

DISTRIBUTION OF WEIGHT ON FOUNDATIONS

M.S.S. writes: "The accompanying diagram shows the plan of an auditorium proposed to be erected as follows: All the walls to be of brickwork in cement, stiffened at intervals by steel stanchions, principally to resist wind pressure. The roof will be of steel construction, and the weight distributed as indicated. The load in tons is given for all stanchions, as also is the weight per foot run of walling. How can I arrive at the correct bearing area required by the foundations so that the pressure will be evenly distributed at 1½ tons per sq. ft. (maximum safe-bearing capacity of ground)? In some cases the stanchions are placed quite close together, and the areas required by the footings of each stanchion overlap each other. Where this occurs I have assumed that the loads may be combined and the footing placed on the centre of gravity. Is this correct? How should the extra weight of the wall brickwork be provided for when it is unevenly distributed over the area required by the concentrated loads? The loads given do not include weight of footings themselves, and should this be added? Are the foundations as shown approximately correct? Where are the points of likely failure, and how may they be rectified? It is desired to limit the size of the steel grillage under the stanchions to the area required to distribute the load on the concrete. How should the depth of the concrete under the grillage be determined, the superficial area being fixed by bearing capacity of ground? Are there any formulæ which can be applied to the various questions raised?"

The areas shown by the broken lines on the diagram may be considered as factors in the answer, but not the completely worked-out result of the problem. The method of attack is as follows:



Distribution of weight on foundations. [*See answer to M.S.S.*]

1. Ascertain by actual experiment on the site whether the subsoil will bear 1½ tons per sq. ft. as assumed, without allowing an unmanageable or excessive settlement. An instance that has just come under my notice shows that very considerable settlement is possible on foundations usually accepted as sound, new piers built on London clay having descended more than a quarter of an inch notwithstanding the limitation of the load to three-quarters of a ton per square foot of bearing surface. Special precautions to avoid harm through settlement had been taken, but the descent of the foundations indicates the need for foresight.

2. The correct bearing areas can be computed by a process of drawing a succession of plans showing the areas needed for stanchions and walls separately, and then combining the areas in convenient ways as nearly symmetrical as possible about the centres of pressure. The weights of all footings and also superimposed loads must be taken into account. It is not necessary to assume that the foundations must be rectangular masses, and any simple shape that is symmetrically disposed may be adopted where squares or rectangles intei-penetrate one ano her. In these cases of overlapping the overlap must be accounted for by adding equivalent areas to the free sides of the foundation.

3. The loads from two or more stanchions or piers may be combined and the foundation disposed about their combined centre of pressure, provided that effective measures are taken to spread the loads in accordance with this theoretical assumption. This may be a somewhat costly business, as it involves the provision of a girder bearing for the stanchions or piers strong enough to pick up their total loads and to apply them to the grillage arranged around the common centre of pressure. The girder is calculated as a double cantilever acting across a fulcrum at the common centre of pressure, though the fulcrum is not provided in the form of a knife-edged single bearing, but as an appropriately diffused arrangement of grillage members. If actual steel girders are used for this purpose the weight of metal is considerable, and it would probably be worth while to design the foundations as reinforced concrete and count upon the concrete to take up compression stresses. The economy of so doing would be most obvious in cases where deep digging is needed, in any event to expose a reliable bearing stratum, and where deep concrete will be needed for filling.

Another way of combining the concentrated loads applied to the footings would be to make the foundation plan as a single united frame of continuous reinforced concrete girders rigidly connected at all angles and junctions. By this means many of the free-ended cantilevers would be avoided, and continuous girders substituted for them with distinct advantage to the homogeneity of the structure. This should permit of a great saving in weight of metal, since the

girders may be calculated upon a more economical formula than the cantilevers; the strengths being more or less as 6 for the girders is to 1 for the cantilevers for equal lengths of span. If such a continuous frame is adopted it will be necessary to see that it is amply strong to resist deflection, or its continuity will constitute a danger almost as grave as the liability of independent settlement in connection with the isolated foundation areas shown on the diagram.

The points of likely failure in the present plan are to be found at the junctions of heavy foundation masses with light ones.

It would not be surprising if the lower and lighter chambers at the sides and front of the building should float high on the foundation while the heavy parts of the building sink into the subsoil. The different amount of sinking may be measured as only a small fraction of an inch, yet the walls may suffer unsightly cracks in consequence.

There are two ways of providing against this liability to unequal settlement. One is to make the foundation frame rigid and continuous by the insertion of calculated reinforcement applied in such a manner as to take up all tensile and shearing stresses. The other is to build the heavy and the light parts of the building separately without bond at the junctions, and to grout up the voids after time has been allowed for settlement after the full application of the load. The second method may seem to savour of "rule of thumb," but it has advantages where the bearing power of the subsoil is unequal and incalculable.

In a grillage formed of short lengths of R.S.J. placed parallel to one another and at right angles to the line of the main girder connecting the bases of the stanchions, the under bed of concrete is usually only a few inches, perhaps 6 in. or 8 in., in depth. It is principally valuable in providing a level surface upon which the R.S.J.s may be laid, and in making good any inequalities in the bottom of the trenches where soft pot-holes have been dug out, etc. Some good impervious material is needed to protect the steel from rust, and the under bed of concrete also performs this function and does a certain amount of duty in applying the pressure uniformly from the R.S.J.s to the ground, and in stiffening their webs against buckling as overburdened struts. The R.S.J.s themselves spread the load as double cantilevers uniformly loaded by the upward resistance of the subsoil. In this action they may be stiffened by an upper layer of concrete surrounding them and the main girder and base-plates. The steel is calculated to do practically all the work in grillage of this type.

If the whole foundation is designed as a single frame, the depth of concrete plays an important part in providing "depth" to the continuous girders of which it is composed. In this case the depths must be calculated in accordance with the formula for reinforced girders. A high factor of safety should be adopted to allow for the effects of unseen disintegration in the course of years. Useful notes on foundations will be found in the handbooks of makers of steel joists, in Kidder Nolan's *Architects' and Builders' Handbook*, and in the many standard works on modern building construction.

W. H.

STAINS ON A CEILING

A. V. writes: "*Discoloured patches have appeared on the ceilings of several bedrooms on the third floor of a building which has been erected some fifteen years. The underside of the concrete roof has been skimmed. The cause of the patches, in my opinion, is a species of mildew, which has formed from time to time on the ceilings, more particularly in one case where the ceiling has been papered. Here quite half the ceiling is very badly discoloured. The asphalt covering the roof has been carefully inspected and pronounced watertight. In one bedroom condensation collected sufficiently to drop from the ceiling; in other cases only mildew formed, which can easily be removed, leaving only slight stains. Can a permanent and effective remedy be applied on to the ceiling in an inexpensive manner, leaving a plain finish suitable for treating with Duresco or a similar material?*"

In the first place, the ceiling should be inspected to determine whether minute shrinkage cracks in the concrete do not let in moisture through the asphalt under certain conditions of temperature, such as when the reinforcing rods are expanded with warmth from inside the building, while the exterior is subjected to sleet or hail. The roof may leak on such occasions, even if watertight at normal times.

If the discoloration is found to be due to condensation water forming on the underside of the ceiling and favouring the growth of moulds and the adhesion of dust, the cure will depend upon getting rid of the condensation. Air-bricks in the upper parts of the outer walls and the partitions would probably help to keep up a current of air that would prevent the excessive collection of moisture on the ceilings, and electric fans would be still more active in this respect.

If the rooms are warmed in an attempt to air them, the windows must be kept wide open at the same time, for warming alone only aggravates the trouble. Some of the milder cases may yield to treatment with undercoats of oil paint applied after the ceiling has been dried out by means of thorough airing, the Duresco or other material being applied over the undercoats. Several manufacturers of washable distempers prepare their own damp-resisting undercoats, and inquiry of the firms themselves might end in the discovery of a suitable material.

The more pronounced cases will probably demand treatment by means of an absorbent material applied to the underside of the ceiling.

The quality of the existing skim under the concrete may be too dense, and a ceiling of lime and hair would possibly give far better results. A suspended ceiling with *a well-ventilated space* between it and the underside of the flat roof is the ideal arrangement where the effect of the decoration is of primary importance.

W. H.

The Editor welcomes readers' inquiries on all matters connected, directly or indirectly, with architectural practice. These inquiries are dealt with by a board of experts, to which additions are constantly being made as, and when, need arises. No charge is made to readers for this expert service. Diagrams must be clearly and legibly drawn out and lettered in black ink. Querists must enclose name and address.—Ed. A. J.

MINIMUM SLOPE FOR PANTILES

Y. writes: "*What is the minimum slope for pantiles?*"

In old tables of pitch of roofs the angle for pantiles is given as 33 degrees 40 minutes, or one-third pitch, but this must not be taken as any guarantee that they were really watertight at this or even at steeper pitches.

Torching (pointing the edges of the tiles from below) was resorted to in order to fill up chinks and stop driving rain and snow. When this failed after the building had been provided with plastered ceilings, the roof was pointed from the outside, and old roofs are often seen with such unpleasant-looking devices as brushing over the whole roof with cement wash, or such ineffective methods as bedding the tiles on bundles of hay, straw, or reeds. These absorbent bedding materials may be appropriate in a large well-ventilated barn, where the undersides of the tiles are exposed to the air, but they have been known to provide a means for water to soak in and ruin ceiling plaster.

In modern work pantiles have been used to cover impervious roofs of waterproofed concrete, the tiles being hung either on horizontal battens, or by having their nibs pressed into the concrete surface while it is green.

Special deeply curved pantiles have been used in recent years on some important roofs, but it is a question whether they would be more efficient than ordinary pantiles if erected without a concrete backing.

The manufacturers may, perhaps, be able to point to their successful use on low pitches. Where minimum angles have to be considered for economy these interlocking tiles made in England of genuine burnt clay are worth a thought, since they have good colour and vigorous modelling.

THE WEEK'S BUILDING NEWS

The Lancashire Education Committee is seeking sanction to borrow £13,750 for the erection of an elementary school at HUYTON.

*

The East Suffolk C.C. has under consideration the selection of a site at IPSWICH for the erection of a new police station.

*

Plans passed by the LAMBETH B.C.: Buildings, 133-183 Waterloo Road, for Messrs. Payne Wyatt, Son and Partner; additions, Stockwell Avenue, for Messrs. Payne Wyatt, Son and Partner; building, 175 Ferndale Road, for the Southern Railway Co.; rebuilding, 283-291 Wandsworth Road, for the Royal Arsenal Co-operative Society, Ltd.; garages, rear of 260 Knight's Hill, for Mr. H. Willcox; projecting pilasters, The Brixton Skating Rink, Tulse Hill, for Messrs. Andrews and Peascod; building, Dolland Street, for Mr. W. M. Epps; alterations, "The Bricklayers' Arms," Chapel Road, West Norwood, for Messrs. Hoare & Co., Ltd.; new frontage line, 74-84 Wandsworth Road, and 4-24 Pascal Street, for Messrs. Trollope and Colls, Ltd.

*

The STRATFORD R.D.C. has decided upon the preparation of a town-planning scheme for the parishes of Stratford-on-Avon and Drayton.

*

The Lancashire Standing Joint Committee is seeking sanction to a loan of £8,250 for the erection of a new county police station at IRLAM.

*

Sanction is being sought by the Lancashire Education Committee to borrow £12,000 for the erection of an elementary school at WARDLE.

*

Plans passed by the MANCHESTER Corporation: Alterations to savings bank, Stretford Road and Welcomb Street, Hulme; rebuilding of Church Hotel, Palmerston Street and Russell Street, Ancoats; additions to Vernon Mill, Vernon Street, Longsight; houses, off North Road, Clayton; shops, corner of Middleton Road and Edilom Road, Crumpsall; seven houses, St. Clement's Road and Vicars Road, Chorlton-cum-Hardy; twenty houses, Palatine Road and Longton Avenue, Withington; mission hall, off Fog Lane, Didsbury; fourteen houses, Ladysmith Road, Didsbury; four houses and shops, Kingsway; six houses, Crescent Avenue, Crumpsall; four houses and shops, Broadway, Moston; twelve houses, Belgrave Road, Crumpsall; air-compressor house, Colliery Street, Clayton; pavilion, grand stand, and boiler-house, Hunter's Lane, Belle Vue, West Gorton; social club, Robert Street and Fletcher Street, Miles Platting; working men's club, Stanley Street, Higher Openshaw.

Fleet Bridge, COOKHAM, is being rebuilt by the Berks County Council.

*

The managers of the Church of England schools have submitted plans to the Board of Education for the erection of new school buildings at LAMBOURN.

*

The CHESTER Corporation has decided to proceed with the erection of 100 non-parlour and sixteen parlour-type houses upon the Eaton Road estate.

*

Mr. R. H. Currie is developing the Moulsham estate, CHELMSFORD.

*

A report of the Brentford and Chiswick U.D.C. states that it is proposed to erect between three and four hundred houses in CARVILLE HALL district. They have also obtained a site for the erection of an elementary school in the same district.

*

The Kent Education Committee has purchased a site at DARTFORD for the erection of a technical college.

*

Plans passed by the CHORLEY Corporation: Extensions, Weldbank Institute, for the Rev. Fr. Bilsborrow; additions, Bleach Works, Common Bank, for Chorley Bleaching Co.; bungalow, Froom Street, for Messrs. R. Gardiner and Son; three bungalows, Claremont Avenue, for Messrs. J. W. Lee, Ltd.; six cottages, Blackburn Street, for Mr. C. G. Froom; bungalow, Burgh Lane, for Mr. Rd. Fishwick; alterations, Great Knowley Farm, for Messrs. J. W. Lee, Ltd.; house, Millfield Road, for Mr. H. Brindle; house, Ventnor Road, for Mrs. A. Darbyshire; fifteen houses, Letchworth Drive, for Messrs. J. W. Lee, Ltd.; eight houses, Weldbank Lane, for Mr. H. B. Moss; two houses, Canterbury Street, for Messrs. R. Gardiner and Son; club, Friday Street, for the Chorley Central Working Men's Club.

*

The CHORLEY Corporation has agreed to a proposal submitted by Messrs. Berry and Sons for the acquisition of Rookwood, for the purpose of a new hospital.

*

Messrs. Greenall, Whitley & Co. are to develop an estate at Weaverham in the NORTHWICH rural district.

*

The Lancashire Education Committee is seeking sanction for a loan of £15,600 for the erection and equipment of an elementary school at TARLETON.

*

The WROTHAM U.D.C. is to proceed with the erection of forty non-parlour houses on three sites.

*

The ATHERSTONE U.D.C. is to erect forty-four houses on the Hag Fold estate.

Plans passed by the BOLTON Corporation: Four houses, Sharples Avenue, for Messrs. Price and Groves; offices, Carlyle Street, for Mr. George H. Pearse; fire escapes, Bridgeman Place, for Messrs. Hodgkinson and Gillibrand; extension to office, China Lane, for Messrs. Holdsworth Brothers, Ltd.; four houses, Higher Swan Lane, for Mr. W. Reddyhough; warehouse, Fletcher Street and Bridgeman Street, for Messrs. Thos. Walmsley and Sons; six houses, Crompton Way, for Mr. John Archer; extension to cart shed, Ocean Mills, Settle Street, for Great Lever Spinning Co., Ltd.; two houses, Plodder Lane, for Mr. H. Whittle; two houses, Manningham Road, for Mr. J. Markland; twelve houses, Inverlael Avenue and Lowndes Street, for Mr. W. Andrew; extension to premises, Bentinck Street, for the Bolton Co-operative Cabinet Makers' Society.

*

Plans passed by the LEEDS Corporation: Two houses, Gipton Wood Avenue, for Mr. Cyril Grantham; twelve houses, Roundhay Grove, Harehills, for Messrs. R. Battersby and Sons; four houses, Ring Road, Farnley, for Mr. Thomas Thompson; six houses, Upland Crescent, Harehills, for Messrs. Bailey Bros.; two houses, Scott Hall Road, for Mr. H. Richardson; ten houses, Wensley Green, Chapel Allerton, for Messrs. W. E. Batty & Co.; six houses, Devonshire Avenue, Roundhay, for Mr. A. Dickinson; four houses, Newport Crescent, Headingley, for Mrs. Charlotte Wheatley; four houses, Stainburn Crescent, Moortown, for Mr. Sylvanus Shute; sixteen houses, Rookwood Avenue and Selby Road, for Mr. William Jowitt; thirty flats, Wood Lane, Headingley, for Messrs. A. Braithwaite & Co., Ltd.; two bungalows, Howard Avenue, Halton, for Messrs. Dunhill Bros.; two houses, Oak Crescent, Halton, for Messrs. Dunhill Bros.; six houses, Park Spring Gardens, Bramley, for Messrs. A. Gibbs and Son; four houses, The Oval, Killingbec, for Mr. D'Arcy Bruce Wilson; four houses, Stainburn Crescent, Moortown, for Lieut.-Col. W. A. Stott; two houses, Vesper Walk, Kirkstall, for Mr. G. W. Petty; five houses, Nixon Avenue and Richardson Road, Osmondthorpe, for Mr. H. V. Waite.

*

The MANCHESTER Corporation has approved the plans of the city architect for the new buildings at the Claremont Road depot and instructed him to obtain tenders for the work.

*

The Sutton Trustees are to proceed with the erection of tenements—over 400—on the St. Quintin site, KENSINGTON.

*

The LEEDS Corporation has approved the proposal of Mr. C. G. Hemsley to erect bank premises in lieu of shops at the junction of North Lane and Otley Road, Headingley.

The SHEFFIELD Corporation Markets Committee has obtained sanction for the following loans: £24,263 for the erection of a market; £525 for roads and £480 for a temporary road.

*

Plans passed by the BERMONDSEY B.C.: Building, 116 Tanner Street, for Messrs. William Harbrow, Ltd., on behalf of Wilson's Cooperage Co., Ltd.; reconstruction of Gloucester Arms public-house, Rolls Road, for Messrs. Stevens and Sons (builders) on behalf of Messrs. Courage & Co., Ltd.

*

Plans passed by the MANCHESTER Corporation: Five shops and houses, Burnage Lane; conversion of Gratton House into club, Whalley Road, Whalley Range; ten houses, Hilldale Avenue, Blackley; shop and showroom, Ashton New Road and Forge Lane, Bradford; studio to dancing academy, 199 Brunswick Street, Chorlton-upon-Medlock; additions to The Corner House, Parkfield Road and Pine Road, Didsbury; additions to works, Chatham Street, Clayton; office and workrooms, Pall Mall, Strutt Street, Moult Street, and Warren Street; rebuilding of factory, Stockport Road, Longsight; cricket pavilion, Barlow Road, Levenshulme; social club, Robert Street and Fletcher Street, Miles Platting; alterations, 101-115 Great Ducie Street and Julia Street, Cheetham; steelwork alterations to warehouse, Church Street, Red Lion Street, and Turner Street; forty houses, Arthog Road and School Lane, Didsbury; private chapel, home for aged people, Whalley Road, Russell Road, and Carlton Road, Whalley Range; additions to works, Back Mill Street, Ancoats; alterations to Malt Shovel Inn, Gay Street, and 9 Thornton Street, Collyhurst; eight houses, Grange Drive, Blackley; cabinet works, Woodward Place, St. Vincent Street, Ancoats; alterations and additions, Smithfield Vaults, Swan Street; eight houses, Grange Drive, Blackley; cinema and lock-up shops, Burnage Lane, Burnage; stores, offices, and garage, Croft Street, Clayton; alterations to premises, 75-77 Cross Street, Gorton; alterations, Albion Inn, Union Street and Tipping Street, Ardwick; alterations to Coliseum Picture Hall, Higher Ardwick and Dolphin Street, Ardwick; store and office, Water Street and Elm Street.

*

The MANCHESTER Corporation has asked the acting town clerk to seek the approval of the Ministry of Health to certain alterations required to be executed at St. Luke's Hospital.

*

The Walton Heath Land Co., Ltd., is to develop the Brentwater estate, WILLESDEN, and Mr. Warren Peachy is to proceed with the construction of roads and sewers.

*

The WILLESDEN U.D.C. is shortly to consider various suggestions for improvements at the baths.

The NORTHAMPTON Corporation has asked the borough engineer to invite tenders for the erection of fifty-seven B3 type (parlour and three bedrooms) houses fronting to Kingsthorpe Road.

*

Plans passed by the WILLESDEN U.D.C.: Four houses, Haycroft Gardens, for the Riley Construction Co.; alterations and additions, "Rising Sun," Harlesden Road, Willesden, for Mr. R. G. Muir; stables, Dudden Hill Lane, for the London Co-operative Society, Ltd.; extension to factory, Cumberland Avenue, Park Royal, for Mr. A. S. Parr-Head, on behalf of the Milk Trade Supplies, Ltd.; forty-five houses and 12 garages, Leigh Gardens, Kensal Rise, for Messrs. Geo. Ball (Willesden), Ltd.; additions, Church Road, Willesden, for Mr. H. Shaw, on behalf of the North London Engineering Co.; two houses, Christchurch Avenue, for Mr. F. Stanley Allen, for Messrs. Lepley and Toovey, Ltd.; shops with flats over, High Road, Willesden Green, and Bertie Road, for Messrs. F. Troy & Co.; eleven houses, Meredith Avenue, for Messrs. Done, Hunter & Co.; workshop, 293 High Road, Kilburn, for Mr. W. M. Glendenning, on behalf of the Norfolk Rubber Co.; shops, 53-55 The Broadway, for Mr. R. M. Piggott; additions, Plumes Hotel, Park Royal, for Trust Houses, Ltd.; iron foundry, Edgware Road, Cricklewood, for The Imperial Machine Co.; seven houses and three garages, Dawson Road, for Messrs. F. Walters, Ltd.; store, Whitby Avenue, Park Royal, for Messrs. C. F. Mearley, Ltd., on behalf of The Indestructible Paint Co.; six garages, Sherrick Green Road, for Messrs. Pearce and Taylor, Ltd.; offices, Edgware Road, Cricklewood, for Mr. S. A. Heaps, on behalf of The London General Omnibus Co., Ltd.; nine shops and flats, College Road, for Messrs. Geo. Ball (Willesden), Ltd.; alterations, 55 Hillside, for Messrs. A. Ross and Sons; wagon shed and miniature range, Willesden Drill Hall, Pound Lane, for Mr. S. W. Cranfield, for the Middlesex Territorial Army Association; joinery works, timber drying-room and stores, Oxgate Lane, for Messrs. E. Howard and Partners, for Bovis, Ltd.

*

At a meeting of the BOLTON Corporation Markets Committee, the borough engineer submitted revised draft plans of the proposed new wholesale fruit and vegetable market, fish market, covered retail market, and weights and measures offices, weighbridge, weigh office, caretaker's house, refreshment room, and public conveniences, and the general layout of the site. He was directed to prepare detailed plans, specification, and estimates of the cost of the proposed buildings.

*

Messrs. Done Hunter & Co., are in negotiation with the WEMBLEY U.D.C. regarding proposals for the development of Mr. Henry Boyer's estate fronting Harrow Road near Stonebridge Park Station.

Plans passed by the WEMBLEY U.D.C.: Four bungalows, Eton Avenue, for Messrs. Griffiths, Ltd.; house, Elmstead Avenue, for Bateman Building Co.; layout of sewers, Sudbury Heights estate, for the British Freehold Investments; southern extension to glass works, East Lane, for the G.E.C.; two houses, Ebrington Road, for Mr. W. Robertson; garages, Barn Hill, for Messrs. Haymills, Ltd.; bungalow, Rugby Avenue, for Mr. S. E. Peat; extension to laundry, Girls' Home, Harrow Road, for the Shaftesbury Home; twelve houses and garages, Harrow Road, for Mr. G. Worboys; two houses and garages, Ebrington Road, for Mr. J. Tussler; two houses, Woodhill Crescent, for Mr. W. J. Shirley; two flats, Beaumont Avenue, for Mr. F. G. Newbutt; twenty-two houses, Dovedale and Sedgecombe Avenues, for Messrs. F. and C. Costin, Ltd.; thirty-four houses, London Road, for Mr. A. Nimmo; thirty-three lock-up garages, Brook Avenue, for Mr. Campbell Symonds; two houses, Elmstead Avenue, for Mr. G. Beor; alterations to former Children's Welfare building, B.E.E., for the Metropolitan Railway; workshop, Honeypot Lane, for Mr. F. Webber; street, Uxendon Crescent, for Messrs. Haymills, Ltd.

*

The SHEFFIELD Corporation has decided to erect another 100 houses on the Longley housing estate.

*

Plans passed by the SHEFFIELD Corporation: Six houses, Daleview Road, for Mr. A. J. Belton; two houses, Abbey Lane, for Mr. J. Marsh; six houses, Pingle Avenue, for Mr. T. H. Bailey; six houses, Endowood Road, for Mr. W. Whiteley; four houses, Ansell and Falkland Roads, for Mr. Wm. Fox; six houses, Cartmell Road, for Mr. J. Enock; four houses, Birch Farm Road, for Mr. J. H. Dyson; six houses, Strelley Road, for Mr. J. Marsh; six houses, Worrall Road, for Mr. W. J. Patchett; thirty-eight houses, Greystones Crescent and Greystones Grange Road, for Messrs. Wm. Malthouse, Ltd.; six houses, Barnsley Road, for Mr. A. Oxspring; four houses, Dixon and Lonnex Roads, for Mr. M. Simpson; four houses, and shops, Southey Avenue, for Messrs. B. Hawley & Co.; fourteen houses and garages, Hallam Grange Road, for Mr. J. W. Sivil.

*

The WEMBLEY U.D.C. is to consider a scheme for the provision of a swimming bath.

*

Mr. Stanley Fowler is acquiring a site on the Barn Hill estate, WEMBLEY, for the erection of a private school.

*

The Cheshire Education Committee has acquired a site in Hibbert Lane, MARPLE, for the erection of an elementary school.

*

The Kent Education Committee is to provide additional accommodation at the GRAVESEND County School for Boys.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 7½	1 2¾
A₁	Abergavenny	S. Wales & M.	1 7	1 2¼
B	Abingdon ..	S. Counties	1 5½	1 1½
A	Accrington	N.W. Counties	1 7½	1 2¾
A₃	Addlestone	S. Counties	1 6	1 1½
A	Adlington ..	N.W. Counties	1 7½	1 2¾
A	Airdrie ..	Scotland	•1 7½	1 2¾
C₁	Aldeburgh	E. Counties	1 3	1 1½
A	Altrincham	N.W. Counties	1 7½	1 2¾
B₃	Appleby ..	N.W. Counties	1 4	1 0
A	Ashton-under-Lyne	N.W. Counties	1 7½	1 2¾
A₂	Atherstone	Mid. Counties	1 6	1 1½
B₃	Aylesbury ..	S. Counties	1 4	1 0
B₃	BANBURY ..	S. Counties	1 4	1 0
B₂	Bangor ..	N.W. Counties	1 4½	1 0½
A	BarnardCastle	N.E. Coast	1 7½	1 2¾
A	Barnsley ..	Yorkshire	1 7½	1 2¾
B₁	Barnstaple	S.W. Counties	1 5	1 0¾
A	Barrow ..	N.W. Counties	1 7½	1 2¾
A	Barry ..	S. Wales & M.	1 7½	1 2¾
B₃	Basingstoke	S.W. Counties	1 4	1 0
B	Bath ..	S.W. Counties	1 5½	1 1½
A	Batley ..	Yorkshire	1 7½	1 2¾
B	Bedford ..	E. Counties	1 5½	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 6½	1 2
A₂	Bewdley ..	Mid. Counties	1 6½	1 2
B₃	Bicester ..	Mid. Counties	1 4	1 0
A	Birkenhead	N.W. Counties	•1 7½	1 2¾
A	Birmingham	Mid. Counties	1 7½	1 2¾
A	Bishop Auckland	N.E. Coast	1 7½	1 2¾
A	Blackburn	N.W. Counties	1 7½	1 2¾
A	Blackpool	N.W. Counties	1 7½	1 2¾
A	Blyth ..	N.E. Coast	1 7½	1 2¾
B₃	Bognor ..	S. Counties	1 4	1 0
A	Bolton ..	N.W. Counties	1 7½	1 2¾
A₂	Boston ..	Mid. Counties	1 6	1 1½
B₁	Bournemouth	S. Counties	1 5	1 0¾
B₂	Bovey Tracey	S.W. Counties	1 4½	1 0½
A	Bradford ..	Yorkshire	1 7½	1 2¾
A₂	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 7½	1 2¾
B₂	Bridgwater	S.W. Counties	1 4½	1 0½
A₁	Bridlington	Yorkshire	1 7	1 2½
A	Brighouse ..	Yorkshire	1 7½	1 2¾
B₁	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 7½	1 2¾
B₃	Brixham ..	S.W. Counties	1 4	1 0
A₂	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 3½	11¾
A	Burnley ..	N.W. Counties	1 7½	1 2¾
A	Burslem ..	Mid. Counties	1 7½	1 2¾
A₂	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 7½	1 2¾
A₁	Buxton ..	N.W. Counties	1 7	1 2¼
B	CAMBRIDGE	E. Counties	1 5½	1 1¾
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 7½	1 2¾
A	Carlisle ..	N.W. Counties	1 7½	1 2¾
B	Carmarthen	S. Wales & M.	1 5½	1 1¾
B₂	Carnarvon	N.W. Counties	1 4½	1 0½
A₁	Carnforth ..	N.W. Counties	1 7	1 2¼
A	Castleford	Yorkshire	1 7½	1 2¾
B₁	Chatham ..	S. Counties	1 5	1 0¾
B₁	Chelmsford	E. Counties	1 5	1 0¾
A₃	Cheltenham	S.W. Counties	1 6	1 1¼
A	Chester ..	N.W. Counties	1 7½	1 2¾
A	Chesterfield	Mid. Counties	•1 7½	1 2¾
B₃	Chichester	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7½	1 2¾
B₂	Cirencester	S. Counties	1 4½	1 0½
A	Clitheroe ..	N.W. Counties	1 7½	1 2¾
A	Clydebank	Scotland	1 7½	1 2¾
A	Coalville ..	Mid. Counties	1 7½	1 2¾
B	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 7½	1 2¾
A₃	Colwyn Bay	N.W. Counties	1 6	1 1¼
A	Consett ..	N.E. Coast	1 7½	1 2¾
A₃	Conway ..	N.W. Counties	1 6	1 1¼
A	Coventry ..	Mid. Counties	1 7½	1 2¾
A₃	Crewe ..	N.W. Counties	1 6	1 1¼
A₃	Cumberland	.....	1 6	1 1¼
A	DARLINGTON	N.E. Coast	1 7½	1 2¾
A	Darwen ..	N.W. Counties	1 7½	1 2¾
B₂	Deal ..	S. Counties	1 4½	1 0½
A₃	Denbigh ..	N.W. Counties	1 6	1 1¼
A	Derby ..	Mid. Counties	1 7½	1 2¾
A	Dewsbury	Yorkshire	1 7½	1 2¾
B	Didcot ..	S. Counties	1 5½	1 1¾
A	Doncaster	Yorkshire	1 7½	1 2¾
C₁	Dorchester	S.W. Counties	1 3	11¼
A₃	Driffield ..	Yorks	1 6	1 1¼
A₃	Droitwich	Mid. Counties	1 6	1 1¼
A₁	Dudley ..	Mid. Counties	1 7	1 2¼
A	Dundee ..	Scotland	1 7½	1 2¾
A	Durham ..	N.E. Coast	1 7½	1 2¾
B₁	EASTBOURNE	S. Counties	1 5	1 0¾
A	Ebbw Vale	S. Wales & M.	1 7½	1 2¾
A	Edinburgh	Scotland	1 7½	1 2¾
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 7½	1 2¾
B	Exeter ..	S.W. Counties	•1 5½	1 1¾
B₃	Exmouth ..	S.W. Counties	1 4½	1 0½
B	FELIXSTOWE	E. Counties	1 5½	1 1¾
A₃	Filey ..	Yorks	1 6	1 1¼
A	Fleetwood ..	N.W. Counties	1 7½	1 2¾
B₂	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W. Counties	1 7½	1 2¾
B₃	Frome ..	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7½	1 2¾
B₁	Gillingham	S. Counties	1 5	1 0¾
A₃	Gloucester	S.W. Counties	1 6	1 1¼
A₂	Goole ..	Yorkshire	1 6½	1 2
B	Gosport ..	S. Counties	1 5½	1 1¾
A₃	Grantham	Mid. Counties	1 6	1 1¼
A₁	Gravesend	S. Counties	1 7	1 2¼
A	Greenock ..	Scotland	•1 7½	1 2¾
A	Grimsby ..	Yorkshire	1 7½	1 2¾
B₁	Guildford ..	S. Counties	1 5	1 0¾
A	HALIFAX ..	Yorkshire	1 7½	1 2¾
A	Hanley ..	Mid. Counties	1 7½	1 2¾
A	Harrogate	Yorkshire	1 7½	1 2¾
A	Hartlepools	N.E. Coast	1 7½	1 2¾
B₂	Harwich ..	E. Counties	1 4½	1 0½
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 5½	1 1¾
B	Hertford ..	E. Counties	1 5½	1 1¾
A₁	Heysham ..	N.W. Counties	1 7	1 2¼
A	Howden ..	N.E. Coast	1 7½	1 2¾
A	Huddersfield	Yorkshire	1 7½	1 2¾
A	Hull ..	Yorkshire	1 7½	1 2¾

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 7½	1 2¾
A	Immingham	Mid. Counties	1 7½	1 2¾
B	Ipswich ..	E. Counties	1 5½	1 1¾
C₁	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 7½	1 2¾
A	KEIGHLEY	Yorkshire	1 7½	1 2¾
B₁	Kendal ..	N.W. Counties	1 5	1 0¾
B₁	Keswick ..	N.W. Counties	1 5	1 0¾
A₃	Kettering ..	Mid. Counties	1 6	1 1¼
A₂	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 4½	1 0½
A	LANCASTER	N.W. Counties	1 7½	1 2¾
A₂	Leamington	Mid. Counties	1 6½	1 2
A	Leeds ..	Yorkshire	1 7½	1 2¾
A	Leek ..	Mid. Counties	1 7½	1 2¾
A	Leicester ..	Mid. Counties	1 7½	1 2¾
A	Leigh ..	N.W. Counties	1 7½	1 2¾
B₃	Lewes ..	S. Counties	1 4	1 0
A₃	Lichfield ..	Mid. Counties	1 6	1 1¼
A	Lincoln ..	Mid. Counties	1 7½	1 2¾
A	Liverpool ..	N.W. Counties	•1 10	1 4¼
A₃	Llandudno	N.W. Counties	1 6	1 1¼
A	Llanelly ..	S. Wales & M.	1 7½	1 2¾
	London (12 miles radius)		1 9	1 4
	Do. (12-15 miles radius)		1 8½	1 3½
A	Long Eaton	Mid. Counties	1 7½	1 2¾
A	Loughborough	Mid. Counties	1 7½	1 2¾
A₃	Luton ..	E. Counties	1 6	1 1¼
A	Lytham ..	N.W. Counties	1 7½	1 2¾
A₁	MACCLESFIELD	N.W. Counties	1 7	1 2¼
B	Maidstone	S. Counties	1 5½	1 1¾
A₃	Malvern ..	Mid. Counties	1 6	1 1¼
A	Manchester	N.W. Counties	1 7½	1 2¾
A	Mansfield	Mid. Counties	1 7½	1 2¾
B₂	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6	1 1¼
A	Merthyr ..	S. Wales & M.	1 7½	1 2¾
A	Middlesbrough	N.E. Coast	1 7½	1 2¾
A₃	Middlewich	N.W. Counties	1 6	1 1¼
B₂	Minehead ..	S.W. Counties	1 4½	1 0½
A	Monmouth S. and E. Glamorganshire	S. Wales & M.	1 7½	1 2¾
A₁	Morecambe	N.W. Counties	1 7	1 2¼
A₂	NANTWICH	N.W. Counties	1 6	1 1¼
A	Neath ..	S. Wales & M.	1 7½	1 2¾
A	Nelson ..	N.W. Counties	1 7½	1 2¾
A	Newcastle ..	N.E. Coast	1 7½	1 2¾
A	Newport ..	S. Wales & M.	1 7½	1 2¾
A	Normanton	Yorkshire	1 7½	1 2¾
A₁	Northampton	Mid. Counties	1 7	1 2¼
A	North Staffs.	Mid. Counties	1 7½	1 2¾
A	North Shields	N.E. Coast	1 7½	1 2¾
A₃	Norwich ..	E. Counties	1 6	1 1¼
A	Nottingham	Mid. Counties	1 7½	1 2¾
A	Nuneaton ..	Mid. Counties	1 7½	1 2¾
B	OAKHAM ..	Mid. Counties	1 5½	1 1¾
A	Oldham ..	N.W. Counties	1 7½	1 2¾
A₃	Oswestry ..	Mid. Counties	1 6	1 1¼
B	Oxford ..	S. Counties	1 6	1 1¼
A	PAISLEY ..	Scotland	•1 7½	1 2¾
C	Pembroke	S. Wales & M.	1 3½	11¾
A	Perth ..	Scotland	•1 7½	1 2¾
A₃	Peterborough	Mid. Counties	1 6	1 1¼
A	Plymouth	S.W. Counties	•1 7½	1 2¾
A	Pontefract	Yorkshire	1 7½	1 2¾
A	Pontypridd	S. Wales & M.	1 7½	1 2¾
B	Portsmouth	S. Counties	1 5½	1 1¾
A	Preston ..	N.W. Counties	1 7½	1 2¾
A	QUEENSFERRY	N.W. Counties	1 7½	1 2
A₃	READING	S. Counties	1 6	1 1¼
B	Reigate ..	S. Counties	1 5½	1 1¾
A₃	Retford ..	Mid. Counties	1 6	1 1¼
A	Rhondda Valley	S. Wales & M.	1 7½	1 2¾
A₃	Ripon ..	Yorkshire	1 6	1 1¼
A	Rochdale ..	N.W. Counties	1 7½	1 2¾
B	Rochester ..	S. Counties	1 5½	1 1¾
A₁	Ruabon ..	N.W. Counties	1 7	1 2¼
A₂	Rugby ..	Mid. Counties	1 6½	1 2
A₃	Rugeley ..	Mid. Counties	1 6	1 1¼
A	Runcorn ..	N.W. Counties	1 7½	1 2¾
A₃	ST. ALBANS	E. Counties	1 6	1 1¼
A	St. Helens ..	N.W. Counties	1 7½	1 2¾
B₃	Salisbury ..	S.W. Counties	1 4	1 0
A₁	Scarborough	Yorkshire	1 7	1 2¼
A	Scunthorpe	Mid. Counties	1 7½	1 2¾
A	Sheffield ..	Yorkshire	1 7½	1 2¾
A	Shipley ..	Yorkshire	1 7½	1 2¾
A₃	Shrewsbury	Mid. Counties	1 6	1 1¼
A₂	Skipton ..	Yorkshire	1 6½	1 2
A₃	Slough ..	S. Counties	1 6	1 1¼
A₂	Solihull ..	Mid. Counties	1 6½	1 2
A₃	South'pton	S. Counties	1 6	1 1¼
A₂	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ..	N.W. Counties	1 7½	1 2¾
A	S. Shields ..	N.E. Coast	1 7½	1 2¾
A₂	Stafford ..	Mid. Counties	1 6½	1 2
A	Stockport ..	N.W. Counties	1 7½	1 2¾
A	Stockton-on-Tees	N.E. Coast	1 7½	1 2¾
A	Stoke-on-Trent	Mid. Counties	1 7½	1 2¾
B	Stroud ..	S.W. Counties	1 5½	1 1¾
A	Sunderland	N.E. Coast	1 7½	1 2¾
A	Swadlincote	Mid. Counties	1 7½	1 2¾
A	Swansea ..	S. Wales & M.	1 7½	1 2¾
B	Swindon ..	S.W. Counties	1 5½	1 1¾
A₁	TAMWORTH	N.W. Counties	1 7	1 2¼
B₁	Taunton ..	S.W. Counties	1 5	1 0¾
A	Teeside Dist.	N.E. Counties	1 7½	1 2¾
B	Teignmouth	S.W. Coast	1 5½	1 1¾
A	Todmorden	Yorkshire	1 7½	1 2¾
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3½	11¾
B₁	Tunbridge Wells	S. Counties	1 5	1 0¾
A	Tunstall ..	Mid. Counties	1 7½	1 2¾
A	Tyne District	N.E. Coast	1 7½	1 2¾
A	WAKEFIELD	Yorkshire	1 7½	1 2¾
A₁	Walsall ..	Mid. Counties	1 7	1 2¼
A	Warrington	N.W. Counties	1 7½	1 2¾
A₂	Warwick ..	Mid. Counties	1 6½	1 2
A	Wellingborough	Mid. Counties	1 6	1 1¼
A	West Bromwich	Mid. Counties	1 7½	1 2¾
B	Weston-s-Mare	S.W. Counties	1 5½	1 1¾
A₂	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W. Counties	1 7½	1 2¾
A	Wigan ..	N.W. Counties	1 7½	1 2¾
B₂	Winchester	S. Counties	1 4½	1 0½
A₃	Windsor ..	S. Counties	1 6	1 1¼
A	Wolverhampton	Mid. Counties	1 7½	1 2¾
A₃	Worcester	Mid. Counties	1 6	1 1¼
A₃	Worksop ..	Yorkshire	1 6	1 1¼
A₁	Wrexham ..	N.W. Counties	1 7	1 2¼
B	Wycombe	S. Counties	1 5½	1 1¾
B₁	YARMOUTH	E. Counties	1 5	1 0¾
B₂	Yeovil ..	S.W. Counties	1 4½	1 0½
A	York ..	Yorkshire	1 7½	1 2

* 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. 4d. *per hour*; LABOURER, 1s. 4d. *per hour*; NAVVY, 1s. 4d. *per hour*; TIMBERMAN, 1s. 5½d. *per hour*; SCAFFOLDER, 1s. 5d. *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	15	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. 4d. *per hour*; TIMBERMAN, 1s. 5½d. *per hour*; BRICKLAYER, 1s. 9d. *per hour*; PLUMBER, 1s. 9d. *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.			
Leadwool per cwt.	£2	0	0
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. 9d. *per hour*; LABOURER, 1s. 4d. *per hour*; SCAFFOLDER, 1s. 5d. *per hour*.

*

London stocks, per M.	£4	15	0
Flettons, per M.	3	0	0
Midhurst white facing bricks, per M	5	0	0
T.L.B., multi-coloured facings, per M	7	7	9
DO. *red best facings, per M*	7	7	9
DO. *rubbers 9½ in., per M*	12	0	6
Staffordshire blue, per M.	9	10	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	24	10	0
DO. *headers, per M.*	24	0	0
Colours, extra, per M.	5	10	0
Seconds, less, per M.	1	0	0

Cement and sand, see "Excavator" above.

Lime, grey stone, per ton	2	17	0
Mixed lime mortar, per yd.	1	6	0
Damp course, in rolls of 4½ in., per roll	0	2	6
DO. *9 in. per roll*	0	4	9
DO. *14 in. per roll*	0	7	6
DO. *18 in. per roll*	0	9	6

BRICKWORK in stone lime mortar, Flettons or equal, per rod	£33	0	0
DO. in cement do., per rod	36	0	0

DO. in stocks, add 25 per cent. per rod.
DO. in blues, add 100 per cent. per rod.
DO. circular on plan, add 12½ per cent. per rod.
DO. in backing to masonry, add 12½ per cent. per rod.
DO. in raising on old walls, etc., add 12½ per cent. per rod.
DO. in underpinning, add 20 per cent. per rod.

HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup.	£0	1	0
BEDDING plates in cement mortar, per ft. run	0	0	3
BEDDING window or door frames, per ft. run	0	0	3
LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run	0	0	2
CUTTING do. in old walls in cement, per ft. run	0	0	4
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup.	0	0	7
TERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cuttings, per ft. run	0	3	6
DO. 14 ft. by 9 in. do., per ft. run	0	6	0
FLAUNCHING chimney pots, each	0	2	0
CUTTING and pinning ends of timbers, etc., in cement	0	1	0
FACINGS fair, per ft. sup. extra	0	0	3
DO. picked stocks, per ft. sup. extra	0	0	7
DO. red rubbers gauged and set in putty, per ft. sup. extra	0	4	9
DO. in salt white or ivory glazed, per ft. sup. extra	0	5	6
TUCK pointing, per ft. sup. extra	0	0	10
WEATHER pointing, do. do.	0	0	3
TILE creasing with cement fillet each side per ft. run	0	0	6
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1½ in., per yd. sup.	0	6	0
DO. 2 in., per yd. sup.	0	7	0
If coloured with red oxide, per yd. sup.	0	1	0
If finished with carborundum, per yd. sup.	0	0	6
If in small quantities in finishing to steps, etc., per ft. sup.	0	1	4
Jointing new grano, paving to old, per ft. run	0	0	4
Extra for dishing grano, or cement paving around gullies, each	0	1	6
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ½ 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. 9d. *per hour*; DO. *fixer*, 1s. 10d. *per hour*; LABOURER, 1s. 4d. *per hour*; SCAFFOLDER, 1s. 5d. *per hour*.

*

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

Cement and sand, see "Excavator," etc., above.

*

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

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

PLAIN face Portland basis, per ft. sup.	£0	2	8
DO. circular, per ft. sup.	0	4	0
SUNK FACE, per ft. sup.	0	3	9
DO. circular, per ft. sup.	0	4	10
JOINTS, arch, per ft. sup.	0	2	6
DO. sunk, per ft. sup.	0	2	7
DO. DO. circular, per ft. sup.	0	4	6
CIRCULAR-CIRCULAR work, per ft. sup.	1	2	0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0	1	1
Do. circular, do., per ft. run	0	1	4

HALF SAWING, per ft. sup.	£0	1	0

Add to the foregoing prices, if in York stone, 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0	6
RUBBED round nosing to do., per ft. lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed	1	13	0
ARTIFICIAL stone paving, 2 in. thick, per ft. sup.	0	1	6
DO. 2½ in. thick, per ft. sup.	0	1	3

SLATER AND TILER

SLATER, 1s. 9d. *per hour*; TILER, 1s. 9d. *per hour*; SCAFFOLDER, 1s. 5d. *per hour*; LABOURER, 1s. 4d. *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	7	9
Grey-green do., per ton				7	3	9
Green peggies, 12 in. to 8 in. long, per ton				6	3	9

In 4-ton truck loads, delivered Nine Elms station.

Clips, lead, per lb.	£0	0	6
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10

Cement and sand, see "Excavator," etc., above.

Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

*

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

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

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

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

TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	5	6	0
DO., machine-made do., per square	4	17	0

Vertical Tiling, including pointing, add 18s. 0d. per square.

FIXING lead soakers, per dozen	£0	0	10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10	0
LABOUR only in laying slates, but including nails, per square	1	0	0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

CARPENTER, 1s. 9d. *per hour*; JOINER, 1s. 9d. *per hour*; LABOURER, 1s. 4d. *per hour*.

*

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

7 × 3, per std.	£21	0	0
11 × 4, per std.	33	0	0
Memel or Equal. Slightly less than foregoing.			
Flooring, P.E., 1 in., per sq.	£1	2	6
DO. *T. and G., 1 in., per sq.*	1	2	6
Planed boards, 1 in. × 11 in., per std.	30	0	0
Wainscot oak, per ft. sup. of 1 in.	0	1	4
Mahogany, Honduras, per ft. sup. of 1 in.	0	1	3
DO. *Cuba, per ft. sup. of 1 in.*	0	2	3
DO., *African, per ft. sup.*	0	1	0
Teak, per ft. sup. of 1 in.	0	1	3
DO., *ft. cube*	0	12	6

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

continued overleaf

CARPENTER AND JOINER: *continued.*

SHUTTERING to face of concrete, per square	£1	10	0
DO. in narrow widths to beams, etc., per ft. sup.	0	0	6
USE and waste of timbers, allow 25 per cent. of above prices.			
SLATE BATTENING, per sq.	£0	12	6
DEAL boarding to flats, 1 in. thick and firrings to falls, per square	2	10	0
STOUT feather-edged tilting fillet to eaves, per ft. run	0	0	6
FEATHER-edged springer to trimmer arches, per ft. run	0	0	4
STOUT herringbone strutting (joists measured in), per ft. run	0	0	6
SOUND boarding, ¾ in. thick and fillets nailed sides to 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, 1¼ 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
1½ 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	17	0	0
DO., *galvd., per ton*	19	0	0
Corrugated sheets, galvd., per ton	18	10	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts per cwt. and up	1	18	0

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

PLUMBER

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

*

Lead, milled sheet, per cwt.	£1	9	0
DO. *drawn pipes, per cwt.*	1	10	0
DO. *soil pipe, per cwt.*	1	12	0
DO. *scrap, per cwt.*	1	0	0
Copper, sheet, per lb.	0	1	3
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	9
Cast-iron pipes, etc. :			
L.C.C. soil, 3 in., per yd.	0	4	0
DO. *4 in. per yd.*	0	4	9½
R.W.P., 2½ in., per yd.	0	2	2
DO. *3 in., per yd.*	0	2	7
DO. *4 in., per yd.*	0	3	6½
Gutter, 4 in. H.R., per yd.	0	1	6½
DO. *4 in. O.G., per yd.*	0	1	10½

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

PLASTERER

PLASTERER, 1*s.* 9½*d. per hour (plus allowances in London only) ;* LABOURER, 1*s.* 4*d. per hour.*

*

Chalk lime, per ton	£2	17	0
Hair, per cwt.	2	0	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	5
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	3	9	0
Lath nails, per lb.	0	0	4

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LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, 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.* 8*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	7½
Polished plate, British ¼ in., up to 2 ft. sup. per ft.	0	1	2
DO. *4 ft. sup.* "	0	2	3
DO. *6 ft. sup.* "	0	2	6
DO. *20 ft. sup.* "	0	3	1
DO. *45 ft. sup.* "	0	3	3
DO. *65 ft. sup.* "	0	3	5
DO. *100 ft. sup.* "	0	3	10
Rough plate, ¼ in., per ft.	0	0	6½
DO. *½ in. per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	15	0

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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.* 8*d. per hour ;* LABOURER, 1*s.* 4*d. per hour ;* FRENCH POLISHER, 1*s.* 9*d. per hour* PAPERHANGER, 1*s.* 8*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	5	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	12	6
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	0	16	0
French polish, per gall.	0	17	6
Ready mixed paints, per gall. and up	0	15	0

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

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity.			
The measured work price is on the same basis . . . per ft. sup.	£0	0	2½
FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	16	0	0
DO., *red*	18	0	0
ASBESTOS COMPOSITION FLOORING : Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7

Waterproofing compounds for cement.

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

PLYWOOD, per ft. sup.

Thickness	1/10 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	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4	9½	7½	—	1 0½	10	—
Figured Oak 1 side	8½	7	—	10	8	—	11½	—	—	1 6	—	—
Plain Oak 1 side	6½	6	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5	4	—	5½	5	—	6	—	—	—	—	—