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THE FUTURE OF THE SEASIDE

THERE was once a time when nobody went to the seaside for pleasure. The sun shone with equal intensity upon little Hastings and unknown Margate, and Skegness braced but a handful. At that time the seaside was a shore from which fishermen set off to fish; there was unlimited quantities of it, and nobody used it. The idea of finding it pleasant and healthy to sit on this shore for days on end never occurred to the gentlefolk of the period, who, if they were unhealthy, took their tonic inside and not out, and went to Bath.

Then came the Regent in a yellow phaeton to Brighthelmstone, and about that time the first party of females were trundled to the water's edge in a sort of malodorous prison van, called a bathing-machine. In spite of this four-wheeled obstacle to success, the fashion for sea-bathing set in, and in quite a short period of time little graceful additions of Belgravia and Regent Street lined themselves along the best stretches of yellow sands. In long ranks stood the bathing-machines, very white outside and rather black within, and strong horses pulled them with pleasant jingle and rumble into three modest feet of water. It is a pretty picture in light tones: white bathing-machines, white terraces of houses, yellow sands, blue sea and sky, and everything discreet, quiet, and refined. Who would not have gone to Brighthelmstone?

Now roll past you fifty, sixty, eighty years of persistent sea-bathing, and enter the "pin and winkle" period: a base and plebeian time when men could hold their manhood cheaply enough to roll their trousers over their ugly knees—and paddle! It was in those dark days that the seaside lost caste and became submerged under the foul efflux of daily trippers. It was in those days, too, that miles of dead-straight promenade shot east and west, and acres of terraces that knew not Regent Street sprang from the earth like tares. The kiosk was born. Advertisements came, and fun-fairs occupied the dead lots along the sea front. People made fortunes out of the seaside then, speculating on a rising market and letting the future go hang. That future is today, and the market is steady, if not falling!

It is clear now to the dullest councillor that speculation made a sorry mess of the seaside, but it is still doubtful whether he understands as clearly what course of action will bring back to his town the beauty and dignity so wantonly destroyed. The exact future or fate of the seaside town is all a little uncertain. Things have changed. The motor-car now spreads people fairly equally over countryside and seaside, and the novelty of sea-bathing has worn a little in the century. One thing is plain. The seaside must become more beautiful. Whatever covering trees and flowers can afford the architectural crudities of past generations must be provided. The arid stretches of promenade must be enlivened with flower-gardens; and as we think that it is the future of seaside towns to become increasingly residential, then they must turn once again to the resident, and forget the tripper. As they do so their point of view will change from that of a cheap estate agent and assume the more far-sighted and civic-minded policy that is intent on creating a town worth living in. Under the impetus of town planning, and directed by architects instead of estate agents and surveyors, the future of the seaside town may assume a rosier hue. Perhaps it is today at its lowest ebb. Heaped with calumny, gibed at by a merciless Press and Stage, and nearly at its wits' end with real worrying over the problem of paying its way, it is at last in the healthy state of knowing the worst.

Its salvation will come in measure as it regards itself as a town for people to live in, and not one great boarding-house. To appeal constantly to the patronage of trippers who pass from railway station to shore and care no more for the town, is to lower the standard by which the growth of the town, its buildings, its parks, its streets, and its civic places are guided. All the really attractive places were made for the residents. There are signs of a new sense of responsibility on every hand. It is discovered, for instance, that gardens are preferred to parks, good music to the municipal band. This is the work of the quiet resident. It is noted with regret that the town has struggled on for years with no real centre, no town hall worth the name, no library worth going to, one theatre above the shanty on the promenade, no railway station to be proud of; nothing that makes the town a town in the true sense of the word; there is no dignity and no form. It realizes now how haphazard its growth has been, and perhaps at this late hour will try to recover the self-respect it lost in grosser days. It will be a return to the days of the better-mannered architecture and more ordered thinking of Georgian times; and architecture, after a century in the wilderness, may come into its own again.

NEWS AND TOPICS

THE other day I had the privilege of being taken round the works of a manufacturer of motor-car bodies—Gordon England, Limited, to be exact. My knowledge of cars was not very extensive, but I was conscious that in these days bodies could be manufactured out of practically anything. The one thing which, for some reason, had never struck me before was plywood. Bodies are made at this factory for various firms of manufacturers and for chassis of all sizes, and the form of construction is as amazing as the result, and extremely ingenious into the bargain. These bodies are turned out at quite an incredible speed, the material being of such a kind that the work can be done with great swiftness without danger of bad workmanship. In addition to this the completed bodies are very light indeed, and it is no great load for one man to lift, single-handed, a saloon body for a 12- or 16-horse-powered car, without, of course, the glass windows. But I think the most incredible thing of all is the pliability of the wood (I regret the pun !). It is almost uncanny to find this material, which logically and mathematically should be absolutely rigid, allowing itself to be bent over the comparatively small arc which is normally present at the back of the roof of a saloon body; and the very fact of watching this operation (which is done with dry wood, of course) gave me, in a flash, some dozens of ideas for new uses for plywood in building, both for decorative and structural purposes.

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In this age of typewriters, printing presses, and dictaphones, handwriting is in danger of gradual extinction. There is, of course, no logical objection to its decease, if its purpose can be more efficiently served by other means; that is progress, but it is nevertheless very refreshing to see that it can still be used to some purpose. Mr. Raymond McGrath's articles in the two recent numbers of *The Architectural Review*, written and reproduced in long hand, serve as an admirable reminder, to those who may have forgotten it, of the charm and decorative quality of well-formed and orderly handwriting. For my part I am quite content to sit and look at such pages, without attempting the unfamiliar task of reading them, and to derive my enjoyment of the words from their pattern before their meaning. A somewhat pertinent confession, since when one thus comes to admire a thing for its own sake rather than for its functional efficiency, one raises it, or lowers it, I am not sure which, to the state of an *objet d'art ;* it becomes a subject for the connoisseur instead of an instrument for the business man.

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Mr. McGrath's pages bear, I suppose, much the same relation to handwriting in general as a certain hansom cab bore to cabs in general, when, not so many years ago, it was snatched from the midst of a still active life and translated into the tranquil hush of a museum, there to wait, in dignified seclusion, until such time as all its fellows had perished and it would assume the halo of a well-preserved relic. If this is so, and in saying it I hope the assumption is premature, we should be grateful to Mr. McGrath for providing us with so fine a specimen of handwriting to preserve for the delectation of future generations.

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Vanity Bridge, at Linton in Kent, is to be pulled down; it has been diagnosed as " dangerous and not worth repairing," and is to be replaced by a " steel girder bridge," which will cost £22. Surprisingly few people seem ever to have heard of this bridge, which spans one of the most charming lanes in the whole of that charming county; it is approached by a flight of steps rising in an alluring curve from the road, and the present structure is, of course, a timber one. The idea of a steel bridge is not in itself objectionable when one considers what has been done in that way—the pierced spandrels and balustrades of some canal bridges, notably that at Regent's Park, of which an illustration was published recently in the JOURNAL in the " English Precedent " series; but the term " steel girder bridge " (if it may not be dismissed as arising merely from the layman's view that all structural steel is in " girder " form) gives one an uncomfortable feeling that the ultimate effect of the new bridge will not be much of a compliment either to that of its predecessor or to those who put it there. It is to be hoped, at least, that the local enthusiasts will have something to say on the matter before it is too late.

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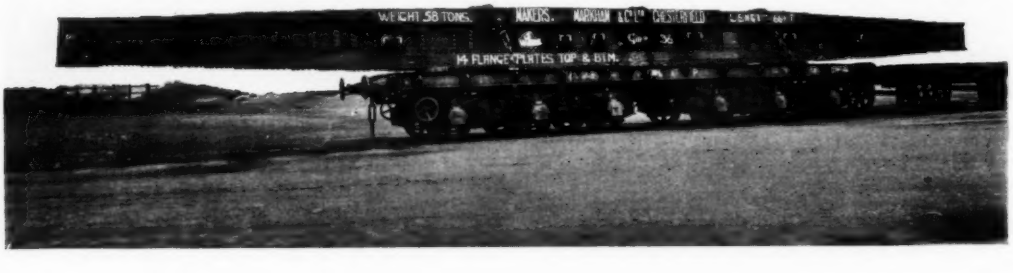
A correspondent has sent me this picture of what he claims to be the biggest girder in the world. Its length is 66 ft., its weight 58 tons, and it is built up of fourteen flange plates at top and bottom. It has, of course, no connection with the proposed structure at Linton !



York Water Gate, of which I give a picture, is one of the few things culled from my little book of old London photographs which remain as they were when the camera-man of those days was on his perambulating quest for subjects. But although it does so, its surroundings have greatly

changed, and public gardens studded with solemn gentlemen in bronze and frock-coats spread themselves between it and the river which, in pre-Embankment days, lapped its steps. For this was the landing-stage to the famous York House, which one gorgeous Duke of Buckingham built and another sold. Charles I, coming from Whitehall to see his favourite's splendid picture gallery, must often have landed at these steps. Indeed, seen in the moonlight, to which its Portland stone is so responsive, this beautiful relic seems peopled with the ghosts of Stuarts and Villiers and all their decorative circle. The design for the gateway is supposed to have come from Inigo Jones; and there seems little doubt that that excellent and industrious craftsman, Nicholas Stone, worked out the great architect's ideas, and not improbably incorporated some of his own. One is glad the gate is still *in situ*, but it is regrettable that it is comparatively hidden and thus unknown to many.

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In America, constructional material turned out from a factory in such shape as to be easily and quickly assembled is said to be "fabricated," and the same word is also applied to the completed assemblage—a ship, or a house, or what not. Now it is proposed to apply the same principles to lumber, which will be turned out directly from the sawmill in shapes and sizes ready to be put together as a house or a barn. Many of these forms are those long familiar to builders, but now shaped by nailing together the requisite strips of wood. By the new plan they would be sawed out solid from the log. The triangle may be obtained as easily as the square, and as in steel production further shapes, such as L, T, Z, cross, and others, suitable for structural and factory purposes and general use, may be sawn with comparative ease.

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Alone on Saturday afternoon owing to a broken appointment I took the train to Farringdon Street. The City was deserted, as I had hoped; and enchanted because it brought back ghosts of myself from the secretive age of ten. Those strangest of all buildings, raised in London about 1870, the Metropolitan Meat Market, led me to a square sleeping in golden light. Here the nose and toes of the ancient masonry of the Charterhouse had hardly space to peep out under featherbeds of ivy. Monks' gowns in plenty had rubbed the Tudor stone by which I stood. My hushed footsteps pit-a-patted through byways of strange trades and callings. One low-fronted shop, slyly displaying old cord and straw in its window, wanted my fat and my bones. The names of the alleys round the Norman remains of St. Bartholomew's Priory became reminiscent: Cloth Fair, the scene of miracle plays. In Henry the Fourth's reign men tilted here and carried off bargains in horseflesh; for centuries they ran a wild, licentious fair. The stonework of the exquisite Priory choir is crumbling into the lustrous softness of a silver-point. I left it, walked up silent Little Britain, once called Stinking Lane, and so towards St. Paul's.

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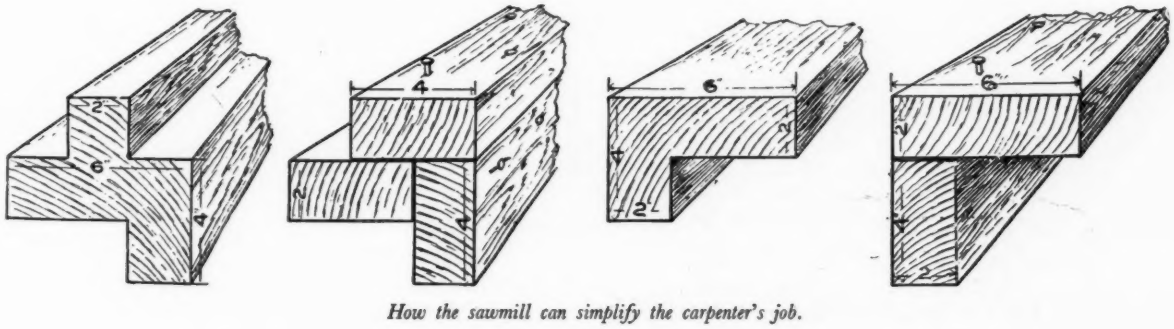
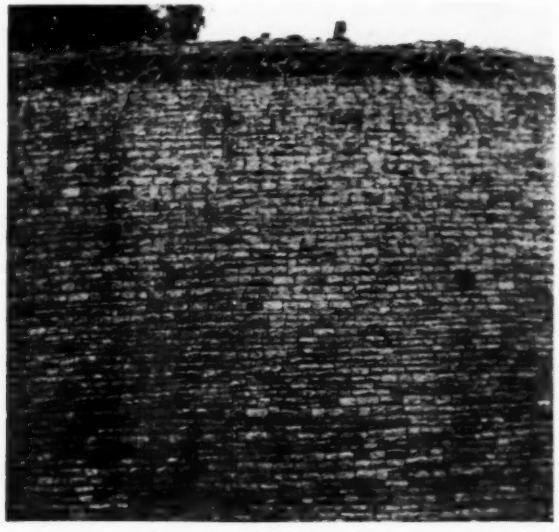
This is only an objective picture; I cannot describe the tumult in my memory as I walked this walk which years ago was so familiar. The puppets of my imaginary world, whose romantic lives at that time had gone on concurrently with mine, in accordance with my wire-pulling, they came back, too, and we made an intimate jolly party. St. Paul's is a lovely pile, grey as the Thames in her sweetest reaches, rounded and full-bosomed as a mother should be. While drinking tea opposite the Cathedral I saw gates rise slowly, slowly, out of the steps, like a stage performance. On coming out my heart leapt again. From a second story window in the churchyard a bevy of pretty girls watched me. I went nearer, smiling—then I paused. They were Finlay's automata. Now you know why that silent London walk was an enchantment.

ASTRAGAL



How the sawmill can simplify the carpenter's job.



DRY WALLING

[BY NATHANIEL LLOYD]

THE illustrations, figures one and two, are from photographs taken by a member of the School Empire Tour recently returned from South Africa. The ruins at Zimbabwe are of a very extensive fourteenth-fifteenth century fortified kraal, which was probably a gold-distributing centre in the Middle Ages between the Zambezi Valley district and traders on the coast. The outer walls are as much as 30 ft. high and 14 ft. wide in places. That illustrated is of a building within the enclosure. The wall at Khami is built dry in the same way, but without ornament.

Figure three is of the park wall, Blenheim Palace, also of dry rubble, in courses. Such dry walls of varying

Above, left (figure one), dry wall of roughly-squared rubble in courses at Khami, Rhodesia; and, right (figure two), similar wall at Zimbabwe, Rhodesia, with coping having a chevron ornament. Below (figure three), park wall at Blenheim Palace, Oxfordshire, built dry with coping set in mortar and mortar capping.

qualities of workmanship are found in every country where suitable stone lies to hand, and in Britain may be seen in the Cotswolds and in many hill counties. If well constructed, they are as strong as any other wall, providing the copings are maintained.

They suggest use as garden walls, in which many plants could be grown. Garden walls of other construction take years to mellow, but a dry wall is free from rawness, even when newly built, and there seems to be no reason why men accustomed to building dry walls should not be imported into other counties where mature garden effects are wanted quickly. If soil can be introduced between the courses as they are built and plants inserted at the same time, they will thrive much better than if " poked in " afterwards.

ENGLISH HOMES

[BY ELEANOR K. D. HUGHES]

These two finely presented volumes,[1] each from a press famous in its own way, and by authors who are experts, are books to be eagerly added to the library, whether lay or architectural. They should be read together, as they cover somewhat the same field, though each explores one side of it more particularly than the other.

The volume published by " Country Life " contains hundreds of those fine photographic illustrations for which this press is justly famous—and illustrations of this kind are essential to the appreciation of any architect's work. The "Letters" contain a number of finely reproduced plates, more in keeping with the character of the book. The frontispieces of both books are portraits of Vanbrugh by Sir Godfrey Kneller, one being from the series of portraits of its members painted by him for the Kit-Cat Club, to which both he and Vanbrugh belonged—and the other from an engraving, again showing Vanbrugh with compass in hand, but turning the other way, and inscribed " Sold by J. Tonson in the Strand " (evidently his friend Tonson of the " Letters "). *The Work of Sir John Vanbrugh and His School* necessarily includes a more general view of Vanbrugh's work, and deals with his contemporaries and coadjutors. It covers a remarkable period in the history of H.M. Office of Works, in which Wren, Vanbrugh, and Hawksmoor held the principal posts contemporaneously—Wren, of course, being the chief.

This was a very happy concatenation of circumstances, considering the methods of appointment at the time and the amount of wire-pulling and side influence which was prevalent. Hawksmoor alone had been trained as an architect from his youth up. The genius of Wren and Vanbrugh, as first and second in command, with Hawksmoor acting partly as principal, partly as coadjutor and assistant, produced an amazing output of architecture of the highest excellence. So harmoniously did they work together on the great undertakings in hand, that only those parts which show the strong individuality of the leaders can be definitely apportioned. References here and there in Vanbrugh's letters indicate Wren's greatness of mind and sweetness of temper, and the love he evoked in his subordinates. But by this time Wren was an old man,

[1] *English Homes : Period IV. Vol. II. The Work of Sir John Vanbrugh and His School, 1699-1736.* By H. Avray Tipping and Christopher Hussey. Published by " Country Life."

The Complete Works of Sir John Vanbrugh. The Fourth Volume, containing the " Letters." Edited by Geoffrey Webb. The Nonesuch Press.

Blenheim Palace, Oxfordshire. Vanbrugh's bridge as it is. [*From* English Homes.]

and the book deals chiefly with the work of Vanbrugh, who combined an extensive private practice with his duties at the Office of Works. We find him excusing himself to ducal clients because of constant visits to Hampton Court or Kensington. Blenheim was put in hand by Royal command, and the Duke of Marlborough himself requested that Vanbrugh should make the design.

The "Letters" contain chiefly Vanbrugh's famous correspondence with the Duke and Duchess of Marlborough, the correspondence connected with Castle Howard and Seton Delaval; but the Blenheim correspondence forms the bulk of them. The Duchess herself desired a simple yet dignified country residence by Wren, and the projected mass of buildings, half a palace and half a national monument, evidently seemed to her an architectural adventure. Her dread of the accumulated expense of Vanbrugh's design was perhaps justified by her inside knowledge of Court and political circles and their financial capacities. But Blenheim was ordered as a national monument to commemorate a great victory, and Vanbrugh rose to the occasion. It suggests a flourish of trumpets and all the panoply of war as carried on in the grand manner, and its buildings stand like troops massed for a great campaign. (Was not Vanbrugh himself late of "My Lord of Huntingdon's Regiment"?) Round the palace stretch acres on acres of garden and park, with the great avenue leading across the bridge over which so much of the controversy raged, and which the architect would not give up. "I love the bridge," he declared; and used all the force of his persuasion to convince the Duchess that when finished she would do the same. There were hostilities, open or overt, between Vanbrugh and the Duchess, all the time, carried on by her tenaciously and acrimoniously, and by him "obstinately and artificially." The dramatist was no less an accomplished letter-writer, and the soldier no less a campaigner in another sphere. The letters of Vanbrugh are masterpieces—whether he is giving a report of the work, reasonable excuses for its delays, or painting word-pictures of his conceptions as they are to appear when built, furnished and lived in, lighted by sunlight or candle-light. With all the magnificence of idea and originality of design, Vanbrugh combined strict attention to practical detail. Of Lord Carlisle and Castle Howard he writes: "He finds what I told him to be true. That these passages" (referring to the lofty vaulted corridors which he was probably the first architect to introduce into England) "would be so far from gathering a drawing wind as he feared, that a candle would not flare in them. Of this he has lately had the proof, by bitter stormy nights in which not one candle wanted to be put in a Lanthorn, not even in the Hall, which is as high (though not indeed so big) as that at Blenheim."

The criticisms of literary men especially, that his architecture was impossible to live in, have helped to obscure Vanbrugh's fame, and he suffered an eclipse from which he is only now emerging. An able, critical, and detailed account of Vanbrugh's position in architecture, and of his work, is given in each of these books. There is an interesting analysis of his planning, which proves it to be suited to the way of life of the nobility and gentry of the eighteenth century. One of the writers under review suggests that Vanbrugh had strong Gothic inclinations, as shown in the massing of his buildings—their broken skylines, their verticality, their towers and turrets. In England certainly, Gothic never really died out, especially in Oxfordshire and in the north. Vanbrugh was probably the first of the Romantics—witness his love of the picturesque, his insistence on making buildings look like castles. Even his little building scheme at Greenwich was entered by a gateway which had the appearance of a "place of defence."

Enough attention has not been paid to Vanbrugh as a garden architect. Yet his garden lay-outs and garden furnishings and so on entitle him to the highest rank. In this, too, he was ahead of his time. He could not conceive of a building apart from its site and its surroundings—which he laid out accordingly. In the larger volume Hawksmoor's work is also brought under review, and in this connection, and with reference to the efforts now being made, one of Hawksmoor's observations may be quoted. "We see ye misfortune of London is Rebuilding as well as augmenting it, by not having Generall Draughts and Regular schemes and what irreparable inconvenience and mischief has been produced, let us returne to Oxford and looke forward upon ye hopes we may have in ye Universities of doing as much good as we can and avoiding ye ills tha may happen by omitting a little previous care."

Blenheim Palace, Oxfordshire. Vanbrugh's bridge as designed.

Blenheim Palace, Oxfordshire. The south end of the hall and the south-east corridor. [*From* English Homes.]

Castle Howard: The centre of the south side. [*From* English Homes.]

A SEASIDE CONVALESCENT HOME

[BY FRANK GRANGER]

THE National Deposit Friendly Society has built a convalescent home at Skegness, Lincolnshire. This statement might have appeared in the papers any time this last year. The reporters might have recorded other facts: that the building cost some £67,000; that Messrs. Young and Sons, of Norwich, were the contractors. But the essence of the case for us is that Mr. W. H. Ansell was the architect and that he did this piece of work in North Skegness.

Seacroft, which is South Skegness, is pleasant enough. But North Skegness disdains the amenities and is not accustomed to architects. She may be commended to those persons who think that the employment of qualified architects is a luxury, or superfluous, or anything you like but necessary. And even at the risk of postponing for a short time our study of Mr. Ansell's work, the reader may suppose himself to have arrived at the Skegness railway station and to be contemplating the background against which generally the convalescent home is set. If one were asked for the first note of the town, the reply might be given that everything seems designed for immediate consumption. The shops in the main street appeal to the visitor who has but few hours to spend in the place. The first hotels and apartments one sees scarcely suggest their value to the permanent visitor. Most emphasized of all is the long array on either side of the North Parade of switchbacks, photographers, penny-in-the-slot machines—in fact, all the fun of the fair, which is to be enjoyed piecemeal at the cost of a few pence for as many minutes' occupation.

The retreating sea has left Skegness to herself, and she has shut herself in on the North Parade from the distant waters by all manner of gadgets and contrivances, amid which the natural amenities of the Lincolnshire coast are lost. Only at the far end of the pier can one look out over a prospect which inspired Tennyson when, from his home near by, he visited the sea and found inspiration. The eye of a prose visitor ranging inland wanders restlessly until it settles upon Mr. Ansell's scheme, of which the merits belong first of all to town planning. He has challenged the deplorable outlook of the North Parade and has brought a note of hope precisely into that part of Skegness which seems desperate. I foresee the gradual transformation of this cheerful and health-giving, but slightly uncouth, sea town into an appropriate setting not only for the Memorial Convalescent Home, but for similar fine designs for which the road is now broken.

To be quite frank, Skegness scarcely does her duty to the visitor in search of health, by dotting about casinos,

Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. The north front.

charsabanc, and switchbacks without excessive regard to the general comfort and peace. Happily the convalescent home is in its own grounds. A well-designed wall (behind which a raised terrace enables the inside spectator to contemplate the surging tide of trippers) both unites and separates. After disentangling the stone, brick, and tile structure amid its setting of sea brushwood and shrubs, the critic—I speak for myself—relishes the general plan to which a delightful spice is given by the oblique setting of the two wings in relation to the centre block. How slight the idea seems ! It came by way of getting some sun for each of the four sides of the wings set diamond-wise

Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. Above, the south front. Below, the south terrace and veranda.

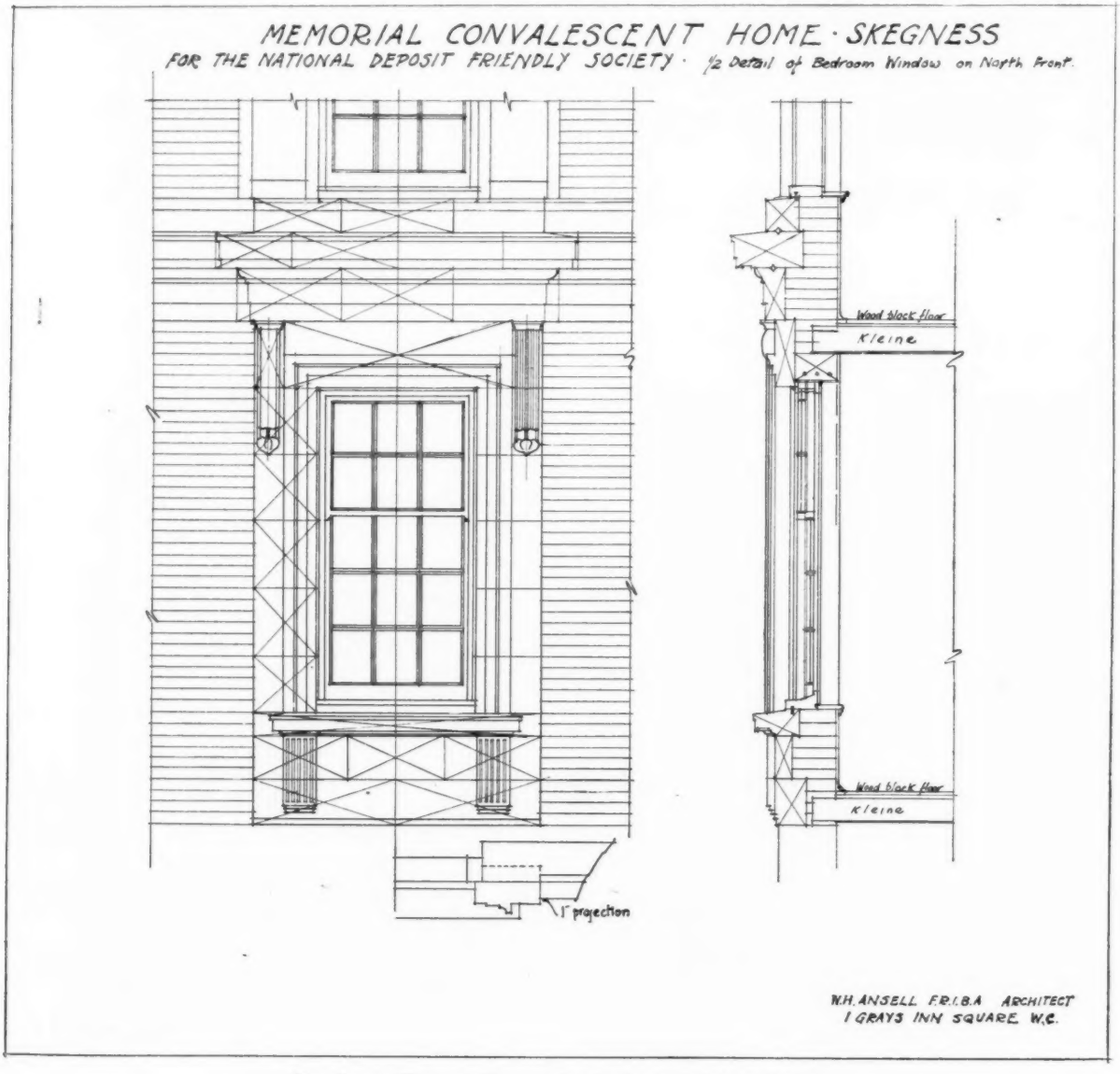
Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. Above, the women's west wing. Below, the women's garden entrance.

north and south. The centre block faces full south, and with the two wings projecting on either side, forms something of a semicircle. To stand below the women's garden entrance and look along the changing perspective of the south front, gives one a variety of line and mass which is beyond all constructed ornament.

After thus taking stock of the general effect, we return to the southward-facing veranda, in order to satisfy our curiosity as to the way in which the plan, so pleasant in its exterior grouping, works from the inside. The veranda spreads through the spacious colonnade to the terrace beyond, and suggests idle hours spent in sight of the sun, looking over the sea-sand heaped up within the grounds to the south. The thick, square tiles with which the veranda is paved answer to the dark reddish and purple bricks of the main building. The substantial square stone columns which mark the veranda hit the right mean between the clumsy and the flimsy. They contribute in a subtle way to the sense of home, to which, as we saw, the very plan appeals. Anyone who has lived with a veranda, knows how important it is to have the piers of a sufficient thickness, yet not heavy.

The dining-room is behind the French windows which open on to the front. At each end of the dining-room and opening on to it by folding doors, are the men's and women's day-rooms. These are at right angles and enclose the veranda with bay-windows projecting on to the terrace. The centre block, therefore, is designed with a recessed centre and projecting wings. Above the veranda, which is aligned with the front of the wings, there is a terrace also, on which the bay-window of the matron's room on the first floor opens.

Only now are we in a position to say something about the general architectural design. The formula is simple: two stories with plain sash-windows and a cornice-like string course separating the lower stories from the third

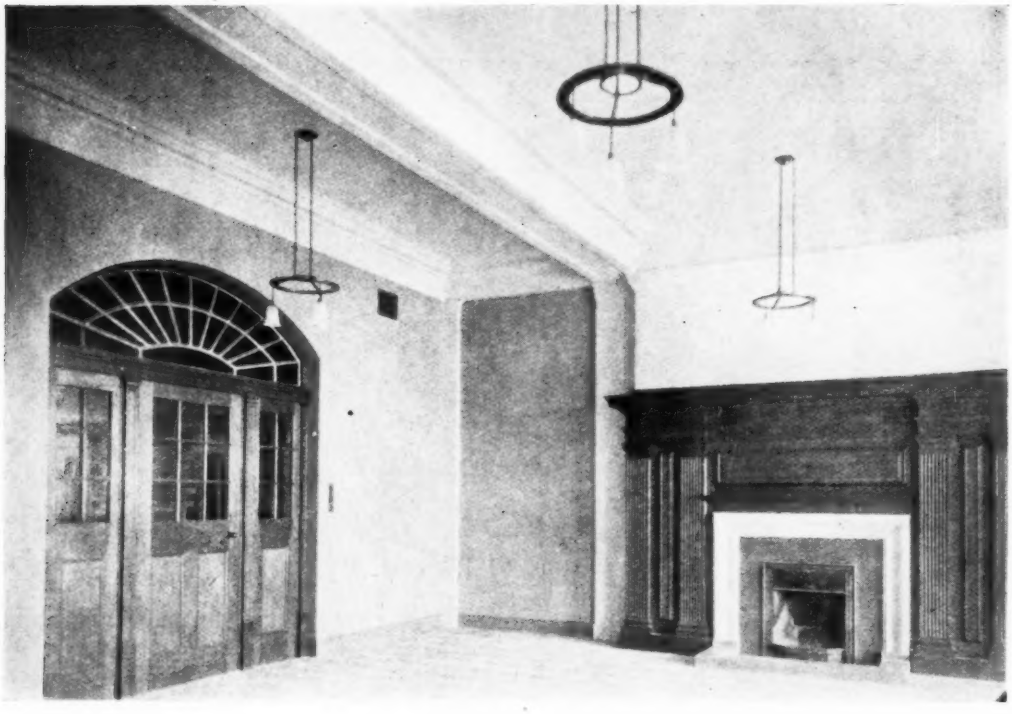


Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. Detail of bedroom window on north front.

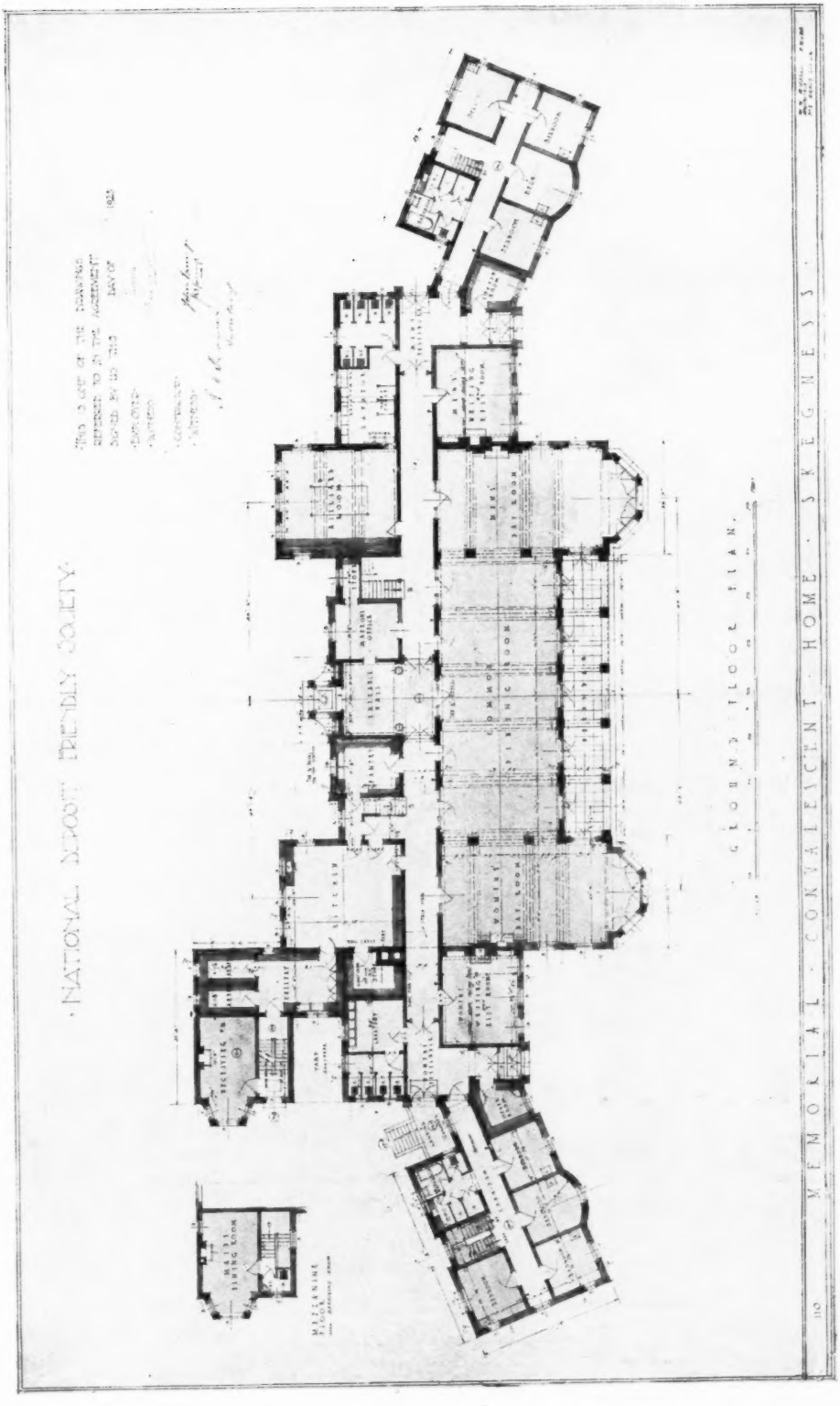
story above. Here the sash-windows are repeated, but with persiennes. One might ask why only the top windows have persiennes. The reply is obvious. The top story being under the roof is most likely to be hot in the sunny weather of which Skegness enjoys a handsome share. I am not certain that the architect intended anything more than a pleasant effect. But here, as so often, truth and beauty are on speaking terms, and I make him a present of this apology if one is needed.

But the indebtedness is all the other way. When I

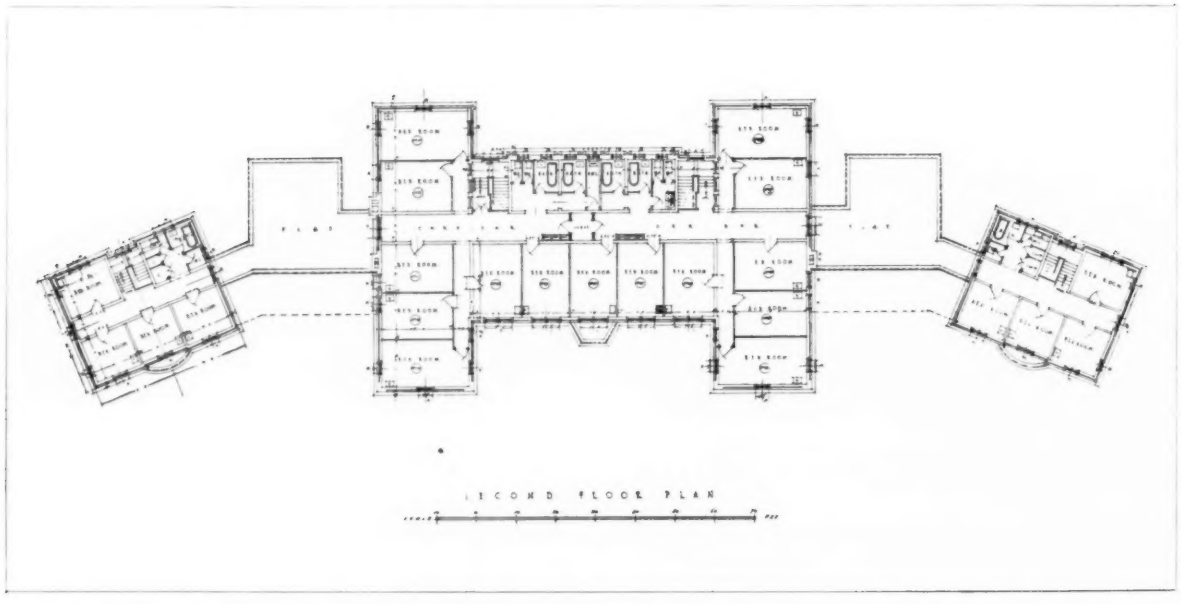
Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. Above, the dining-room. Below, the fireplace in the rest room.



Convalescent Home at Skegness for the National Deposit Friendly Society. Above, the men's day-room. Below, fireplace in day-room.

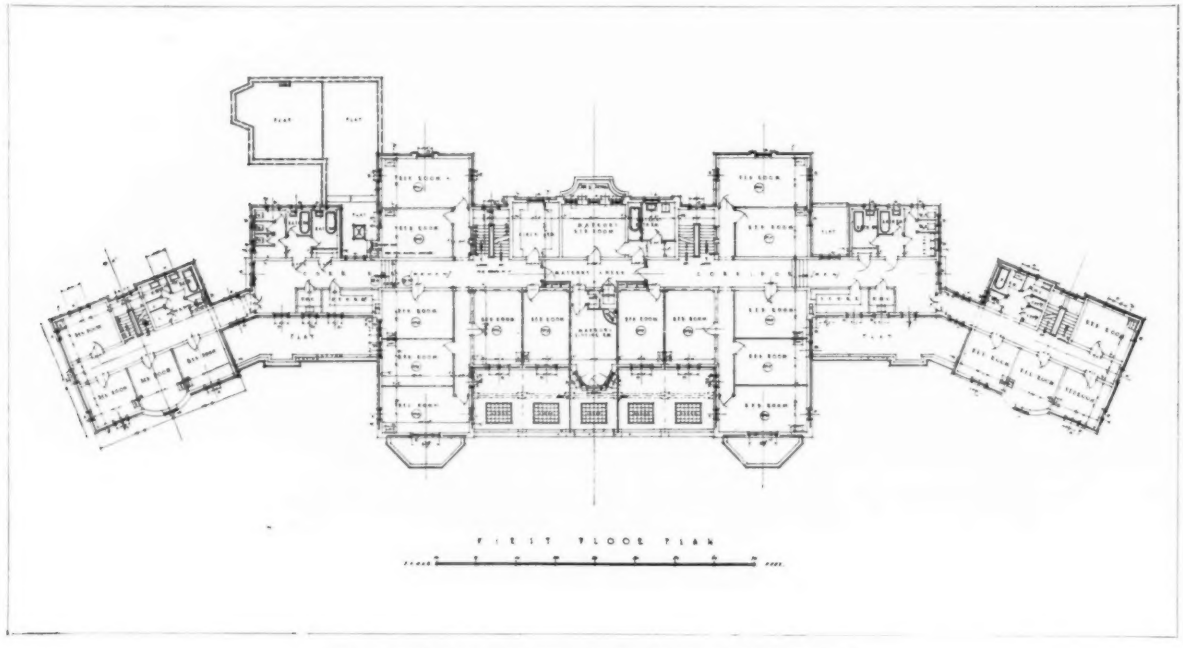


Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. The ground-floor plan.

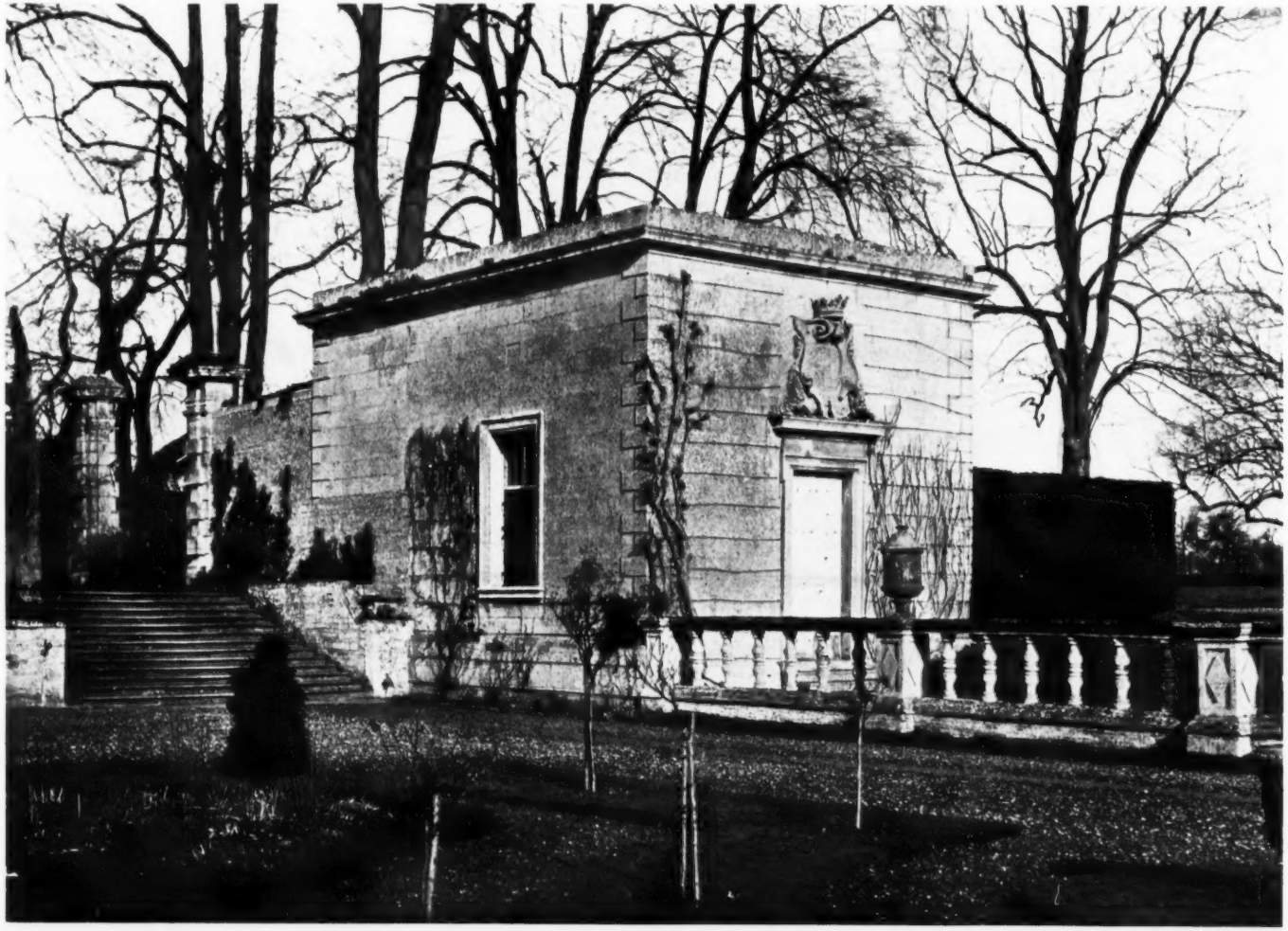


looked at Mr. Ansell's elevation, being inspired by the notion of classical severity I sniffed at the touches of variety which broke into the order of the stories. The matron's bay-window annoyed me, and I resigned myself to making the best of what seemed to verge on the commonplace. When, however, the design is judged in the solid, the varied external features, the rather steep hipped roofs, with their pantiles, the turret and clock; all these combine to transform at least the garden front into something delightful; rather less like an institution than a country house. The north or entrance front is more forbidding, or—it is difficult to judge these things—I should have liked a different, perhaps more imposing, entrance. The architect, at any rate, has shown that a classical restraint and quiet can be reconciled with homeliness varied enough.

The simple and spacious interior, the dining-room, and the day-rooms, gain their effect from the oak work, the dignified fireplaces, the electric fittings. The interior receives a pleasant touch from two or three oil paintings presented by the Nottingham branch: Mr. J. Milner's "Morning Glory," for example. I remember also "Bridlington Harbour" and "An Interior." These occurred in solitary effect in just one or two places. We shall be wise to hold our æsthetic breath along the North Parade amid the peep-shows, until the kindly gates open on to the convalescent home.



Convalescent Home at Skegness for the National Deposit Friendly Society. By W. H. Ansell. Plans of first and second floors.



ENGLISH PRECEDENT

29 *Drayton House, Northamptonshire, is a fine example of garden architecture. The garden-house illustrated is balanced by another of similar design at the other end of the terrace. They are connected by the stone balustrade, which bears a series of lead urns enriched with ornament in delicate relief, all worthy of close inspection. Over the door of the garden-house are the arms of the owner, who was then the Duchess of Norfolk. Drayton has never been sold, but has always passed by inheritance or will. The broad flight of steps leads to a higher terrace, which opens on to the park through the handsome gateway. The date of the work is early in the eighteenth century.*—[J. A. GOTCH.]

REINFORCED CONCRETE MEMBERS

[BY L. G. TAFFS]

SEVERAL methods of designing reinforced concrete members subject to bending combined with direct stress, either tension or compression, have been put forward in the past, but the question is one which can be approached from many varied standpoints. By the method explained in this article, as is the case with most other methods, it is necessary first to assume a part of the result and then prove the assumption to be correct. The advantage of the former method lies in the fact that the amount of calculation between the point at which the initial assumption is made, and the final proof of its correctness, has, especially with regard to the more usual cases, been reduced to a minimum.

Throughout this article the following notation has been adopted:

P = The total load either tensile or compressive.
M = The total moment acting on the member.
C = The total compression of the concrete + the compressive reinforcement.
T = The total tension of the tensile reinforcement.
A_c = Area of steel in compression.
A_t = Area of steel in tension.
p = Total percentage of steel in the member.
D = Overall depth of the member.
b = Overall width of the member.
c = Maximum compressive stress in the concrete.
f = Maximum tensile stress in the steel.
n = Depth of neutral axis from the compression side.
$n_1 = \frac{n}{D}$.
e = The eccentricity of the load from the centroid of the section.
$e_1 D$ = The distance of the centroid of the member from the geometric centre.

The distance from the outside face of the concrete to the centre of the steel has been taken, in all cases, as equal to ·1D.

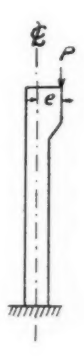


Figure one.

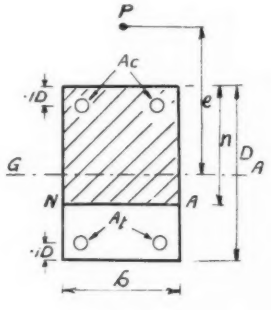


Figure two.

Forces have been measured in lbs.
Lengths ,, ,, ins.
Moments ,, ,, lbs. ins.
Stresses ,, ,, lbs./sq. in.

The maximum permissible compressive stress in the concrete has been taken as 600 lbs./sq. in.

The tensile strength of the concrete has been ignored.

The modula ratio of steel to concrete has been taken as 15.

COMBINED BENDING AND COMPRESSION

The case in which the eccentricity of the load is so small that there is no tension in the member may always be solved by adding the direct stress to the bending stress, obtainable from the formula $p = \frac{My}{I}$, and it is not dealt with in this article.

Where the eccentricity is so great that there is tension in one side of the column.

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

(Here refer to figure one, previous column.)

Consider the equilibrium of forces:

$$P = C - T$$

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

$$= bn_1D\frac{c}{2} + 14\frac{pbD}{200}\frac{(n_1D - \cdot 1D)}{n_1D}c - 15\frac{pbD}{200}\frac{(\cdot 9D - n_1D)}{n_1D}c$$

$$= bD\frac{c}{2}\left[n_1 + \cdot 14\frac{p}{n_1}(n_1 - \cdot 1) - \cdot 15\frac{p}{n_1}(\cdot 9 - n_1)\right]$$

$$= bD\frac{c}{2}\left[n_1 + \frac{p}{n_1}(\cdot 14n_1 - \cdot 014 - \cdot 135 + \cdot 15n_1)\right]$$

$$= bD\frac{c}{2}\left[n_1 + \frac{p}{n_1}(\cdot 29n_1 - \cdot 149)\right]$$

$$\therefore P = JbDc$$

Where $J = \frac{1}{2}\left[n_1 + \frac{p}{n_1}(\cdot 29n_1 - \cdot 149)\right] \ldots (1)$.

Now, taking moments about the centroid, we have:

Pe = C × distance from centroid + T × distance from centroid.

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

$$= bn_1D\frac{c}{2}\left[\frac{D}{2} - \frac{n_1D}{3}\right] + \frac{14pbD}{200}\frac{(n_1D - \cdot 1D)}{n_1D}c \times \cdot 4D + \frac{15pbD}{200}\frac{(\cdot 9D - n_1D)}{n_1D}c \times \cdot 4D$$

$$= bD^2\frac{c}{2}\left[n_1\left(\frac{1}{2} - \frac{n_1}{3}\right) + \cdot 14 \times \frac{\cdot 4p}{n_1}(n_1 - \cdot 1) + \cdot 15 \times \frac{\cdot 4p}{n_1}(\cdot 9 - n_1)\right]$$

$$= bD^2\frac{c}{2}\left[\frac{n_1}{6}(3 - 2n_1) + \cdot 4\frac{p}{n_1}(\cdot 14n_1 - \cdot 014 + \cdot 135 - \cdot 15n_1)\right]$$

$$= bD^2\frac{c}{2}\left[\frac{n_1}{6}(3 - 2n_1) + \cdot 4\frac{p}{n_1}(\cdot 121 - \cdot 01n_1)\right]$$

$$\therefore Pe = KbD^2c$$

Where $K = \frac{1}{2}\left[\frac{n_1}{6}(3 - 2n_1) + \cdot 4\frac{p}{n_1}(\cdot 121 - \cdot 01n_1)\right] \ldots (2)$.

Hence from (1) and (2):

$$\frac{Pe}{P} = \frac{KbD^2c}{JbDc}$$

$$\frac{e}{D} = \frac{K}{J}$$

Thence, by taking a series of values of n_1 for each value of p, we may obtain a graph, see diagram I, between $\frac{e}{D}$ and K, from which the stress in the concrete may be found by the relationship

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

Example: A reinforced concrete member has to withstand a moment of 600,000 lbs. ins., and a direct stress of 30,000 lbs. Select a suitable section such that the stress in the concrete shall not exceed 600 lbs./sq. in.

In designing a member of this kind there are three unknowns, b, D, and p. We may therefore assume any two of the above and obtain the third.

Let us assume, therefore, that the depth of the member is limited to 20 in., and that we are going to use 4 per cent. of steel, i.e. 2 per cent. in each face.

$$e = \frac{600{,}000}{30{,}000} = 20 \text{ in.}$$

$$\frac{e}{D} = \frac{20}{20} = 1$$

Then from diagram No. 1, with 4 per cent. steel

$$K = .263$$

Then $c = 600$ lbs./sq. in. $= \frac{M}{KbD^2}$ i.e. $b = \frac{M}{KcD^2}$

$$= \frac{600{,}000}{\cdot 263 \times 600 \times 20^2} = 9.5 \text{ in.}$$

Case II. Area of steel in tension equal to 2/3 of the area of steel in compression.

When the area of steel in each face of the member is not equal, the position of the centroid of the section moves from the geometric centre of the concrete section, and allowance must be made for this fact in obtaining equations (1) and (2).

It is therefore necessary to obtain the distance of the centroid from the geometric centre in terms of p and D.

With $A_t = 2/3\ A_c$.

To find e_1D—the distance of the centroid from the centre of the member:

$$A_c = \frac{2}{500} pbD \qquad A_t = \frac{3}{500} pbD$$

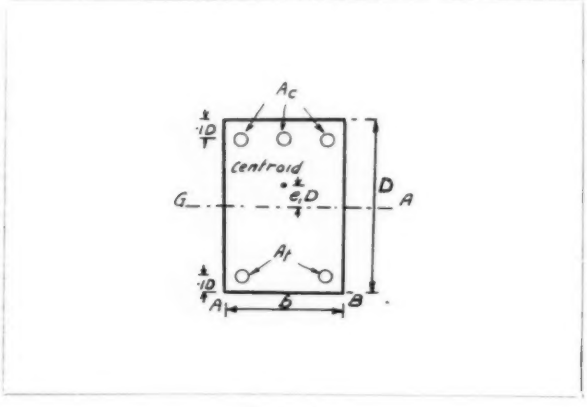


Figure three.

Moments about AB:

$$e_1 D = \frac{\frac{bD^2}{2} + 14 \times A_c \times \cdot 9D + 14A_t \times \cdot 1D}{bD + 14(A_c + A_t)} - \frac{D}{2}$$

$$= \frac{\frac{bD^2}{2} + 12 \cdot 6D \frac{3}{500} pbD + 1 \cdot 4D \frac{2}{500} pbD}{bD + 14\frac{(pbD)}{100}} - \frac{D}{2}$$

$$= \frac{bD^2}{bD}\left[\frac{\frac{1}{2} + p(\cdot 0756 + \cdot 0056)}{1 + \cdot 14p}\right] - \frac{D}{2}$$

$$= \frac{D}{2}\left[\frac{1 + p(\cdot 1624) - 1 - \cdot 14p}{2 + \cdot 28p}\right]$$

$$= \frac{D}{2}\left[\frac{\cdot 0224p}{2 + \cdot 28p}\right]$$

$$\therefore e_1 = \frac{\cdot 0112p}{2 + \cdot 28p}$$

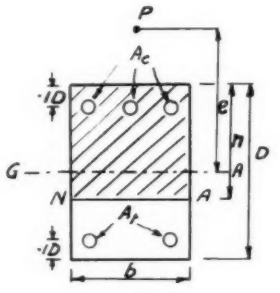


Figure four.

Then, as before, consider the equilibrium of forces:

$P = C - T$

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

$$bn_1D\frac{c}{2} + 14 \times \frac{3}{500}pbD\frac{(n_1D - \cdot 1D)}{n_1D}c - 15 \times \frac{2}{500}pbD\frac{(\cdot 9D - n_1D)}{n_1D}c$$

$$= \frac{bDc}{2}\left[n_1 + \cdot 168\frac{p}{n_1}(n_1 - \cdot 1) - \cdot 12\frac{p}{n_1}(\cdot 9 - n_1)\right]$$

$$= \frac{bDc}{2}\left[n_1 + \frac{p}{n_1}(\cdot 168n_1 - \cdot 017 - \cdot 108 + \cdot 12n_1)\right]$$

$$= \frac{bDc}{2}\left[n_1 + \frac{p}{n_1}(\cdot 29n_1 - \cdot 125)\right]$$

$$\therefore P = JbDc$$

Where $J = \frac{1}{2}\left[n_1 + \frac{p}{n_1}(\cdot 29n_1 - \cdot 125)\right] \ldots (1)$

Take moments about centre of gravity:

$Pe = C \times$ dist. from C of G $+ T \times$ dist. from C of G.

$$= bn\frac{c}{2}\left[\frac{D}{2} - e_1D - \frac{n}{3}\right] + 14A_c\frac{(n - \cdot 1D)}{n}c(\cdot 4D - e_1D) + 15A_t\frac{(\cdot 9D - n)}{n}c(\cdot 4D + e_1D)$$

$$= bn_1D\frac{c}{2}\left[\frac{D}{2} - e_1D - \frac{n_1D}{3} + 14 \times\right]\frac{3}{500}pbD\frac{(n_1D - \cdot 1D)}{n_1D}c(\cdot 4D - e_1D) + 15\frac{2}{500}pbD\frac{(\cdot 9D - n_1D)}{n_1D}c(\cdot 4D + e_1D)$$

$$= \frac{bD^2c}{2}\left[\left(\frac{1}{2} - e_1 - \frac{n_1}{3}\right)n_1 + \cdot 17\frac{p}{n_1}(n_1 - \cdot 1)(\cdot 4 - e_1) + \cdot 12\frac{p}{n_1}(\cdot 9 - n_1)(\cdot 4 + e_1)\right]$$

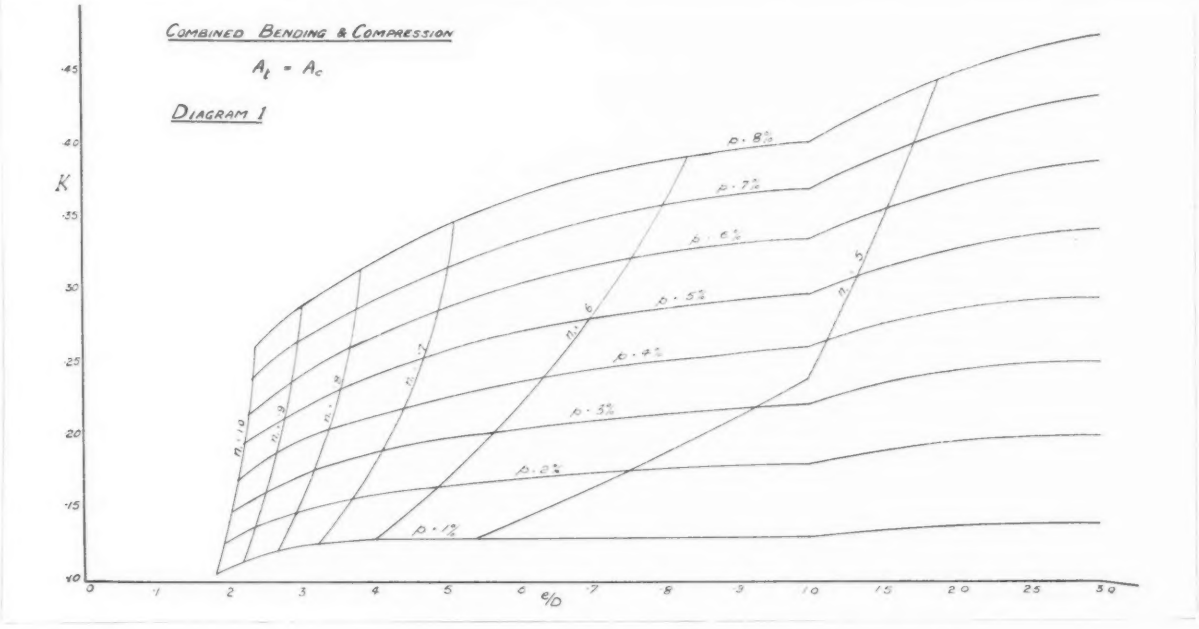
$$= bD^2\frac{c}{2}\left[\frac{n_1}{6}(3 - 6e_1 - 2n_1) + \frac{p}{n}\left\{\cdot 068n_1 - \cdot 17n_1e_1 - \cdot 0068 + \cdot 017e_1 + \cdot 0432 + \cdot 108e_1 - .048n_1 - \cdot 12n_1e_1\right\}\right]$$

$$\frac{bD^2c}{2}\left[\frac{n_1}{6}(3 - 6e_1 - 2n_1) + \frac{p}{n_1}\left\{n_1(\cdot 02 - \cdot 29e_1) + \cdot 0364 + \cdot 125e_1\right\}\right]$$

$Pe = KbD^2c$

Where

$$K = \frac{1}{2}\left[\frac{n_1}{6}(3 - 6e_1 - 2n_1) + \frac{p}{n_1}\left\{n_1(\cdot 02 - \cdot 29e_1) + \cdot 0364 + \cdot 125e_1\right\}\right] \ldots (2)$$



Then by taking certain fixed values of p and substituting for e_1 these equations become of the same form as equations (1) and (2) in the previous case, and graphs between e/D and K can again be obtained. Diagram 2.

Example: A section of a reinforced concrete wall 12 in. thick has to withstand a direct pressure of 35,000 lbs. per ft. run and a bending moment of 315,000 lbs. ins. per ft. run. Assuming that $A_t = 2/3\ A_c$, find the percentage of steel required.

$$e = \frac{M}{P} = 9$$

$$e/D = \frac{9}{12} = \frac{3}{4}$$

$$c = \frac{M}{K b D^2} \quad \text{Whence } K = \frac{M}{c b D^2}$$

$$K = \frac{315{\cdot}000}{600 \times 12 \times 12^2} = {\cdot}304$$

Whence from diagram No. 2

$$p = 5{\cdot}1 \text{ per cent.}$$

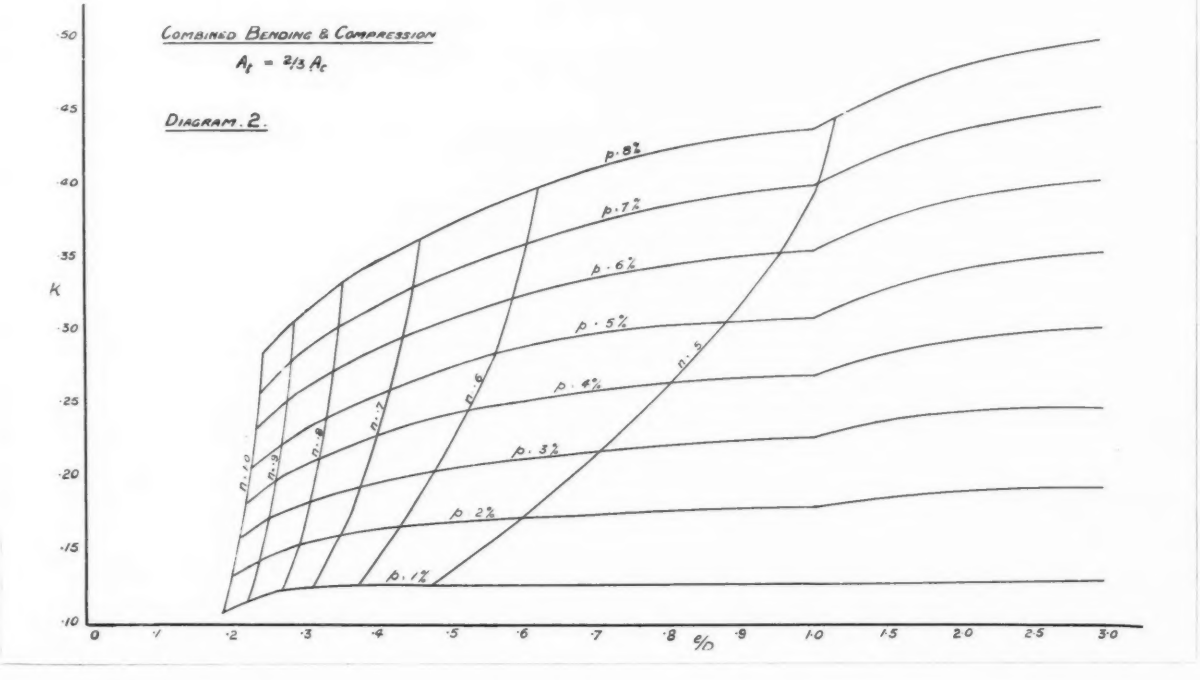
Therefore $A_c = 3{\cdot}06$ per cent. and $A_t = 2{\cdot}04$ per cent.

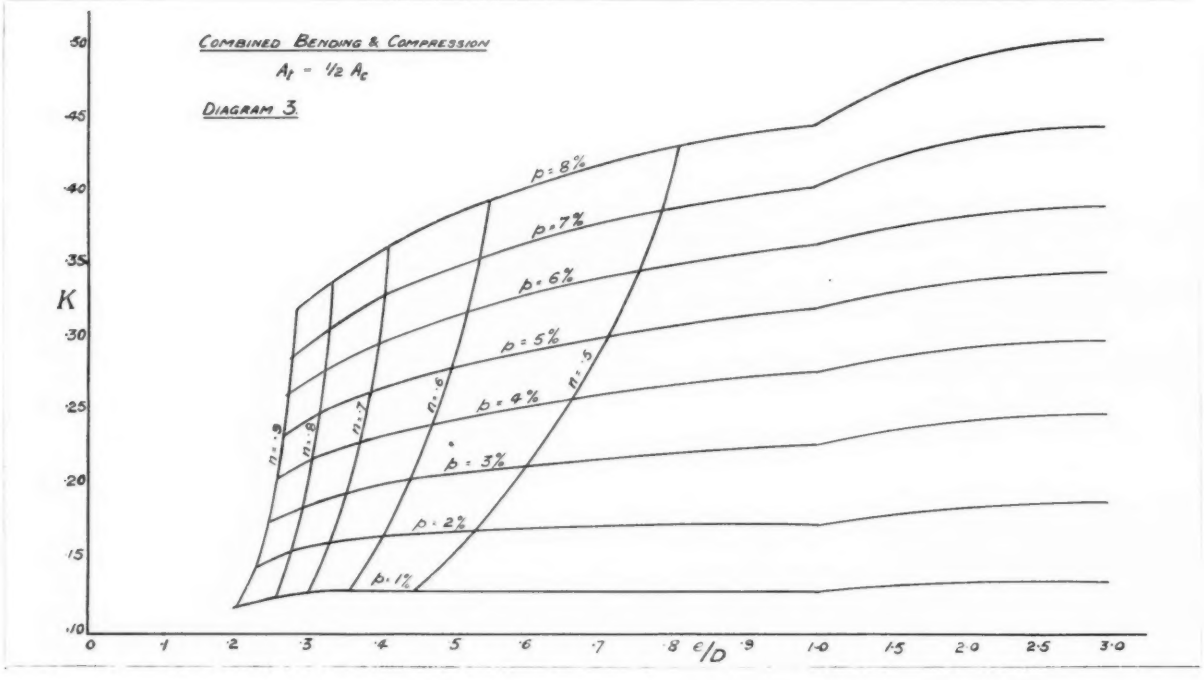
Case III.

With $A_t = \frac{1}{2}A_c$

This may be treated in a similar manner to the previous case, the resulting equations being as follows:

$$e_1 = \frac{{\cdot}0187p}{2 + {\cdot}28p}$$





$$J = \tfrac{1}{2}\left[n_t + \frac{p}{n_t}(\cdot 287 n_t - \cdot 1087)\right] \ldots (1)$$

$$K = \tfrac{1}{2}\left[\frac{n_t}{6}(3 - 6e_t - 2n_t) + \frac{p}{n_t}\left\{n_t(\cdot 0348 - \cdot 287 e_t) + \cdot 0285 + \cdot 1087 e_t)\right\}\right] \ldots (2)$$

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

Example: Taking the same example as for $A_t = 2/3A_c$

$e = 9$ in. $\quad e/D = \frac{3}{4}$

$K = \cdot 304$ as before.

Whence from diagram number three—

$p = 5$ per cent.

$A_c = 3\frac{1}{3}$ per cent. $\quad A_t = 1\frac{2}{3}$ per cent.

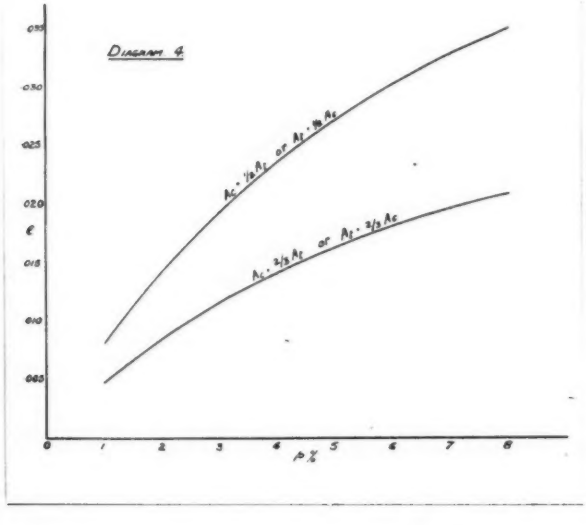
From the above example it will be seen that by rearranging the position of the steel in the section it is possible to effect a slight saving in the percentage of steel required. This is more noticeable with higher percentages.

In cases where the eccentricity of the load is known it is generally measured from the geometric centre, and in this case the value of "e" must be obtained as follows:

$$e = ecc. - e_t D$$

A graph giving the value of "e" for various values of "p" is given in diagram number four.

[To be concluded]



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

23570. Allensby, C. R., and Benham and Sons, Ltd. Heating installations for buildings. August 15.

23398. Dixon, G. Shuttering for building concrete work. August 14.

23772. Rosenberg, A. Buildings. August 17.

23632. Spooner, H. J. Sound-proof windows. August 16.

23602. Smith, W. H. Wall structures. August 16.

SPECIFICATIONS PUBLISHED

295229. Sharp, F. L. Structural elements for erecting buildings and for like purposes.

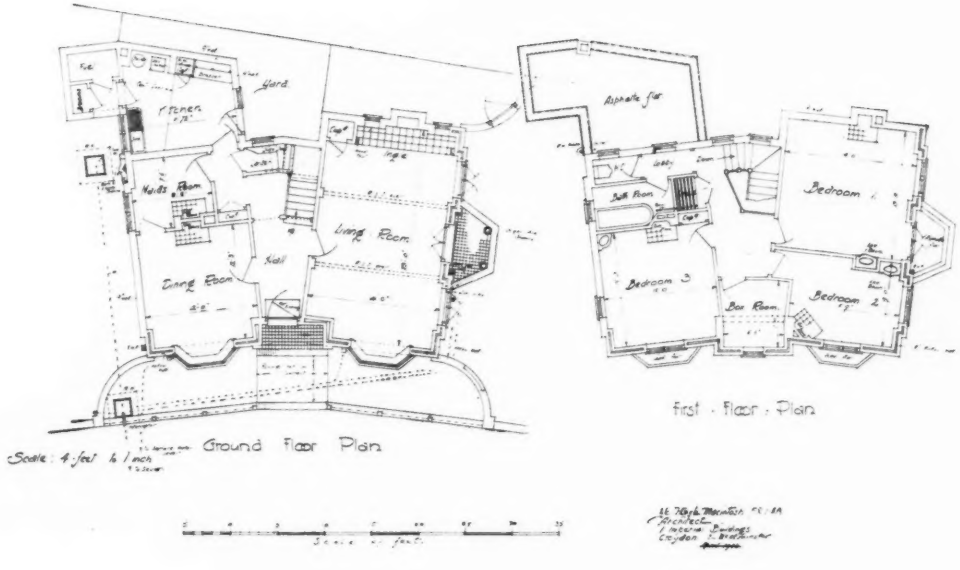
295440. Smith, H. Means for opening or closing sliding windows, panels, and the like.

295538. Peter, R. Lock to be operated by means of a double key.

284246. Laderer, H. Water-resisting building material.

ABSTRACT PUBLISHED

292909. Vriese, H. de, 177 Avenue Milcamps and Vandercruyssen, M., 183 Avenue Rogier, both in Brussels. Walls; floors; columns.



House in Colson Road, Croydon. By Hugh Macintosh.
Above, the entrance front. Below, the plans.

LITERATURE

"THE STORY OF ARCHITECTURE IN AMERICA"

PERHAPS it is because Mr. Tallmadge set out to write the story, and not the history, of architecture in America, that he has been able to produce a book so interesting, so readable, and yet so informative. It is a book that holds one like a novel; and then, when the covers are closed, it is suddenly realized that the author has all the while been filling the reader with facts, information, dates, theories, criticisms, and appreciations, all served up as ingredients in a dish so palatable that it can be swallowed at a sitting without a trace of mental indigestion.

These remarks are not the hyperbole of a good-humoured reviewer. Let each one test Mr. Tallmadge's book for himself, enjoy his chapter headings, his choice of simile, his gift of making the personalities of his architect heroes live. Let him refresh himself with clear, unmannered English, a polished vehicle for conveying to the reader knowledge which is obviously present to such a degree that the very quantity of it might have excused obscurity. Suffice it to say that this book is good in every way: and that one does not require to have lived or journeyed in America to follow the events and personalities which have resulted in American architecture beginning existence as it did and developing into what we see today.

If there is one fault to find, it is that Mr. Tallmadge has insisted too much upon the facts, presented in his concluding chapters, which tend to show that America in modern architecture has achieved a certain supremacy. In Europe it is recognized that the land of opportunity has been more than justified in her architects. As Mr. Tallmadge points out, before 1893 there was not a single class of building in which America excelled or even equalled contemporary work in the mother countries, and "today there is hardly a single class of structure in which an excellent claim cannot be advanced for either our supremacy or our equality."

There is no place here to break a lance with our author. Suffice it to say that not every one will agree with him. The scorn which he pours on Germany, "struggling in a maze of wanton secessionism and arrogant self-expression," will no doubt be amply reciprocated. "Finland and the Norse countries are doing the best work in Europe today, but the opportunities are limited." Yes, of course, Holland and Denmark, and Austria even, may feel a little hurt, and France may feel that she has contributed something to modern architecture—the Perrets, for example. Mr. Tallmadge grants one building to England—Liverpool Cathedral—for the rest he does not even accuse us of being wilful or naughty.

This portion of Mr. Tallmadge's book concludes, under the title of "Today and Tomorrow," his survey of America's past. Here he is in the rôle of critic or prophet; in the rest of his book he merely tells a story, and who will not love a story so easily and entertainingly told?

The book begins with an introduction, which tells us of what the history of architecture is made. It tells us about styles and hazy lines of demarcation; about fashions, and the little comedies of architectural history, instanced by the tale of Niagara limestone, loved, rejected, and once more restored to favour. He tells us of the three basic styles, Classic, Romanesque, Gothic, and then starts his real business with the description of the springtime of American architecture, the "Early American style," the Colonial, which is "the architecture with the schoolgirl complexion."

He tells us how the earliest American towns must have been quite medieval, "like an English village badly transplanted"; he explodes the myth of the village carpenter—humble craftsman "with the unerring taste of a Pericles." He tells us about the early furniture, today worth a king's ransom, and then about the Georgian days, the houses whose interiors, preserved today in the Metropolitan Museum of Art in New York, strike the visitor in the same way as a succession of old masters.

Then we go on to the period when the Adam brothers "ruled the taste of two nations"; we learn about Bulfinch the Adamite and the first American "professional architect," and McIntire, the carpenter architect come true. And so to Thomas Jefferson and Monticello, the Capitol of Washington and Dr. William Thornton, the charms of Charleston, and the Greek Revival which came in as an imported fad, and spread so quickly that

Trinity Church, Boston, 1877. By H. H. Richardson. Porch by Shepley, Rutan and Coolidge. [*From* The Story of Architecture in America.]

" a building which was not Greek in 1827 was as hard to find as a skirt that was not short in 1927."

With an excursion into the Californian missions we pass on to " the Parvenu Period " of 1860-1880, the age of ignorance and Eastlake, of Gothic and Third Empire, of tin Mansards and perverted Ruskinism. We see the rise and fall of the " Brown stone " period, the beginnings of Hunt and Richardson and Root and Burnham, the great white city of Chicago '93 exhibition, and we witness the first budding of the genius of Louis Sullivan, whose life-work and personality Tallmadge sketches with kindness and sincerity. We learn about Frank Lloyd Wright, about McKim who made larceny of the classics almost a virtue, about Goodhue and his later development away from his early Gothic loves, and then we get on to ground with which most English readers will be familiar, the history of development in modern times, including the beginnings of the skyscraper, the period of 1893-1917, which Mr. Tallmadge calls the " period of electicism."

It is dull work to read a second-hand impression of a good book. This review will have accomplished its purpose if it has helped to show that Mr. Tallmadge's book *is* good. There is one point about it which alone should ensure an English public, which is, that in his unfolding of the " Story of American Architecture," the author manages to teach us, almost without our becoming aware of it, the story of European architecture as well.

H. R.

The Story of Architecture in America. By Thomas E. Tallmadge. London: Grant Allen and Unwin, Ltd. Illustrated. 16s. net.

A BACKGROUND TO ARCHITECTURE

Mr. Rathbun has set himself to present a background to architecture in two ways. He shows as the background to modern architecture the architecture of the past outlined in a somewhat ordinary history; he shows as the background to the architecture of the past the culture, artistic ideas, and traditions of the countries which produced it. The scheme is certainly interesting. The book starts with a chapter on " Fundamentals," and ends with a chapter on " Possibilities." For the rest, the chapters run: " Egypt," " Egyptian Architecture," " Greece," and so on.

It is very obvious from the mere chapter-headings that Mr. Rathbun intends to be absolutely logical. He never wanders from his point. His only real thesis is that architecture in every country is dependent on the exigencies of climate, materials, skill, on culture, on religion, on governments, on wealth. All this is more or less undisputed. There is much interesting reading in the chapters on national characteristics, and they are written in an interesting manner: then comes an abrupt change to the didactic in the chapters on the actual architecture. It is very hard to carry off this scheme of writing first about aspects of the country and then about its architecture, since the second chapter is a continuous " vide supra."

Having allotted an interesting essay, an ordinary architectural history, and a number of photographs apiece to Egypt, Greece, Rome, France, Italy, and England, Mr. Rathbun has a chapter on " Possibilities," illustrated with one singularly ominous illustration—namely, the Woolworth Building. Americans always make possibilities their special province; we therefore await with interest what Mr. Rathbun has to say. He asks the necessary question: Structure or Art? He draws the necessary distinction that other arts sprang from impulse, architecture from necessity. Therefore structure comes first. It always has: but two gloomy facts stand in our way nowadays. Art has lost its hold on the people. The specialized architect has to combine with the specialized engineer. The common man is left out. Mr. Rathbun admits that his answer is " rank iconoclasm." Sweep away the past: let architecture go all the way to meet science. He is gloomy, but then he knows his America.

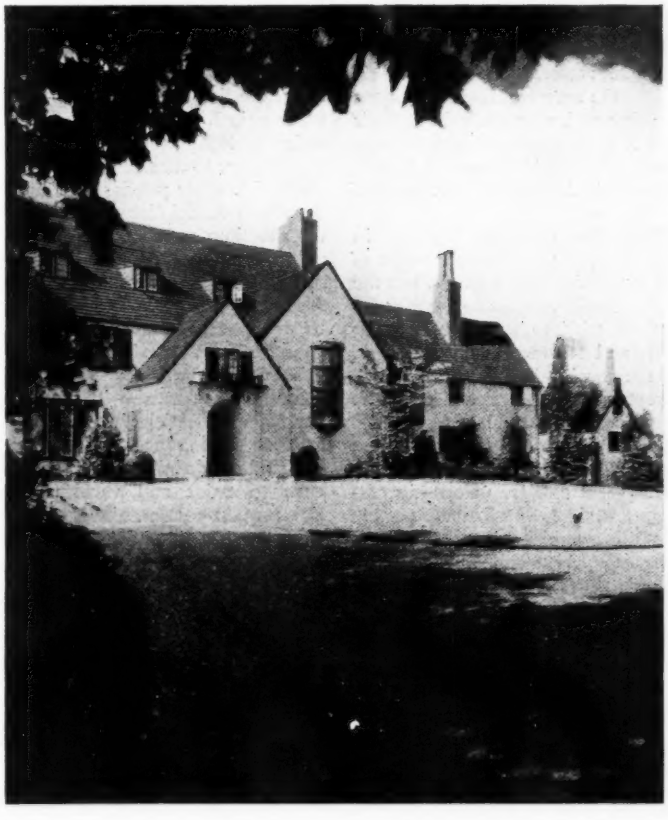
CHRISTOPHER HOBHOUSE

A Background to Architecture. By S. H. Rathbun. Yale University Press.

A HISTORY OF PAINTING

There is such a steady output of histories of painting that of each new book it must be asked now: Is it worth reading? no longer: Does it fill a gap?

Mr. Kaines Smith's book passes the test successfully. Not,



A house by H. T. Lindeberg. [*From* The Story of Architecture in America.]

however, surely, without provoking the examiner to administer a rap on the knuckle. A history of painting should give ineffaceable picture after picture of the personality of each artist, and of the object or locality he has painted, so that we hunger after the canvas as expressing certain moods and visions and enjoyments which are our own. Mr. Kaines Smith does this, not, however, as completely as, say, Wedmore. The reason lies in his prose style; it is somewhat commonplace and verbose. It is not imaginative. One can fancy Mr. Kaines Smith boasting of having written a book on art that will be understood by the plan man and by the child. One is left sighing for the music and poetry (concomitants of art) which Taine makes you feel in his " translucent shadows and graduated amber lights," writing of the voluptuous Danæ in Naples; or Pater, who says in a sketch on Watteau's garden comedy of life: " As I gaze upon those windless afternoons I find myself always saying to myself involuntarily, ' The evening will be a wet one.' " Children, too, inheritors of paganism, respond to colourful prose, even where it passes their comprehension. J. Addington Symonds's " melodrama of flame and gold and rose and orange and azure which the skies and lagoons of Venice yield almost daily to the eye " must stamp Titian on their memories unforgettably.

By calling his work an outline, Mr. Kaines Smith has escaped the tedium of crowding his pages with names, and has been able to select the " great " ones only. Of their work he writes with tenderness as well as with scholarly knowledge, penetration, and exactitude. His two chapters on the Dutch and Spanish schools are a joy, thanks to his love for the canvases of such men as Hals, Hobbema, Rembrandt, El Greco, Velazquez—I choose at random.

Personally, I do not require, as an addition to my interest, the many pages devoted to a quartet or quintet of well-produced illustrations, but to those not so well acquainted with the names marshalled in Mr. Kaines Smith's book they will be a useful aid to memory.

M. M.

An Outline History of Painting in Europe. By S. C. Kaines Smith, Keeper of the Birmingham City Art Gallery. Published by the Medici Society. Price 6s.

A SWEDISH ROYAL GARDEN

Few architectural schemes have received so elaborate an analysis as Nils Wollin devotes to the seventeenth-century park and château of Drottningholm; few such schemes exist in their entirety. The author compares it with, among others, Sceaux, Chantilly, and Versailles, and, ambitious as is this comparison, it is not exaggerated. Drottningholm is, indeed, a great work of architecture.

A palace, park, and formal garden on Drottningholm in the great Mälar lake extending seventy-three miles to the west of Stockholm, existed at the close of the sixteenth century, but the subsequent scheme is due to the Tessins, father and son, who together embrace the period from 1615 to 1728. Nicodemus Tessin, the elder, died in 1681, and Nicodemus, the younger, succeeded him as architect of the royal palaces and completed Drottningholm among other great works. Both borrowed where they could, developed and invented as was needful, and produced masterpieces of the Swedish Baroque style. Maps, plans, drawings, and photographs in great profusion illustrate the situation, the structure, and the layout of this great country palace—its outbuildings, its subsidiary structures, such as the Chinese pagoda and villas; its arcades, its balustrades and pillars, its cascades and fountains, including the celebrated Hercules fountain, with its fine bronze group and figures, which, incidentally, is very usefully compared with illustrations of the Hercules fountain of Adrian de Fries at Augsburg. The book is not on the great scale of Erik Dahlberg's *Suecia Antiqua et Hodierna*, that princely work dealing with all the ancient buildings of Sweden, but in its detail it is extraordinarily profuse and satisfying. Its price is very small.

KINETON PARKES

Drottningholms Lustträdgård och Park. By Nils S. Wollin. La. 8vo, pp. 8+372; illus. 131. Stockholm: Broderna Lagerstroms Forlag. Kronor 7.50.

STANDARD SPECIFICATIONS FOR PAINT, VARNISH, AND PAINT INGREDIENTS *

The British Engineering Standards Association continues to do good work by adding to the series of specifications for paint, varnish, and paint ingredients, which they commenced to publish in 1926. These specifications, which have been drawn up at the request of the paint manufacturers by a committee representative of the buying as well as the manufacturing interests, are now fifty-five in number, covering various pigments in the dry-powdered condition and, in some cases, in the form of oil pastes (such as white lead oil paste and red oxide of iron oil paste); oils which enter into the composition of paint and varnish (separate specifications being given for *raw* linseed oil, *refined* linseed oil, and *boiled* linseed oil); ready-mixed linseed oil paints; oil varnishes for interior and exterior use; turpentine, white spirit, and gold size. The recent additions include specifications for green oxide of chromium (No. 318), vandyke brown (No. 319), and vermilion (No. 320); paste driers (No. 331) and liquid driers (No. 332); as well as one for red lakes (No. 333). This latter is intended to cover such colours as signal red, post office red, and vermilion substitutes, which are made by precipitating organic dyestuffs (" coal tar dyes " or " aniline dyes ") upon some appropriate inorganic base such as blanc fixe, alumina, barytes, or red lead.

These specifications are, of course, essentially technical in character, but they include only those provisions which are deemed to be necessary to control the composition and quality of the material to which the specification refers, some qualities (such as colour, oil absorption and staining power, in the case of a dry pigment) being taken in comparison with a standard sample. Where chemical and physical methods of testing are included these tests are, in many cases, of such a character that they may be carried out with the minimum of experience in analytical manipulation, and the individual tests are described in detail in the form of appendices at the end of each specification in which they are given. The value of many of these receptive tests cannot be over-estimated—a determination of the amount of coarse particles which are present and the amount of matter which is soluble in water, for instance, is more or less necessary for the evaluation of all pigments in dry powdered form; so, too, is the oil absorption factor, the staining power (or in the case of red lakes, the liability to " bleed " through a superimposed coat of white paint), and the relative fastness of the colour towards the action of light (not overlooking the discoloration of lithopone by exposure to direct sunlight).

As with other publications issued by the British Engineering Standards Association, these specifications will be revised from time to time as experience of their working or progress in the paint and varnish industry renders such a course necessary. Any suggestions for improvements, addressed to the Secretary of the Association, 28 Victoria Street, London, S.W.1, will, therefore, be welcomed, so that they may be brought to the notice of those charged with the revision of the specification concerned. Bearing this in mind, and now that the first stage of the work of the committee entrusted with the preparation of these paint and varnish specifications is being brought to a conclusion, we therefore venture to suggest that there is still some need for a glossary of standard definitions for the terms commonly in use in reference to paint and varnish products, on the lines of that published by the American Society for Testing Materials, perhaps, but with particular reference to the interpretation held by the manufacturers and users of paint and varnish in this country.

The 1928 edition of the indexed list to British Standard Specifications and Reports has also just been issued. This list, which covers thirty pages, is a complete subject index of over 300 British Standard Specifications which are now available, and should be in the hands of all drawing offices and contracts departments throughout the associated engineering industries.

C. H. B.

* Copies of this list may be obtained from the B.E.S.A. Publications Department. Price 1s. 2d., post free.

LAW REPORTS

BUILDING DISPUTE: QUESTION OF SUBSIDY

Cutler v. *Davis. Court of Appeal. Before the Master of the Rolls and Lords Justices Lawrence and Russell*

This appeal was by a builder against a decision of Mr. Justice Astbury, sitting in the Chancery Division, and raised questions as to the possession of land and a counter-claim as to the subsidy. Defendant, Sidney Davis, an Oldham builder, was sued by the personal representatives of the late Mrs. Catherine Parish, for the specific performance of an agreement for sale to him of land at Slatch House Farm, Halesowen, for £1,096, and an adjoining property, Greenfield House, for £903. Defendant said he was willing to complete the agreement, subject to getting vacant possession of Greenfield House. Defendant set up a counter-claim for specific performance of the contracts, and for damages, alleging that he had lost the Government subsidy through being unable to finish the houses in time. Mr. Justice Astbury found that but for an arrangement with the tenant of Greenfield House, the defendant would have had possession. Plaintiffs had never refused to give vacant possession, and he gave judgment for plaintiffs, and made no order on the defendant's counter-claim.

The Master of the Rolls, in giving the Court's judgment, after legal arguments, said the appeal had come before the Court as a result of very unfortunate litigation. He could not help thinking that if some good sense had been shown by some one in the course of the proceedings the costs that had been incurred would never have been incurred at all. The Court thought the plaintiffs should succeed on their claim for specific performance as to the sale of the Greenfield House and land, and that the defendant should succeed on the issue as to the Slatch House Farm. In the circumstances there would be no order for costs on either side and no costs of the appeal. The defendant would have an order for an inquiry as to any damage he had suffered, but the Court must not be taken, because it made that order, that it encouraged that inquiry.

Lords Justices Lawrence and Russell concurred.

WATER SCHEME: CLAIM AGAINST CONSERVATORS

Rook v. *Derwent Board of Conservators. Court of Appeal. Before Lords Justices Scrutton, Greer, and Sankey*

This was an appeal by Mr. T. Rook, of Cockermouth, Cumberland, from a judgment of Mr. Justice Rowlatt, sitting in the King's Bench Division, dismissing his claim against the defendants for remuneration for services rendered in connection with the water scheme at Lake Thirlmere for the Manchester Corporation.

For the appellant, Mr. Pritt, K.C., said his client was employed by the Board of Conservators, whose function was to look after the Derwent and its tributaries from the fishing point of view. The Manchester Corporation drew their water supply from Thirlmere. In 1918 the Corporation surreptitiously raised a sill which increased the volume of water in the lake by 2,000 million gallons, but, of course, interfered with the flow of water in St. John's Beck, the Greta and the Derwent. When this was discovered the conservators entered into negotiations with the Corporation and it was agreed that the conservators should support a Bill in Parliament provided they received compensation water plus £12,000 to meet an expenditure of £4,500 on works, £4,500 in meeting the opposition of mill owners, and £3,000 for Mr. Rook for services in carrying the scheme through. This was subsequently reduced by £4,500, as the Corporation said they had settled with the mill owners. When the Bill came before Parliament, however, the mill owners had to be paid £1,900 to receive the withdrawal of their opposition. The balance of £5,600 was paid to the Ministry of Agriculture for expense in improving the river Greta, and the Ministry refused to sanction the payment of Mr. Rook's proportion, which had then been reduced to £2,240. Plaintiff brought his action, which had been dismissed.

Lord Justice Scrutton said the appellant's salary as manager and bailiff was £150 a year, but he was allowed to take lucrative engagements as adviser or expert witness to other bodies concerned with river conservancy. When the Manchester Corporation were carrying out their Haweswater scheme, Mr. Rook, acting as witness, adviser, and negotiator, received £2,000 and an honorarium of £1,000. When the Manchester Corporation were promoting a Bill in connection with their Thirlmere scheme they agreed to pay £7,500 to the respondent board if there was no opposition to their Bill and if it became law. The respondent board were to pay Mr. Rook out of that sum remuneration for his services. When the Bill came before Parliament it transpired there was opposition on the part of three mill owners, who required compensation. The Manchester Corporation therefore withdrew their promise to pay the £7,500 as there was opposition, and the Derwent Board then decided to oppose the Bill and instructed Mr. Rook to take the necessary steps. His lordship was of opinion that up to that time there was no agreement to pay Mr. Rook by the Derwent Board, and in that respect the judgment of Mr. Justice Rowlatt was right. But the Court had allowed an alteration in the pleadings so that Mr. Rook could claim remuneration from the Derwent Board for expenses incurred and services rendered after the date when it was decided to oppose the Bill. The Court could not assess this, but would refer it to the official referee, hoping, however, that the parties would agree upon a sum. His lordship remarked that this case threw a lurid light on the way in which private Bills went through the Houses of Parliament. Everybody expected to get something out of the promoting Corporation, either as expert witness or by way of compensation, or for some other reason. The appellant, his lordship added, had failed on the greater part of his claim and had succeeded on only a small part after an amendment of pleadings.

Lords Justices Greer and Sankey agreed, and an order was made in the terms indicated, with an order for no costs there or in the Court below.

DEVELOPMENT OF ESTATE: RIGHT TO LAY GAS AND WATER MAINS

Davis and another v. *Corporation of Ripon. Chancery Division. Before Mr. Justice Tomlin*

This was an action by Mr. and Mrs. Davies and Mr. John Henry Coldbeck, of Ripon, against the Corporation of Ripon, for a declaration that the defendants were not entitled to lay and maintain or repair gas and water pipes on any part of Lark Lane, Ripon, belonging to the plaintiffs, and for an injunction restraining them from trespassing upon the lane. In reply, the Corporation said the pipes were laid in the lane with the consent of the plaintiffs' predecessors in title and were lawfully there.

Mr. Gover, K.C., argued the case for the plaintiffs, and Mr. Gavin Simonds, K.C., for the defendants.

The facts of the case are fully dealt with in the judgment.

His lordship said prior to 1914 the lane was an occupation road to agricultural land belonging to a Dr. Hartley, who had since died. Following the outbreak of war, the war department took possession of a large area of land, including the lane, and made camp for 40,000 soldiers. They made roads over the area and erected hutments, and put down water pipes in the lane and elsewhere for the supply of water to the camp. The Corporation supplied the water in bulk, and subsequently acquired the pipes which had been laid down by the military authorities and laid additional pipes. Lark Lane was converted by the War Department into a macadam road, and branch roads were constructed out of it. After the war the military authorities sold the hutments, which were converted into dwellings, and the land was developed into residential property, houses and bungalows being erected. These places were supplied with water from the pipes which the military had laid down and the Corporation had acquired. In June 1922, the Corporation relaid the pipe line up Lark Lane,

to supply a factory which had sprung up, and later extended the main in Lark Lane. In July 1926, Dr. Hartley's estate was handed over to his executors, who included Mr. Hutchinson, a solicitor. Mr. Hutchinson gave the Corporation permission to lay gas pipes in Lark Lane to supply the bungalows with gas. Mr. Hutchinson was then informed of the presence of water pipes in Lark Lane, and he said he regarded their presence as an advantage from the point of view of the Hartley estate, and that he had no objection to their being left there. From that time forward he allowed the Corporation to continue the water mains there on the footing that they were there with his authority and consent. In that state of affairs the property was put up for auction by Mr. Hutchinson and his co-executor, and was sold ultimately to the present plaintiffs. In the present case the onus was on the plaintiffs to establish that the pipes were improperly laid, or at any rate were improperly under the land when it was purchased by them. In his opinion they had failed to discharge that onus. There was another ground why plaintiffs could not succeed, and that was that the Corporation had statutory powers to do what they did because, although there was not a public right of way over this lane, its character was such, having regard to the houses and premises abutting on to it, that the Water Clauses Act gave them power to do what was done, as this was "a street laid out," though not dedicated to the public. The action would be dismissed, with costs.

RIGHT TO CONSTRUCT A SEWER

Leckie and Others v. *Pickford. Chancery Division. Before Mr. Justice Eve*

This case raised the rights of tenants over certain garden land. Plaintiffs, the occupiers of seven houses at South View, Woodley, Cheshire, brought an injunction against the defendant, Mr. Frank Pickford, of Spring Bank Farm, Woodley, to restrain him from removing a fence or laying any sewer or drain upon or under land used as gardens by the plaintiffs.

Sir T. Hughes, K.C., for the plaintiffs, explained that the case raised a question of title in the plot of land. In 1904 a plot of 2,500 sq. yd. was leased to Mr. Edward Lees on a building lease. He built the seven houses now occupied by plaintiffs and he enclosed by a fence 292 sq. yd. which had since been used as gardens for the houses. Defendant had bought land on the south side, and he proposed to build property there. In March last year he gave notice that he proposed to make a sewer through the land, which was the subject-matter of the action, and to make a street there.

Mr. Hurst, K.C., for defendant, submitted that whether the plaintiff had or had not a title to the land, they were under an obligation to have the whole of the land on the south side unbuilt on for the purpose of a street 12 yd. wide.

His lordship, after hearing the evidence, came to the conclusion that the plaintiffs were entitled to the injunction they sought, and he granted it with costs.

LEGAL NUISANCE

Shutter v. *Standage. Chancery Division. Before Mr. Justice Astbury*

In this case his lordship laid down what constituted the standard of legal nuisance to entitle a tenant to an injunction to restrain vibration and noise from machinery. The plaintiff, an aged invalid widow of High Street, Harlesden, asked for an injunction against the defendant, trading as the Unit Tool and Engineering Co., at adjoining premises, arising from use of certain machinery,

Mr. Manning, K.C., for the plaintiff, said his case was that the noise and vibration caused by defendant's machinery constituted a nuisance. Defendant occupied the basement of the adjoining premises. Plaintiff was over seventy years of age, and did not enjoy good health, being practically confined to bed. On the ground floor of her premises she carried on the business of dealing in bicycles, gramophones, etc. Behind the shop was a hairdresser's establishment, carried on by Mr. Charles Burge, and plaintiff had a bedroom at the rear of the shop. Plaintiff alleged that the noise was caused by the vibration that came from the working of defendant's heavy metal-working machinery.

Mr. Nichols, for the defendant, denied that there was any noise or vibration constituting a nuisance.

His lordship, after hearing a mass of evidence, gave judgment. He said the premises were in a noisy neighbourhood, and at the back of them there were noisy works and railways. Prior to the defendant coming into possession of the basement it had been used for a number of years for various sorts of work which might or might not have caused noise or vibration. He thought defendant had tried to mitigate the noise and vibration complained of, and prior to the issue of the writ he removed a milling machine which had created a considerable amount of noise. This was one of those cases which gave a judge considerable anxiety because very often the remedy was out of all proportion to the offence. Both sides had called a large number of witnesses, and he had to decide whether defendant's workshop did cause in plaintiff's house vibration and noise sufficient to amount to a legal nuisance. It was true that when tramcars and heavy traffic were passing the noise was not noticeable, but it was a continuous matter, with the exception of meal times, throughout the day. Plaintiff had only proved just sufficient to constitute a legal nuisance. She was bedridden and, no doubt, felt the nuisance in a more intensive degree than the normal person would do, but he had heard evidence from her tenants and other people in support of her case. He was satisfied that there was a legal nuisance to an ordinary normal person. Plaintiff had only just brought herself within a legal right and very little alteration in defendant's premises would turn the scale. He felt considerable sympathy with defendant, who went to a place which had previously been used as a workshop. He had done his best to carry on his business so as to cause as little nuisance to his neighbours as possible. His lordship said the action was commenced, perhaps, not very considerately, but he had no alternative but to grant the plaintiff relief. There would be an injunction restraining defendant from working machinery on his premises in such a manner as by noise and vibration to interfere with the reasonable enjoyment of the plaintiff's premises and to cause a nuisance to her and her tenant. He granted a stay of the injunction till the end of September, to give the defendant an opportunity of taking steps to mitigate the nuisance. Defendant must pay the costs of the action, but he awarded the plaintiff no damages.

ANNOUNCEMENTS

Mr. Patrick Cutbush, A.R.I.B.A., has been taken into partnership by Mr. Evelyn Simmons, F.R.I.B.A., and the practice will be carried on over the present address, Palace Chambers, Bridge Street, S.W.1.

Messrs. Courtenay Theobald and Deane Skurray have begun practice at 7 Grosvenor Street, New Bond Street, W.1.

Mr. George Hornblower, F.R.I.B.A., has taken into partnership Mr. George Anag, F.R.I.B.A., of No. 7 Sweeting Street, Liverpool, his previous partnership with Mr. Ralph W. Thorp, A.R.I.B.A., having been mutually dissolved. The practice will be carried on at 2 Devonshire Terrace, W.1, where they will be glad to receive trade circulars, etc.

The address of the Bristol office of the British Reinforced Concrete Engineering Co., Ltd., is now Refuge Assurance Buildings, Baldwin Street, Bristol. Telephone Number: Bristol 5544.

The National Radiator Co., Ltd., announces that its travelling motor-caravan with a working installation of the "Ideal Cookan-heat" will be giving demonstrations as follow: September 5 and 6 (afternoon), Car Park, opposite Town Hall, Chatham.

TRADE NOTES

In connection with the street lighting demonstrations held in Sheffield during the Convention of the Public Lighting Engineers, the General Electric Co., Ltd., exhibited a number of interesting types of lighting units. Perhaps the most interesting of the whole of the street lighting units exhibited was the standard model FC. 6047 Wembley Lantern. This was fitted with a new type patented G.E.C. asymmetric elliptical one-piece prismatic glass refractor, attached by means of a special refractor fixing-plate in lieu of that formerly accommodating the regular G.E.C. symmetrical type of refractor. In addition to this, a special type of adapter for rendering the lantern quite rigid, by means of its being screwed to the column arm, was substituted in lieu of the ordinary suspension shackle.

"The objection to concrete houses that they had rather a drab look—perfectly true—no longer applies," says Sir John Foster Fraser in *Houses, Health and Beauty*, just issued by the Portland Cement Selling and Distributing Co., Ltd. He says: "Manufacturers of cement know that warmth in appearance is pleasing to the eye and can now provide a happy finish of yellows and greys and soft greens in pigment so that buildings may tone in with the situation. I particularly press that the new architecture should think in terms of colour. May I say much of the mental unrest in this excitable age is that thousands of our people have to live in houses, however good in other ways, that are monotonous in appearance. There is no reason to expel all other building material for cement—that would indeed be prejudice. I have seen structures of cement with brick chimneystacks and wooden bay windows. Before me lies a publication, an advertisement in fact from another land, with representations of various houses, and on one accompanying sheet many different tinted roofs to scale; so you see how the colour affects the whole aspect. There is imagination combined with sense. We want more of that." The booklet contains illustrations of many recent concrete houses.

Messrs. G. A. Harvey & Co. have recently completed a large extension of their works. The new structure is brick built and roofed with glass and corrugated asbestos sheets, is 500 ft. long, 250 ft. wide, and 38 ft. high. 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 FIRST NATIONAL GLASS CONVENTION

The First National Glass Convention will be held at Bournemouth from September 19 to 22, 1928, presided over by Mr. W. Butterworth, M.A., J.P., president of the Society of Glass Technology. The Mayor of Bournemouth, Alderman Thwaites (a past-master of the Glass Sellers' Company of the City of London), will open the convention, which will be held in the Town Hall. The meetings will be devoted to discussions on the organization of the glass industry, with a conference on legislation, and the convention will close with a banquet at the Town Hall, at which Mr. Douglas Hacking, O.B.E., M.P., Parliamentary Secretary to the Department of Overseas Trade, will be the chief guest, and other members of Parliament will be present. A preliminary brochure containing the programme will be sent to anyone connected with the British glass industry upon application to either of the joint secretaries of the Glass Convention: Professor W. E. S. Turner, D.SC., M.SC., Society of Glass Technology, Darnall Road, Sheffield, or Mr. Geoffrey Marchand, M.A., Glass Manufacturers' Federation, Aldwych House, London, W.C.2.

HOUSING PROGRESS IN SCOTLAND

The following figures show the progress that has been made in State-aided housing schemes in Scotland to July 31, 1928:

	Completed	Under Construction
1919 Act	25,129	—
„ by public utility societies	421	—
Private subsidy schemes (1919 Additional Powers Act)	2,324	—
Slum clearance schemes	7,661	2,670
1923 Act, by local authorities	3,959	96
„ by private enterprise	13,074	2,590
„ by public utility societies	80	—
1924 Act, by local authorities	24,216	11,900
„ by private enterprise	561	504
„ by public utility societies	46	81
Demonstration houses	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,552	—
	80,040	17,841

VIEWS OF OLD LONDON AT THE L.C.C.

The collection of prints and watercolours relating to London in the possession of the London County Council amounts to over 6,700 items, and has been acquired either by bequest, gift, or purchase.

It has been the Council's practice for some time to place on view in one of the rooms in the County Hall, Westminster Bridge, S.E.1, a number of its various prints and watercolours selected and arranged so as to form a coherent whole. At first the basis of arrangement was chronological, and exhibitions illustrative of—i: Tudor London; ii: Stuart London; iii: Eighteenth-century London; and iv: Early Nineteenth-century London were given.

It was afterwards decided to vary the basis of arrangement, and for a time the keynote will be topography, not chronology. The fifth of the new series (the first being that of Islington and Finsbury, the second that of St Pancras, the third that of North-east London, and the fourth that of Lambeth), illustrating the topography and history of the Metropolitan Borough of Southwark, is now on view One hundred and seventy-eight items are shown.

Among the places and buildings illustrated in the present exhibition may be mentioned: Southwark Cathedral and Close, Blackman Street, Winchester House, Horsemonger Lane Gaol, Bankside, King's Bench Prison, Gravel Lane, neighbourhood of the Mint, Surrey Chapel, the old town hall, Broadwall, High Street inns, old almshouses, the Marshalsea, buildings near the Obelisk, St. George's Church, Newington Butts, Old and New Kent Roads.

The room containing the drawings is included in the itinerary for visitors to the County Hall.

The general public are admitted to view certain portions of the hall (entrance in Belvedere Road) during the undermentioned hours:

Saturdays, from 10.30 a.m. to 12 noon, and from 1.30 p.m. to 3.30 p.m.

Easter Monday, Whit Monday, and August Bank Holiday, from 10.30 a.m. to 12 noon, and from 1.30 p.m. to 4.30 p.m., but arrangements can generally be made for persons interested to view the exhibition on any day during office hours. Application for this purpose should be made at Room No. 114 (the members' library). In cases in which parties of several persons desire to see the drawings, application should be made by letter.

THE WEEK'S BUILDING NEWS

Plans passed by the HERNE BAY U.D.C.: Alterations, Red Lantern Cinema, High Street, for Mr. C. H. R. Griggs; bungalow, Sunny Hill Road, for Mr. H. C. Box; telephone exchange, Victoria Park, for Office of Works; alterations, St. George's Nursing Home, Grand Drive, for Mr. Godfrey, of Surbiton; alterations, Norlands Hotel, Beacon Hill, for Mr. Fay; two houses, Selsea Avenue, for Mr. C. H. H. Kenworthy; shop and house, Grand Drive, for Mr. J. Huxtable; house, Fleetwood Avenue, for Messrs. Woolf Bros.

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The WOKING U.D.C. surveyor is to meet Lord Iveagh's agent to discuss the Council's town-planning scheme so far as it affects his lordship's estate.

*

The PRESTWICH U.D.C. surveyor has prepared revised plans for the layout of the Rectory Fields estate, and these are to be forwarded to the Ministry of Health for approval.

*

The WOKING U.D.C. has met Messrs. A. W. S. and K. M. B. Cross, the architects, and arranged the details of the new swimming bath. The size of the bath is to be 100 ft. by 40 ft., and the building is to be planned to facilitate its use for dancing, etc., in the winter. Provision is also made for sixteen slipper baths.

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The Middlesex Education Committee is seeking sanction for a loan of £10,000 for the enlargement of the elementary school at POTTER'S BAR.

*

Buildings are to be erected upon Kensington High Street, Young Street, and King Street, KENSINGTON, by Mr. B. George, on behalf of Messrs. J. Barker & Co., Ltd.

*

The OSSETT Corporation Gas Committee has considered plans prepared by the borough engineer for the erection of gas showrooms at Kingsway and asked him to prepare amended plans.

*

The GLASGOW Education Committee has decided upon the erection of three temporary schools at Springfield Road, Braehead Street and Elba Lane.

*

The GLASGOW Corporation has sold a site at Riddrie to the Episcopal Church authorities for the erection of a church.

*

The Ministry of Health has held an inquiry into the proposal of the BOURNEMOUTH Corporation for the erection of baths at the Northwood estate at a cost of £40,000.

*

The Berks Education Committee has decided to erect a practical instruction centre at WANTAGE.

The NORFOLK County Council has decided to purchase Little Plumstead Hall for the purpose of the provision of a mental deficiency institution, and a scheme for adaptation has been submitted to the Board of Control.

*

Plans passed by the MORECAMBE Corporation: Lay-out of land, Pemberton Drive, for Messrs. Wm. Gardner & Co.; alterations and additions, The Crescent, for the District Bank; bungalow, Sunnyfield Avenue, for Mr. A. E. Dent.

*

Plans passed by the BOURNEMOUTH Corporation: Additions, 15 Bath Road, for Bournemouth Spiritualist Society; seven shops and houses, Charminster Avenue, for Mr. S. G. Ward; solarium, Tollyard Royal Hotel, Westcliff, for Mr. A. Rosenberg; alterations and additions, 670 Christchurch Road, for Mr. T. Ball; church hall, Chatsworth Road, for the Deacons; block of cottages, Boscombe Grove Road, for Mr. C. Newton; two houses, Ensbury Park Road, for Mr. A. E. Bolton; four houses, Court Road, for Mr. F. J. Marks; two houses, Stamford Road, for Mr. C. Loveless; block of flats, Kimberley Road, for Mr. G. Pearce; flats, garages, etc., Boscombe Grove Road, for Messrs. Grounds and Newton; alterations and additions, Hastings House, Alumhurst Road, for Messrs. Eldridge Pope & Co.; two houses, Portland Road East, for Mr. H. Miles; five houses, Barrie Road, for Mr. F. Moorman; chapel, House of Bethany, St. Clement's Road, for the Sisters of Bethany; hall, Lincoln Avenue, for Mr. E. G. Stay; workshop, Brassey Road, for Messrs. Opperman and Jones; block of shops and flats, Holderhurst Road for Mr. A. Gould; showroom and flat, etc., Wimborne Road, for Messrs. Hovis, Ltd.

*

The PAIGNTON U.D.C. is to seek Parliamentary powers for a scheme for the construction of a dam across the river Swincombe for the purpose of impounding the water. Messrs. G. H. Hill and Sons of Manchester are being asked to act as consulting engineers in the matter.

*

The Board of Education has sanctioned the proposal of the OLDHAM Education Committee to secure a site in the Limeside district for the erection of an elementary school.

*

The Essex Education Committee has obtained sanction to borrow £36,000 for the erection of the fifteenth elementary school at DAGENHAM.

*

The Waterdale Dyeing and Finishing Co., Ltd., is to develop a housing estate at Mere Clough, PRESTWICH, and plans for sixteen houses have already been submitted to the U.D.C. for approval.

Plans passed by the COLCHESTER Corporation: House, Fitzwalter Road, for Mr. O. S. Locke; house, Manor Road, for Mr. D. McPherson Burton; two houses, Albert Road, for Mr. C. H. Green; two houses Audley Road, for Mr. W. H. S. Smith; workshops and store, St. John's Avenue, for Mr. D. McPherson Burton, for Eastern Automobiles, Ltd.; store, 72 High Street, for Mr. J. M. Bedwell; alterations, "Cups" Hotel, High Street, for Mr. S. W. Davies, for Trust Houses, Ltd.; petrol depot, Hythe Quay, for the Medway Oil and Storage Co., Ltd.; new offices, St. Helena Works, St. Helena Road, for Messrs. J. Moss and Son.

*

Plans passed by the STRETFORD U.D.C. New road, Trafford estate, for trustees; elementary school, Stretford Road, for Education Committee; extension of telephone exchange, Trafford Park Road, for Office of Works; additions and alterations, 40 Sandy Lane, for Mr. L. Stothard.

*

The Isle of Ely C.C. now proposes to reconstruct the Middle Fen Bridge at STUNTNEY.

*

The WISBECH Corporation is to proceed with improvements at Nene Quay at an estimated cost of £12,000, the scheme including the provision of a cantilevered footpath over the river.

*

The Isle of Ely C.C. is to reconstruct Mepal Bridge, MEPAL, at an estimated cost of £10,000.

*

The Coulsdon U.D.C. has asked the surveyor to prepare plans for the provision of destructor works on land at KENLEY, the cost being estimated at £29,000, of which £11,000 is in respect of buildings.

*

The governors of the Magnus Grammar School, NEWARK, are to add a new block of buildings to the school, and the Notts county architect is to act as the governor's architect for the scheme.

*

Plans for new streets on the Smailslynn estate have been lodged with the FARNHAM U.D.C. and referred to the surveyor for consideration.

*

The Woking U.D.C. has asked the surveyor to prepare a scheme for the erection of flats on a site at MAYBURY.

*

The Notts Education Committee has obtained sanction for a loan of £9,200 for the erection of an infants' school at HARWORTH-BIRCOTES.

*

The NEWCASTLE Corporation has obtained sanction to borrow £406,000 for the erection of houses.

Funds are being raised by the Duchess of Portland's Home for Crippled Children, at HARLOW WOOD, Notts, for the erection of an orthopædic hospital.

*

Plans passed by the Coulsdon U.D.C.: Twenty houses, Brent Road and Littleheath Road, SELSDON, for the Walton Heath Land Company.

*

The Ministry of Health has held an inquiry into the STRATFORD-ON-AVON Corporation town-planning scheme, the principal feature of which is the construction of a new road for the purpose of avoiding the steep gradient of Borden Hill.

*

A further step towards the completion of BELFAST Corporation's housing scheme at Seaview was taken yesterday when the Housing Committee decided to recommend the Council to accept the tender of Messrs. M'Auley, M'Ilroy & Co., Ltd., Windsor Road, Belfast, for the erection of 267 additional kitchen houses at Seaview.

*

The Brentford and Chiswick Education Committee is acquiring property adjoining the Rothschild Council School, High Street, BRENTFORD, in connection with proposals for reconstructing and extending the school.

*

Mr. Howard Hill is in negotiation with the South Shields Corporation regarding a scheme for the erection of forty-five garages on a site at the junction of Winston Street and Palatine Street, SOUTH SHIELDS.

The Ministry of Health has sanctioned the construction of a sea defence wall from Harrison Drive, WALLASEY, to Leasowe, at a cost of £27,000.

*

The Cape Town Corporation has decided to undertake another section of the native housing scheme at a cost of £133,000 on the LANGA township.

*

The SMETHWICK Corporation is seeking sanction to borrow £25,000 for further housing advances.

*

The HACKNEY B.C. is to borrow £20,000 for further housing advances.

*

The CHORLEY Corporation is seeking sanction to borrow £23,000 for the erection of houses on the Marlborough Street estate.

*

The Norfolk Education Committee is building a senior elementary school on the Norwich main road at HOLT.

*

The Norfolk Education Committee has decided to provide a new elementary school at HALVERGATE.

*

The governors of Thetford Boys' Grammar School have acquired a site of 2¼ acres with house and buildings adjoining the school for extensions, at THETFORD.

*

Sir Reginald Blomfield, 1 New Court, Temple, has in view a scheme for the construction of a new road to lead out of the northern side of Cheyne Walk, CHELSEA.

Owing to drainage problems the Sorbo Rubber Sponge Products, Ltd., CHERTSEY, is unable to proceed with its housing scheme under which 400 houses for employees are to be erected, and the matter is to be brought to the notice of the Ministry of Health.

*

Plans passed by the YORK Corporation: Temporary buildings, Layerthorpe, for Messrs. Shell-Mex, Ltd.; oil tanks and sheds, Foss Islands Road, for the Anglo-American Oil Co., Ltd.; four houses, Finsbury Avenue, for Mr. H. C. De Burgh; two houses, Bootham Crescent, for Messrs. H. Colman and Sons; additions, Coney Street, for the Yorkshire Herald Newspaper Company; additions, Edward VII Inn, Nunnery Lane, for Messrs. R. A. Wright, Ltd.; two houses and shops, Melrosegate, for Mr. T. Harrison; additions, 26 Stanley Street, for Mr. C. Simpson; additions, dining block, Cocoa Works, for Messrs. Rowntree & Co., Ltd.

*

The cost of the construction of CANBERRA, the new capital of Australia, has been £10,546,000 to date, according to an estimate supplied by the Parliamentary Committee inquiring into local housing conditions. The city is designed for a population of 100,000, whereas at present the population is only 8,000.

*

Work has now started on the late L.C.C. school in BAKER STREET, E., which is to be the East London Catholic Central School. It is hoped to complete the work so that the opening ceremony may be performed by the Cardinal Archbishop on October 31.

Golf Club House at Llancynn, South Wales. By Edward Rimmer.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 7½	1 2¼
A₁	Abergavenny	S. Wales & M.	1 7	1 2½
B	Abingdon ..	S. Counties	1 5½	1 1½
A	Accrington	N.W. Counties	1 7½	1 2¼
A₃	Addlestone	S. Counties	1 6	1 1½
A	Adlington ..	N.W. Counties	1 7½	1 2¼
A	Airdrie ..	Scotland	*1 7½	1 2¼
C₁	Aldeburgh	E. Counties	1 3	1 1½
A	Altrincham	N.W. Counties	1 7½	1 2¼
B₃	Appleby ..	N.W. Counties	1 4	1 0
A	Ashton-under-Lyne	N.W. Counties	1 7½	1 2¼
A₃	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 2¼
A	Barnsley ..	Yorkshire	1 7½	1 2¼
B₁	Barnstaple	S.W. Counties	1 5	1 0½
A	Barrow ..	N.W. Counties	1 7½	1 2¼
A	Barry ..	S. Wales & M.	1 7½	1 2¼
B₃	Basingstoke	S.W. Counties	1 4	1 0
B	Bath ..	S.W. Counties	1 5½	1 1½
A	Batley ..	Yorkshire	1 7½	1 2¼
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 2¼
A	Bishop Auckland	N.E. Coast	1 7½	1 2¼
A	Blackburn	N.W. Counties	1 7½	1 2¼
A	Blackpool	N.W. Counties	1 7½	1 2¼
A	Blyth ..	N.E. Coast	1 7½	1 2¼
B₃	Bognor ..	S. Counties	1 4	1 0
A	Bolton ..	N.W. Counties	1 7½	1 2¼
A₂	Boston ..	Mid. Counties	1 6	1 1½
B₁	Bournemouth	S. Counties	1 5	1 0½
B₂	Bovey Tracey	S.W. Counties	1 4½	1 0½
A	Bradford ..	Yorkshire	1 7½	1 2¼
A₂	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 7½	1 2¼
B₂	Bridgwater	S.W. Counties	1 4½	1 0½
A₁	Bridlington	Yorkshire	1 7	1 2½
A	Brighouse ..	Yorkshire	1 7½	1 2¼
B₁	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 7½	1 2¼
B₃	Brixham ..	S.W. Counties	1 4	1 0
A₂	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 3½	11½
A	Burnley ..	N.W. Counties	1 7½	1 2¼
A	Burslem ..	Mid. Counties	1 7½	1 2¼
A₂	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 7½	1 2¼
A₁*	Buxton ..	N.W. Counties	1 7	1 2½
B	CAMBRIDGE	E. Counties	1 5½	1 1½
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 7½	1 2¼
A	Carlisle ..	N.W. Counties	1 7½	1 2¼
B	Carmarthen	S. Wales & M.	1 5½	1 1½
B₂	Carnarvon	N.W. Counties	1 4½	1 0½
A₁	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford	Yorkshire	1 7½	1 2¼
B₁	Chatham ..	S. Counties	1 5	1 0½
B₁	Chelmsford	E. Counties	1 5	1 0½
A₃	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W. Counties	1 7½	1 2¼
A	Chesterfield	Mid. Counties	*1 7½	1 2¼
B₃	Chichester	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7½	1 2¼
B₂	Cirencester	S. Counties	1 4½	1 0½
A	Clitheroe ..	N.W. Counties	1 7½	1 2¼
A	Clydebank	Scotland	1 7½	1 2¼
A	Coalville ..	Mid. Counties	1 7½	1 2¼
B	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 7½	1 2¼
A₃	Colwyn Bay	N.W. Counties	1 6	1 1½
A	Consett ..	N.E. Coast	1 7½	1 2¼
A₃	Conway ..	N.W. Counties	1 6	1 1½
A	Coventry ..	Mid. Counties	1 7½	1 2¼
A₃	Crewe ..	N.W. Counties	1 6	1 1½
A₃	Cumberland	.....	1 6	1 1½
A	DARLINGTON	N.E. Coast	1 7½	1 2¼
A	Darwen ..	N.W. Counties	1 7½	1 2¼
B₂	Deal ..	S. Counties	1 4½	1 0½
A₃	Denbigh ..	N.W. Counties	1 6	1 1½
A	Derby ..	Mid. Counties	1 7½	1 2¼
A	Dewsbury ..	Yorkshire	1 7½	1 2¼
B	Didcot ..	S. Counties	1 5½	1 1¼
A	Doncaster ..	Yorkshire	1 7½	1 2¼
C₁	Dorchester	S.W. Counties	1 3	11½
A₃	Driffield ..	Yorks	1 6	1 1½
A₃	Droitwich	Mid. Counties	1 6	1 1½
A₁	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7½	1 2¼
A	Durham ..	N.E. Coast	1 7½	1 2¼
B₁	EASTBOURNE	S. Counties	1 5	1 0½
A	Ebbw Vale	S. Wales & M.	1 7½	1 2¼
A	Edinburgh	Scotland	1 7½	1 2¼
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 7½	1 2¼
B	Exeter ..	S.W. Counties	*1 5½	1 1½
B₁	Exmouth ..	S.W. Counties	1 4½	1 0½
B	FELIXSTOWE	E. Counties	1 5½	1 1½
A₃	Filey ..	Yorks	1 6	1 1½
A	Fleetwood ..	N.W. Counties	1 7½	1 2¼
B₂	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W. Counties	1 7½	1 2¼
B₃	Frome ..	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7½	1 2¼
B₁	Gillingham	S. Counties	1 5	1 0½
A₃	Gloucester	S.W. Counties	1 6	1 1½
A₂	Goole ..	Yorkshire	1 6½	1 2
B	Gosport ..	S. Counties	1 5½	1 1½
A₃	Grantham	Mid. Counties	1 6	1 1½
A₁	Gravesend	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 7½	1 2¼
A	Grimsby ..	Yorkshire	1 7½	1 2¼
B₁	Guildford ..	S. Counties	1 5	1 0½
A	HALIFAX ..	Yorkshire	1 7½	1 2¼
A	Hanley ..	Mid. Counties	1 7½	1 2¼
A	Harrogate	Yorkshire	1 7½	1 2¼
A	Hartlepools	N.E. Coast	1 7½	1 2¼
B₂	Harwich ..	E. Counties	1 4½	1 0½
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S. W. Counties	1 5½	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W. Counties	1 7	1 2½
A	Howden ..	N.E. Coast	1 7½	1 2¼
A	Huddersfield	Yorkshire	1 7½	1 2¼
A	Hull ..	Yorkshire	1 7½	1 2¼

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 2¼
A	Immingham	Mid. Counties	1 7½	1 2¼
B	Ipswich ..	E. Counties	1 5½	1 1½
C₁	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 7½	1 2¼
A	KEIGHLEY	Yorkshire	1 7½	1 2¼
B₁	Kendal ..	N.W. Counties	1 5	1 0½
B₁	Keswick ..	N.W. Counties	1 5	1 0½
A₃	Kettering ..	Mid. Counties	1 6	1 1½
A₂	Kiddermin-ster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 4½	1 0½
A	LANCASTER	N.W. Counties	1 7½	1 2¼
A₂	Leamington	Mid. Counties	1 6½	1 2
A	Leeds ..	Yorkshire	1 7½	1 2¼
A	Leek ..	Mid. Counties	1 7½	1 2¼
A	Leicester ..	Mid. Counties	1 7½	1 2¼
A	Leigh ..	N.W. Counties	1 7½	1 2¼
B₃	Lewes ..	S. Counties	1 4	1 0
A₃	Lichfield ..	Mid. Counties	1 6	1 1½
A	Lincoln ..	Mid. Counties	1 7½	1 2¼
A	Liverpool ..	N.W. Counties	*1 10	1 4½
A₃	Llandudno	N.W. Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 7½	1 2¼
	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 2¼
A	Lough-borough	Mid. Counties	1 7½	1 2¼
A₃	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7½	1 2¼
A₁	MACCLES-FIELD	N.W. Counties	1 7	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6	1 1½
A	Manchester	N.W. Counties	1 7½	1 2¼
A	Mansfield	Mid. Counties	1 7½	1 2¼
B₂	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6	1 1½
A	Merthyr ..	S. Wales & M.	1 7½	1 2¼
A	Middles-brough	N.E. Coast	1 7½	1 2¼
A₃	Middlewich	N.W. Counties	1 6	1 1½
B₂	Minehead ..	S.W. Counties	1 4½	1 0½
A‡	Monmouth	S. Wales & M.	1 7½	1 2¼
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7	1 2½
A₃	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7½	1 2¼
A	Nelson ..	N.W. Counties	1 7½	1 2¼
A	Newcastle ..	N.E. Coast	1 7½	1 2¼
A	Newport ..	S. Wales & M.	1 7½	1 2¼
A	Normanton	Yorkshire	1 7½	1 2¼
A₁	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 7½	1 2¼
A	North Shields	N.E. Coast	1 7½	1 2¼
A₃	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7½	1 2¼
A	Nuneaton ..	Mid. Counties	1 7½	1 2¼
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 7½	1 2¼
A₃	Oswestry ..	Mid. Counties	1 6	1 1½
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 7½	1 2¼
C	Pembroke	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	*1 7½	1 2¼
A₃	Peterborough	Mid. Counties	1 6	1 1½
A	Plymouth	S.W. Counties	*1 7½	1 2¼
A	Pontefract	Yorkshire	1 7½	1 2¼
A	Pontypridd	S. Wales & M.	1 7½	1 2¼
B	Portsmouth	S. Counties	1 5½	1 1½
A	Preston ..	N.W. Counties	1 7½	1 2¼
A	QUEENSFERRY	N.W. Counties	1 7½	1 2
A₃	READING	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₃	Retford ..	Mid. Counties	1 6	1 1½
A	Rhondda Valley	S. Wales & M.	1 7½	1 2¼
A₃	Ripon ..	Yorkshire	1 6	1 1½
A	Rochdale ..	N.W. Counties	1 7½	1 2¼
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7	1 2½
A₂	Rugby ..	Mid. Counties	1 6½	1 2
A₃	Rugeley ..	Mid. Counties	1 6	1 1½
A	Runcorn ..	N.W. Counties	1 7½	1 2¼
A₃	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7½	1 2¼
B₃	Salisbury ..	S.W. Counties	1 4	1 0
A₁	Scarborough	Yorkshire	1 7	1 2½
A	Scunthorpe	Mid. Counties	1 7½	1 2¼
A	Sheffield ..	Yorkshire	1 7½	1 2¼
A	Shipley ..	Yorkshire	1 7½	1 2¼
A₃	Shrewsbury	Mid. Counties	1 6	1 1½
A₂	Skipton ..	Yorkshire	1 6½	1 2
A₃	Slough ..	S. Counties	1 6	1 1½
A₂	Solihull ..	Mid. Counties	1 6½	1 2
A₃	South'pton	S. Counties	1 6	1 1½
A₂	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ..	N.W. Counties	1 7½	1 2¼
A	S. Shields ..	N.E. Coast	1 7½	1 2¼
A₂	Stafford ..	Mid. Counties	1 6½	1 2
A	Stockport ..	N.W. Counties	1 7½	1 2¼
A	Stockton-on-Tees	N.E. Coast	1 7½	1 2¼
A	Stoke-on-Trent	Mid. Counties	1 7½	1 2¼
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 7½	1 2¼
A	Swadlincote	Mid. Counties	1 7½	1 2¼
A	Swansea ..	S. Wales & M.	1 7½	1 2¼
B	Swindon ..	S.W. Counties	1 5½	1 1½
A₁	TAMWORTH	N.W. Counties	1 7	1 2½
B₁	Taunton ..	S.W. Counties	1 5	1 0½
A	Teeside Dist.	N.E. Counties	1 7½	1 2¼
B	Teignmouth	S.W. Coast	1 5½	1 1½
A	Todmorden	Yorkshire	1 7½	1 2¼
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3½	11½
B₁	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall ..	Mid. Counties	1 7½	1 2¼
A	Tyne District	N.E. Coast	1 7½	1 2¼
A	WAKEFIELD	Yorkshire	1 7½	1 2¼
A₁	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7½	1 2¼
A₂	Warwick ..	Mid. Counties	1 6½	1 2
A	Welling-borough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 7½	1 2¼
B	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A₂	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W. Counties	1 7½	1 2¼
A	Wigan ..	N.W. Counties	1 7½	1 2¼
B₂	Winchester	S. Counties	1 4½	1 0½
A₃	Windsor ..	S. Counties	1 6	1 1½
A	Wolver-hampton	Mid. Counties	1 7½	1 2¼
A₃	Worcester	Mid. Counties	1 6	1 1½
A₃	Worksop ..	Yorkshire	1 6	1 1½
A₁	Wrexham ..	N.W. Counties	1 7	1 2¼
B	Wycombe	S. Counties	1 5½	1 1½
B₁	YARMOUTH	E. Counties	1 5	1 0½
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

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

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

BRICKLAYER

BRICKLAYER, 1s. 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 sail, white, and ivory stretchers, per M.	24 10 0
DO. *headers, per M.*	24 0 0
Colours, extra, per M.	5 10 0
Seconds, less, per M.	1 0 0
Cement and sand, see "Excavator" above.	
Lime, grey stone, per ton	2 17 0
Mixed lime mortar, per yd.	1 6 0
Damp course, in rolls of 4½ in., per roll	0 2 6
DO. *9 in. per roll*	0 4 9
DO. *14 in. per roll*	0 7 6
DO. *18 in. per roll*	0 9 6

BRICKWORK in stone lime mortar, Flettons or equal, per rod . . £33 0 0
DO. in cement do., per rod . . 36 0 0
DO. in stocks, add 25 per cent. per rod.
DO. in blues, add 100 per cent. per rod.
DO. circular on plan, add 12½ per cent. per rod.
DO. in backing to masonry, add 12½ per cent. per rod.
DO. in raising on old walls, etc., add 12½ per cent. per rod.
DO. in underpinning, add 20 per cent. per rod.
HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup. . . £0 1 0
BEDDING plates in cement mortar, per ft. run 0 0 3
BEDDING window or door frames, per ft. run 0 0 3
LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run 0 0 2
CUTTING do. in old walls in cement, per ft. run 0 0 4
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup. 0 0 7
TERRA-COTTA 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.*

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

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HOISTING and setting stone, per ft. cube £0 2 2
DO. for every 10 ft. above 30 ft. add 15 per cent.
PLAIN face Portland basis, per ft. sup. £0 2 8
DO. circular, per ft. sup. . . . 0 4 0
SUNK FACE, per ft. sup. 0 3 9
DO. circular, per ft. sup. . . . 0 4 10
JOINTS, arch, per ft. sup. . . . 0 2 6
DO. sunk, per ft. sup. 0 2 7
DO. DO. circular, per ft. sup. . . 0 4 6
CIRCULAR-CIRCULAR work, per ft. sup. 1 2 0
PLAIN MOULDING, straight, per inch of girth, per ft. run . . . 0 1 1
Do. circular, do., per ft. run . . 0 1 4
HALF SAWING, per ft. sup. . . . £0 1 0
Add to the foregoing prices, if in York stone, 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.
SETTING 1 in. slate shelving in cement, per ft. sup. £0 0 6
RUBBED round nosing to do., per ft. lin. 0 0 6
YORK STEPS, rubbed T. & R., ft. cub. fixed 1 9 0
YORK SILLS, W. & T., ft. cub. fixed . 1 13 0
ARTIFICIAL stone paving, 2 in. thick, per ft. sup.. . . . . 0 1 6
DO. 2½ in. thick, per ft. sup. . . 0 1 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 3 9
Grey-green do., per ton			7 3 9
Green peggies, 12 in. to 8 in. long, per ton			6 3 9

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

Clips, lead, per lb.	£0 0 6
Clips, copper, per lb.	0 2 0
Nails, compo, per cwt.	1 6 0
Nails, copper, per lb.	0 1 10
Cement and sand, see "Excavator," etc., above.	
Hand-made tiles, per M.	£5 18 0
Machine-made tiles, per M.	5 8 0
Westmorland slates, large, per ton	9 0 0
DO. *Peggies, per ton*	7 5 0

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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, ⅞ 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, 1⅛ 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 1⅛ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1⅛ 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. ⅝ in., per ft.	0	2	3
DO. 1 in., per ft.	0	3	0
DO. 1¼ in., per ft.	0	4	0
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
WIPED soldered joint, ½ in., each	0	2	6
DO. ⅝ 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. ⅝ 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.*

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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. ⅛ 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, ⅛ in., per ft.	0	0	6½
DO. ¼ *in. per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	15	0

*

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

Small sizes slightly less (under 3 ft. sup.).
Patent glazing in rough plate, normal span 1*s.* 6*d.* to 2*s.* per ft.
LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up | £0 | 3 | 0

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

PAINTER AND PAPERHANGER

PAINTER, 1*s.* 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	8	6
Knotting, per gall.	0	18	0
Distemper, washable, in ordinary colours, per cwt., and up	2	5	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4½
Single gold leaf (transferable), per book	0	2	0
Varnish, copal, per gall. and up	0	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

*

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

SUNDRIES

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

FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds per ft. sup. from 3d. to 0 0 6

Plaster board, per yd. sup. from 0 1 7

PLASTER BOARD, fixed as last, per yd. sup. from 0 2 8

Asbestos sheeting, ⅛ in., grey flat, per yd. sup. 0 2 3
DO., *corrugated, per yd. sup.* 0 3 3

ASBESTOS SHEETING, fixed as last, flat, per yd. sup. 0 4 0
DO., corrugated, per yd. sup. 0 5 0

ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey 2 15 0
DO., red 3 0 0

Asbestos cement slates or tiles, ⅛ in. punched per M. grey 16 0 0
DO., *red* 18 0 0

ASBESTOS COMPOSITION FLOORING : Laid in two coats, average ⅜ in. thick, in plain colour, per yd. sup. 0 7 0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd. 0 6 6

Metal casements for wood frames, domestic sizes, per ft. sup. 0 1 6
DO., *in metal frames, per ft. sup.* 0 1 9

HANGING only metal casement in, but not including wood frames, each 0 2 10

BUILDING in metal casement frames, per ft. sup. 0 0 7

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

PLYWOOD, per ft. sup.

Thickness	⅛ in.			¼ in.			⅜ in.			½ in.		
Qualities ..	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	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	5	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5	4	—	5½	5	—	6	—	—	—	—	—

1 1
1 4

l span

3 0
per ft.

GER

1s. 4d.
hour

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

5 0
3 6
0 4½

2 0
12 6
2 0
16 0
17 6
15 0

0 3
0 6

0 9
0 7

0 10
0 9
1 2½

3 8
5 6
1 2
0 6

1 7
1 10
2 4
9 0

3 0

1 2

0 11

0 2½

0 6

1 7

2 8

2 3
3 3

4 0
5 0

15 0
0 0

0 0
0 0

7 0

6 6

1 6
1 9

2 10

0 7

½in.

A.	A.	B.
d.	d.	d.
2½	7	6
6	7	6
0½	10	—
6	—	—
6	—	—