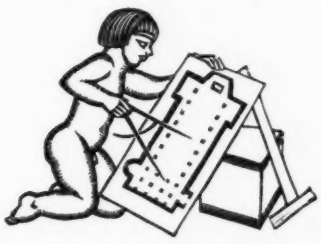
THE ARCHITECTS' JOURNAL



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CHRISTIAN BARMAN, *Editor*

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

WEDNESDAY, October 12, 1927. NUMBER 1708: VOLUME 66

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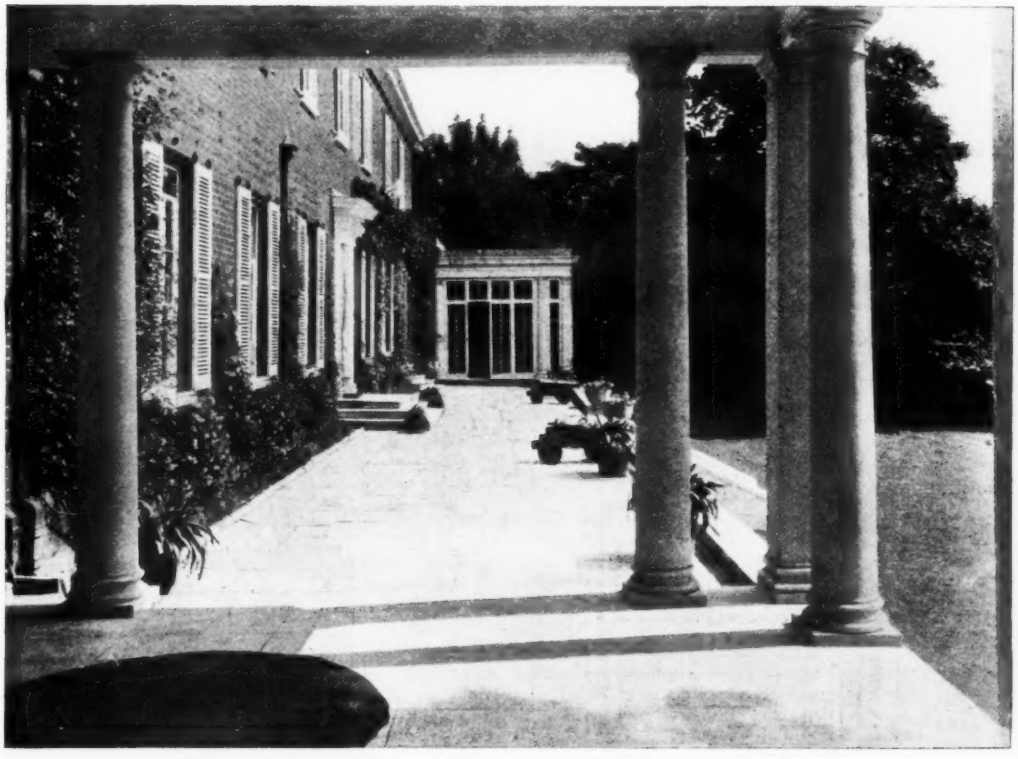


[A working detail of this loggia appears on the following page]

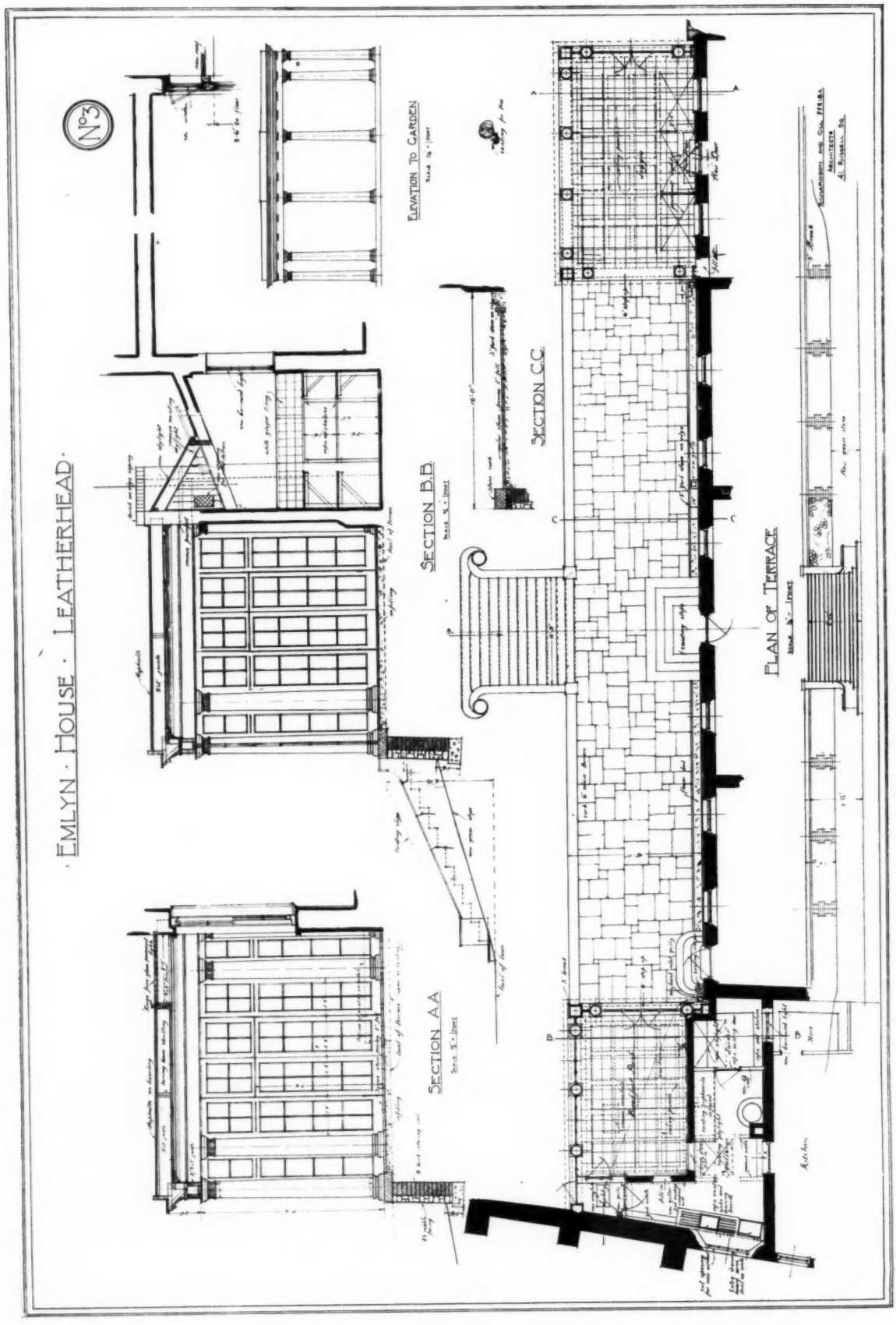
THE LOGGIA AT EMLYN HOUSE, LEATHERHEAD

[BY RICHARDSON AND GILL]

THE WEEK'S DETAIL

[BY RICHARDSON AND GILL]

The drawing on the next page shows the alterations which have been carried out in the remodelling of Emlyn House, part of which consisted of the addition of a loggia. The brickwork is of Bracknell bricks, and hand-made sand-faced tiles were also used. Concrete was chiefly used for the construction of the loggia.



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

THE ARCHITECTS' JOURNAL

Wednesday, October 12, 1927

ULTIMATE ECONOMICS

The Birmingham Civic Society, whose activities are chronicled in these pages from time to time, has just sent us its report for the year, or rather for the fifteen months ending September, 1927. Its achievements during that period are of a positive and a negative character. That is to say, its work has been productive of new beauty, and it has prevented the demolition or destruction of existing beauty. The chief example of this positive work was carried out at Aston Hall, on the gardens of which the Society has been at work for some time, and the chief example of the negative work is to be seen in the Society's successful negotiations for the preservation of the Aston Almshouses. The negotiations for the preservation of Stratford House, too, begun last year, show indications of being brought to a successful conclusion. The Society's biggest undertaking, its suggested scheme for a new roadway over the railway and station, is still under consideration by the Public Works Committee.

Those who have followed the Society's activities will remember that it took a prominent part in, if it did not even inaugurate, the agitation on behalf of a better-designed telephone kiosk. The Society itself submitted to the Post Office authorities a very excellent design in cast concrete. The one, however, which was eventually adopted by the G.P.O. was the work of Sir Gilbert Scott. But this design, it would appear, is too costly for general use, so that an inferior pattern is often to be seen in juxtaposition to the new pattern. The Society has taken this matter up with the G.P.O., with the result that uniformity is to be secured by the removal of the old type and the substitution of the new where the two appear side by side. By the exercise of such vigilance and such attention to detail a civic society is able to do much towards the preservation of the amenities of the city.

We see that among the suggestions that the Society has made is one for the formation of a civic museum; a suggestion which has been regarded favourably by the Art Gallery Committee. This suggestion is particularly interesting in view of the paper which Sir Josiah Stamp has recently read to the Society, the first part of which is published elsewhere in these columns this week. The reading of this paper is, in our opinion, a matter of first-rate importance, for here we have one of the foremost economists of the day giving public recognition to the fact that art, beauty, and archæology can take their place in the world of economics; can figure on a business man's balance-sheet. The difficulty, of course, is to place a figure on these kinds of assets; but, after all, are they more intangible than the item goodwill, which figures prominently—all too prominently very often—on so many balance-sheets vouched for by the most respectable chartered accountants?

In the first part of his paper Sir Josiah is mainly concerned with the value of time's deposits in resuscitating the past, and this he thinks, of course, quite rightly, is a commercial asset to the present. This being so, the preservation of old buildings, old streets, even where they directly impede works of modern improvement, is not necessarily a burden to the community, but may rather be a source of wealth. How, after all, in terms of cash can we assess man's highest endeavour, which is his work for the future, for a more orderly future than the present here and now; a future in which there is less pain and less suffering, less wasted and thwarted effort? But that endeavour is surely helped by a vivid knowledge of the past, a knowledge which actual contact with the works of man can quicken. Economics are not, after all, an end in themselves, and if the best of balance-sheets do not in some way tend to increase the sum total of human happiness and to diminish the sum total of human suffering, of what use are they? The ultimate balance-sheet of all has surely happiness on the credit side and suffering on the debit side. It is against this that economists must test their efforts. And it is in this balance-sheet that the arts and the amenities of life will conspicuously figure. Here we are considering art and archæology as intangible assets. But often enough they are very tangible, but even when this happens so-called economists are often blind to the fact. If the old buildings of Stratford-on-Avon were swept away to make room for any modern improvement scheme it is doubtful if the national wealth would be increased.

The efforts which are being made today to preserve the countryside are efforts of which Sir Josiah, as an economist, wholeheartedly approves. Health is recognized as a national commercial asset, and an unspoilt countryside makes for health. But it is in connection with such matters as this that the clash arises between the direct gain to the individual and the indirect gain, or less direct gain, to the community.

We hope that among Sir Josiah's audience were many big business men, for until more of them acquire his breadth of vision there will be but slow improvement in that ultimate balance-sheet of happiness and suffering.

NEWS AND TOPICS

PRAGUE, VIENNA, AND SALZBURG—"DON'T . . ."—"THE HOME" EXHIBITION IN STUTTGART—ICE CONCRETE.

SOME thirty members of the Architectural Association have just returned from an excursion to Prague, Vienna, and Salzburg, where they have been basking not only in perfect summer weather, but in the warmest and kindliest hospitality of the Czechs and Austrians. They all sing loud the praises of the magnificence, beauty, and charm of the countries and towns visited, and of the cordiality of the reception they received, and particularly lay stress upon the painstaking diligence displayed by those architects of Prague and Vienna who, neglecting their own important affairs for days at a time, attached themselves to the party as guides, philosophers, and friends. To steer a large crowd safely through a town where everything is new and strange to them calls for the tact, observation, concentration, and astuteness of a sheep dog; add to this the capacity to fire off a name or a date, an explanation or a translation without a moment's hesitation, and it will readily be seen how much the success of the visit depended upon the genial and untiring efforts of the hosts. The order of the visit was as well chosen as a well-balanced play or an artistically ordered dinner. Prague, a city of romance and high endeavour, whetted the appetite for Vienna, the *pièce de résistance*; while Salzburg, a sheer delight both intrinsically and in setting, was reserved as a delicious *bonne bouche* to round off the whole.

* * *

Prague is a striking example of striking contrasts between old and new. Walking down the Václavské Nám`stí, a magnificent street, 200 ft. broad and nearly half a mile long, and crossing the Na Příkopé, once a moat, and now the principal shopping street, one plunges headlong into the ramifications of the old town, a maze of medieval ways, narrow, tortuous alleys, courts, and arcades, clustered round the old town hall. Then, by way of the fourteenth-century Charles Bridge, adorned with some of the earliest Baroque statuary in Christendom, to the Hradčany, resting majestically upon the hill top. This is the culmination of old Prague, and whether seen in silhouette against the flaming sky of sunset or in the cool light of dawn, is a thrilling experience. Prague is not content to sit still amidst these glories of past centuries, but with great energy is preparing schemes for her advancement in accordance with her position, and the party were privileged to see, besides many new buildings, a town-planning scheme of very great importance in the development of the city.

* * *

The name Vienna conjures up visions of wonderful coffee, orchestras playing the "Blue Danube" waltzes, vivacity, gaiety, Fischer von Erlach, Schönbrunn, and the Ringstrasse, and it is all there. But there is much more. There is a serious side to the Viennese character which is displaying itself in social works of a high order. The architects of Vienna are producing, in accordance with the housing policy of the municipality, blocks of flats, baths, schools, and hospitals which are models of thoroughness, completeness, and efficiency. There is a breadth and spaciousness in the planning which is very noticeable, while the manner in which awkward sites and varying levels have been treated produces many points of great charm. There are also to be seen many ingenious and intriguing essays in decoration and furniture design, and one is left with the strong impression that Vienna is producing work that will have great influence upon the architecture of Europe.

* * *

Of Salzburg, what can be said? If it were not so delightfully naive it might be accused of being theatrical. To walk through the town at night is to receive the impression of wandering about an immense stage-setting cunningly lit with all the resources of modern German stage effects. By day the scale is naturally reduced, but the delight remains; such a wealth of joyous Baroque *en gros en détail*—churches, palaces, fountains, doorways, stonework—can surely not be seen anywhere else in such a small compass. To crown all, there is the fortress of Hohen-Salzburg enthroned, as Baedeker picturesquely puts it, upon its rock in much the same manner and producing much the same silhouette as Edinburgh Castle. And having climbed to 1,780 ft., one is rewarded with a wondrous view and a restaurant that produces Wiener Schnitzel and ice-cold lager beer. What better termination to an entrancing fortnight in Central Europe?

* * *

The Archdeacon of St. Albans, the Ven. the Hon. K. F. Gibbs, has given some useful hints upon the care of churches before the Church Conference at Ipswich; and who should know more about the care of churches than an official of St. Albans Abbey? Naturally, considering the circumstances, his advice takes the form of a series of protests against the introduction of disharmonious novelties.

> Don't put white marble monuments into an English churchyard.
>
> Don't disfigure the walls with cheap memorial tablets inscribed with ugly lettering. If you must do these bad things, don't assert that you are doing them to the glory of God.
>
> Don't destroy ancient work, or knock holes in ancient walls.
>
> Don't assume that an angular saint in an impossible robe is more beautiful than the sky and the sunshine and the leaves of the trees.
>
> Don't let ivy grow on the church.
>
> Don't shut out the light of day with too much or too heavy stained glass.

That the Archdeacon is obviously right may be demonstrated at a glance in many delightful old churches which have been spoilt by these things. Unfortunately, it is not only the monumental mason and the stained glass merchant who perpetrate mistakes of this sort. Architects feel helpless to protest when influential clients demand white marble and fancy printing, and supply the text of inscriptions in mongrel Latin or Baboo English. Perhaps the Board of Architectural Education might find means to place some information on the subject before the younger generation of architects. But even education will fail to meet the case when the dignified and highly-educated client wishes his dear departed to be described as "very unique" or "most priceless." The architect can hardly inform a bishop, for example, that he is employing the

diction normally adopted by a charlady in her sentimental moods; but such incidents do happen.

* * *

In spite of the Press campaign, partly inspired by the Ministry of Health, and the optimistic statements made by Sir Kingsley Wood as to the fall in the cost of building working-class houses, following the reduction in the subsidy, few architects expect any considerable reduction in prices, at any rate for the next six months. The Ministry of Health figures only concern contracts let by local authorities. As the officials for a year past have been refusing to approve high tenders, and have been encouraging the building of an extremely small type of house, naturally the average price has fallen. But apart from official statistics, the cost of building houses to sell at from £800 upwards shows little signs of an appreciable decrease.

* * *

The visit of the American Legion to London coincides with the completion of a building scheme of special interest to housing reformers and to architects. Early this year the British Legion decided to build houses for ex-service men in different parts of the country, and called in Mr. Lloyd Thomas and Major Douglas Wood, formerly Housing Commissioners at the Ministry of Health, as joint architects to the scheme. The first houses at Bromyard, Worcester, are now practically completed, and will be officially opened about the end of the month. Building is also in progress at Felixstowe on a site given by Major Prettyman, and at Knutsford. Houses will shortly be begun at Kettering on a site given by the Duke of Buccleuch, while those for the London area are to be built at Chingford. A special feature of the houses is a very large living-room, with windows back and front so as to secure adequate ventilation and sunlight, which mean so much to ex-service men who may still be suffering from war wounds or the effects of gas.

* * *

Eighteenth-century woodwork worth preserving may not greatly abound in British streets. It is clear, however, that Mr. S. Tugwell, in expressing his solicitude for surviving examples, implies not only what the weather has spared us of "external doorways of refinement and beauty," but also such interior objects as chimneypieces and staircases. As he is no doubt aware, his suggestion that photographs and measured drawings should be made of the examples of fine woodwork as yet undestroyed by time, or fire, or flood, has been to some extent anticipated. Many measured drawings of such work have appeared, for instance, in this journal, and in *The Architectural Review*. Nor must I omit to give the London County Council due credit for having done more, probably, than any other municipal body to forestall Mr. Tugwell's excellent advice. I should suppose that the L.C.C. has an unrivalled collection of photographs of the sort; while many architectural associations must have amassed embarrassing numbers of every kind of graphic representation of architectural features. It is merely just to commend the zeal of those who rescue from the hands of the housebreaker dignified specimens of woodwork, wood being, as someone has said before me, a noble material on which to lavish craftsmanship. Some firms of housebreakers have often displayed quite expert knowledge in such matters, and are usually alert to preserve valuable specimens. I imagine that South Kensington, the Guildhall Museum, the L.C.C. Museum at Shoreditch, and many a provincial museum, owe much to the zeal and intelligence of the housebreakers, and still more to the scholarly discrimination of the architects engaged to design substitute buildings, in which it is a joy to incorporate valuable old work when opportunity is favourable.

* *

This photograph from a little book is a particularly interesting one, for it represents one of those old buildings which stood close to the northern boundary of old Whitehall Palace, occupying ground next to the palace stairs or landing stage from the river. It was, indeed, the Royal Almonry where were distributed the sovereign's charities, and is not, of course, to be confounded with that other almonry, or ambry, as it was sometimes, but incorrectly, termed, which stood just off Tothill Street, at the east end of the Great Sanctuary, and where the alms collected in the Abbey were distributed. The building here shown was used for the purpose mentioned till the year 1820, when its activities were removed to an old house to the west of the spot, where the United Services Museum is now. As can be seen, the house had obviously been erected on ancient foundations, the lower portion being constructed in stone, and including an archway which had no doubt in earlier times been used as a water-gate. Another old feature was a mullioned window; and it is, I think, likely that once this had been what in the well-known plan of Whitehall Palace, dated 1680, is called "the small beer buttery." It was during the construction of the Embankment, 1862-70, that much of the structure was demolished, the whole being cleared away some fifteen years later. The gardens in front of Whitehall Court approximately stand on the site of what was within living memory an interesting and picturesque relic of the past.

The old Royal Almonry.

* * *

A week ago I was invited to an exhibition of colour work where I saw the entries for a competition promoted by the Silicate Paint Company (who may be better known to architects as "the Duresco people"). Here some very bright panels had been painted by students of various schools. It was raining heavily, but blue skies, and

humming birds, and perpetual sunshine were here, and I wondered why men and women did not go forth and paint the whole of London with Duresco. It could be done, you know. Egyptians, Greeks, Goths, Arabs, and medieval Christians—none of them, when in their right senses, ever thought of doing without paint, wrote John Ruskin. And I remembered it as I stepped out once more under the London rain and walked down depressing Cannon Street.

* * *

The first meeting of the winter session of lectures of the Design and Industries Association was held on Thursday evening, in the Hall of the Art Workers' Guild, under the chairmanship of Sir Lawrence Weaver, the President of the Association. "British Craftsmanship at Leipzig" was the subject for the evening discussion, and Mr. H. H. Peach, Miss Minnie McLeish and Mr. Trethowan, who had been out to Leipzig to set out the British Section of the Arts and Crafts Exhibition, which has been held during the last six months in the Grassi Museum at Leipzig, spoke of their experiences in the collection and display of English craft and trade work, and of their opinions as to the place occupied by England in Modern European design. Mr. Peach showed slides of the British Exhibit and of the exhibits of the other European countries. Mr. Peach was inclined to be pessimistic about our own work, but from the slides the general impression given was that the English work, though not strikingly modern and certainly making no marked break with tradition, compared very favourably, from the point of view of sane design and craftsmanship, with the Continental work.

* * *

The slides were, of course, unable to show colour, and it was in this respect that the other exhibits had far outstripped the British, which looked dull in comparison to the more daring and original colour experiments of the other countries. In speaking of the European countries, Mr. Peach particularly mentioned Russia. We are inclined to regard Russia as cut off from Europe, but strangely enough their exhibit reflected all the tendencies of the modern movement. Any one who had visited the Exhibition, said Mr. Peach, must have been struck by the high place given to the arts and crafts in Europe. In England the politician and professional classes have little or no appreciation of craftsmanship and modern design; but on the Continent, particularly in Germany and the Scandinavian countries, the designer and good design are regarded as national assets, and are therefore specially encouraged by the State.

* * *

Sir Lawrence Weaver, in summing up, said that it was impossible to make any fair comparison between the management of exhibitions in England and in Germany, for abroad exhibitions were subsidized and it was possible to sacrifice profit to artistic considerations. In England, exhibitions had to pay their way and show a profit for the organizers in the end. The organizers of the British section had accomplished a remarkable piece of work with the time and means which had been at their disposal. It was entirely due to their efforts that Britain had been so creditably represented at this important International Exhibition.

An exhibition of homes, to which the Ideal Home Exhibition is the nearest likeness in England, is being held in Stuttgart. Here are shown, besides houses, all the many things which, being brought together within four walls and a roof, give one the sense of home. The exhibition is divided into three. In the Trade Hall are the furniture, wall-papers, floor coverings, etc. On one of the hills which surround the town is erected a colony of thirty-three houses, and then, as a sort of appendix to the main exhibition, there is an international exhibition of plans, photographs, and models of erected buildings, both domestic, civic, and commercial. In the colony, architects foreign to Germany have been admitted for the work, and though modes of expression differ, the effort to simplify the structure is common to all. The plain wall is interrupted only by windows; the roof is always flat. Most of the furniture is built in, and the space left for movable furniture is very small.

* * *

I looked into Le Corbusier's "one-family" house. On entering, I saw before me the staircase, and on the right the open heating chamber. Whether this is a particularly charming first impression, Monsieur Le Corbusier could say. Up strikingly narrow and steep stairs I reached a little vestibule. Before me was the kitchen, with the maid's room beyond, to the right a large room which, in one part, rises to the height of two floors, and is lighted by an enormous window. There is a fixed bookcase of reinforced concrete, while in that part of the room nearest the kitchen, only one floor in height, is a fixed concrete cupboard. We have here drawing-room and dining-room in one. Above the dining-room, and overlooking that part of the same room intended for a drawing-room, is a dressing-room, bedroom, and bathroom. Upstairs again is the children's and the spare bedroom, and the roof-garden and terrace. In Corbusier's "two-family" house there was, on the principal floor, a long, bright apartment which, by day, was a living-room, by night, a bedroom. Movable walls divided it up, and movable beds came forth from the walls. The colony contains the work of sixteen architects in all. One might name Walter Gropins, T. T. P. Ond, Peter Behrens, Mies van der Rohe, Hans Poelzig, Bruno Taut, Josef Frank. Known "modernists" as most of these are, their houses were much more real than Le Corbusier's.

* * *

Ice concrete is the name of a new, porous, astonishingly light building material invented in Finland. Like ordinary concrete, it is composed of cement and sand. Crushed ice or snow is used during the process of mixing. Heat evaporates the water of the melting ice, and the result is a block or brick uniformly honeycombed with minute pores. The number of pores varies directly with the quantity of ice or snow mixed with the cement and sand. Building blocks thus made are exceedingly light and durable. In a house or office building of ice concrete there is a saving of weight varying from 20 to 50 per cent. Because they are cellular in structure, the blocks act as insulators to keep out heat in summer and cold in winter. If ice concrete is made without sand the resultant product is a tough compound that can be sawed, nailed, screwed, chiselled, and cut as readily as if it were wood.

ASTRAGAL

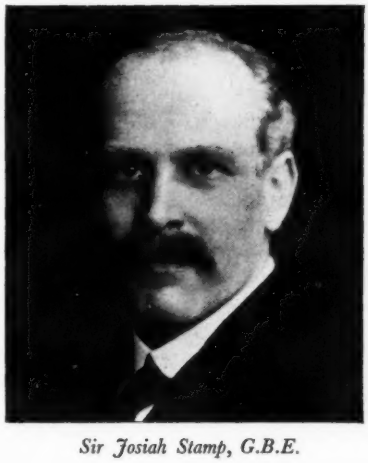
ÆSTHETICS VERSUS ECONOMICS

[BY SIR JOSIAH STAMP. G.B.E.]

I: THE HISTORIC SENSE

[*The substance of this and the following article is taken from the address delivered by Sir Josiah Stamp, G.B.E., LL.D., Sc.D., F.B.A., to the Birmingham Civic Society on September 29 last.*—Ed. A. J.]

IF I use *æsthetics* as a general term to cover historical, antiquarian, and archæological interests, as well as natural beauty and amenity, and *economics* as a term to cover the getting of *material* welfare, either satisfactions actually measurable in money, or put in the balance as an object of human desire with which money objects may compete, then it will be roughly true to say that in popular esteem these two things are incompatible. For coal-getting and factories have spoilt natural beauty, and many objects of great antiquarian interest have been sacrificed to town extension, wider streets, rail and road highways. So-called non-productive uses have had to give way to hard profit considerations, and age-long timber felled to pay off the mansion mortgage and meet the rates. Moreover, did not Ruskin, the apostle of æsthetics, continually fulminate against every advance of the materialistic age of smoke and steel? And do we ever find sound men of business indulging in such sentiment as æsthetics involve, or antiquarians and ecclesiologists behaving as men of affairs with business instincts? Is not getting a living a necessity, and studying unproductive antiquity or landscape a luxury? Ought we not to love the grey and stern evidences of man's conquest of the material more than the picturesque evidences of his stagnation? Truly economics *seems* the implacable enemy of æsthetics. Truly economics seems to *owe* nothing to æsthetics. But is it really true that they are mutually exclusive and incompatible? That as a man becomes more æsthetic he must be less economic, and vice versa; or that attention to æsthetic welfare must be at the expense of economic welfare?



Sir Josiah Stamp, G.B.E.

I wish to affirm my entire conviction to the contrary, and to say that indifference to the æsthetic will in the long run lessen the economic product; that attention to the æsthetic will increase economic welfare. For this purpose I shall make three broad economic assertions, which I shall not attempt to prove here, but the immediate æsthetic consequences of which will form my main theme. My first deals with the historic sense and economic judgment.

Economic conditions are obviously, and will be, profoundly affected by the social institutions men *select*, and by their political framework. If not, then capitalism, socialism, individualism, communism, and bolshevism must be economically equal, which is absurd. Men's *selection* depends upon their intellectual equipment of facts and logic, and their moral philosophy of life. This equipment and philosophy is impossible to any high standard without a developed geographic sense and an historic sense. An historic perspective is greatly assisted by visible and objective signs and reminders. The care of such signs comes within the field of practical social æsthetics. In short, the historic sense in a democratic society has an ultimate direct influence upon the economic attainment of that society in two ways; *a:* as an ingredient or factor in judgment on public affairs; and *b:* as a personal moral incentive. The theme of this first article is the æsthetic contribution to a sense of history. Now, a popular sense of history and perspective is best or mainly secured by objective interest, or an appeal to the eye and the touch. Only a minority can long remain interested in abstractions and descriptions. Dotheboy's Hall "winder-cleaning" methods were a system good in conception, but faulty in execution! Actuality is essential to knowledge, which is the basis of the historic sense. It is an almost universal experience that without concrete embodiment and objective illustration the average mind cannot for long retain abstract ideas or ideals and interests. Mere book-learning is the possession of a minority, but even those of us who can live with abstractions, who can browse perpetually in ideas and sentiments, acknowledge readily the value of a sight of realities in correcting impression, and especially in giving new impetus to interest and intellectual curiosity and liveliness.

The historic sense has some analogy in the geographic sense; both are highly necessary to sound judgment of complicated human affairs. This distinguishes the present civilized age from less sophisticated ones. Space and time are both elements which distinguish adequate powers of judgment today. Now, the sense of space or the geographic instinct may be partly obtained in these days by the reading of books of travel and description, the higher uses of the cinema, of broadcasting and the like. But nobody would declare that to sit at home and read a guide-book and look at views of distant parts was equivalent to having a holiday. Travel, in its sense of actuality, adds enormously to all knowledge that can be gained in those other ways. Now, in a way as real, but less self-evident, objectivity helps the sense of time, and particularly of development.

I well remember in 1920 crossing to the States with a large company of middle-western Americans, who were at that time greatly excited about the Irish question, and, being one of the few available Britishers, I was constantly asked to explain the Irish question to them. In their comments and questions they baffled me completely, because whole centuries of historical incidents in this story were crushed into one flat, identical plane, and some remark that I made about a happening within the past month would be countered by some retort as to what Oliver Cromwell did, or the Fenians, or Balfour in the eighties. All sense of relativity and perspective was completely absent. From that kind of mentality obviously no proper judgment of such a question, which requires both the historic and geographic sense, was possible.

The interaction between sight and thought in giving birth to knowledge and to that vital interest in the context and panorama of human life which is the most precious

possession of content, and the firm bulwark of character, is nowhere better illustrated than in the study of architecture. There is no branch of knowledge in which an investment of time by the fireside leads to quicker and more substantial dividends in the open. Yet who is likely to ponder books of diagrams and sections, or even picturesque views, if interest and desire are not quickened by the challenge of a treasured tower? Even the most intense observation, and liveliest pleasure in the sight of a cathedral, if there is no mental background of book knowledge to preserve it, fades in a few weeks into a confused recollection of magnificence and vague impression of size. That impetus to growing interest, the power of comparison with other examples, if based on pure recollection of this kind, is altogether impossible. But a little careful study of the characteristic features of style, and particularly the less picturesque and drier study of sections of mouldings, in door and arcade arches, in string courses and dripstones, at once transforms the hazy impressions into scientific data, meaningless chaos fitting into a clear mental picture of intention and development that the memory can carry over long periods of years and to the ends of the land. To him that hath shall be given. The truth is that we mostly only see what we have been taught to see, or look for. Teaching about what to see or look for does not long survive in the mind if it has no practical exercise. The child called "interest" is born only of the complete marriage of knowing and seeing; there is no parthenogenesis here.

[*To be continued*]

MR. GEORGE P. BANKART AND HIS WORK

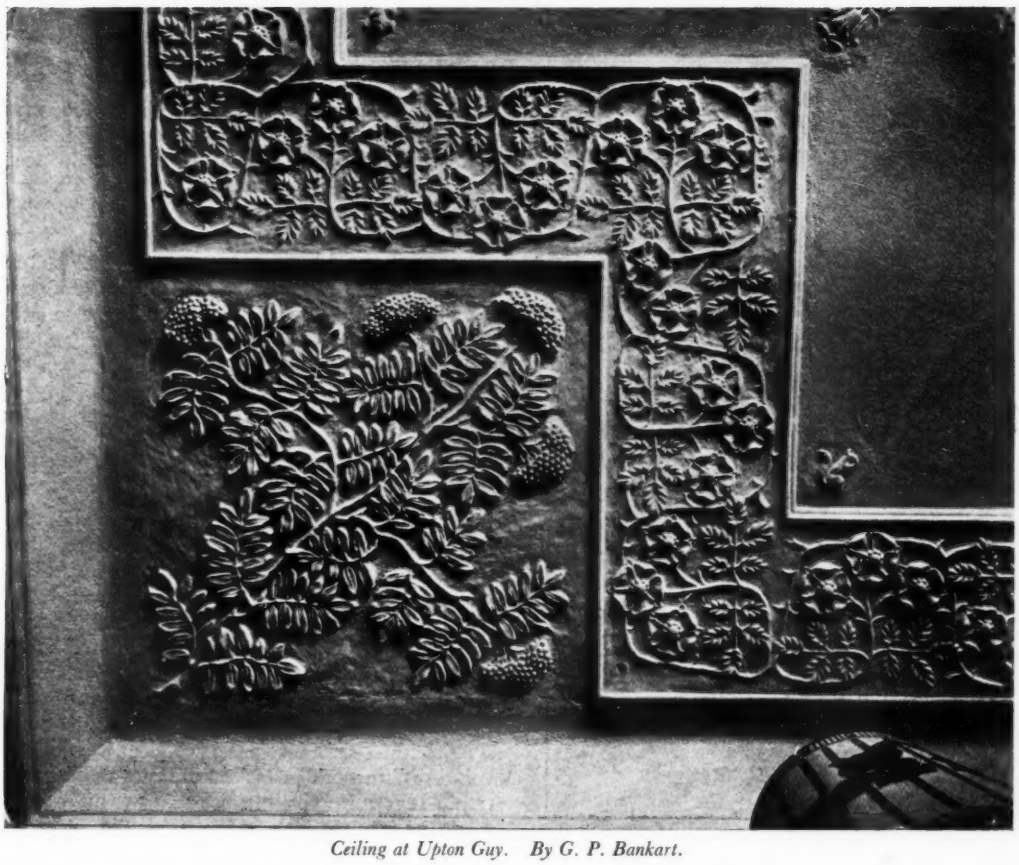
[BY G. GREY WORNUM]

WHEN touching on biography it must be with joy that any writer finds records proving his hero an infant prodigy from the very start. With what relish do the biographers of Richard Wagner, for instance, dwell on the fact that at the age of six he translated Homer's *Odyssey*! If I remember rightly they recount how, at the age of twelve, he wrote a drama for 600 characters. It possibly was amazingly bad or else took up too much house room, for the work has not survived. But the fact remains that such stories make interesting reading.

Although this article is by no means an attempt at biography, it is an attempt to remind readers of the influence and activity of a great craftsman who is still living and still working amongst us. On a plea of a treacherous memory, but which might quite justifiably be put down to very charming, but to me somewhat disconcerting modesty, Mr. Bankart gives little information as to his early days. He belongs to one of the oldest and best-known of Leicester families. The younger son of the late George Bankart of that city, he was born and schooled at Leicester, and started his first training at the Leicester School of Art. Here he appears to have come under the influence of watercolour painters, fortunately men of high ability, such as the late James Orrock, R.I., John Fulleylove, R.I., Wilmot Pilsbury, R.W.S., and Edward Davies, R.I., all of whom were old friends of his family. Contact with such masters produced the inevitable result with such a pupil, and young George Bankart developed a keen ambition to become a painter. Perhaps the adjective "inevitable" should be explained to those who do not know Mr. Bankart.

He is a man dominated by enormous enthusiasm and tireless energy. His deep-set, thoughtful eyes are those of the student and scholar. To know him is to realize that his brain and hands could not keep idle. Except for the subjects of drawing and painting, the Leicester School of Art at that time had nothing to offer him as a channel for his energies. Later on, as a designer, there is no doubt the drawing experience served him in good stead. Fortunately, perhaps, he did not become a watercolour painter professionally, but embraced the profession of architect. He was articled to the late Isaac Barradale, F.R.I.B.A., of Leicester,

Drawing-room ceiling, The Knoll, Leicester. By G. P. Bankart.



Ceiling at Upton Guy. By G. P. Bankart.

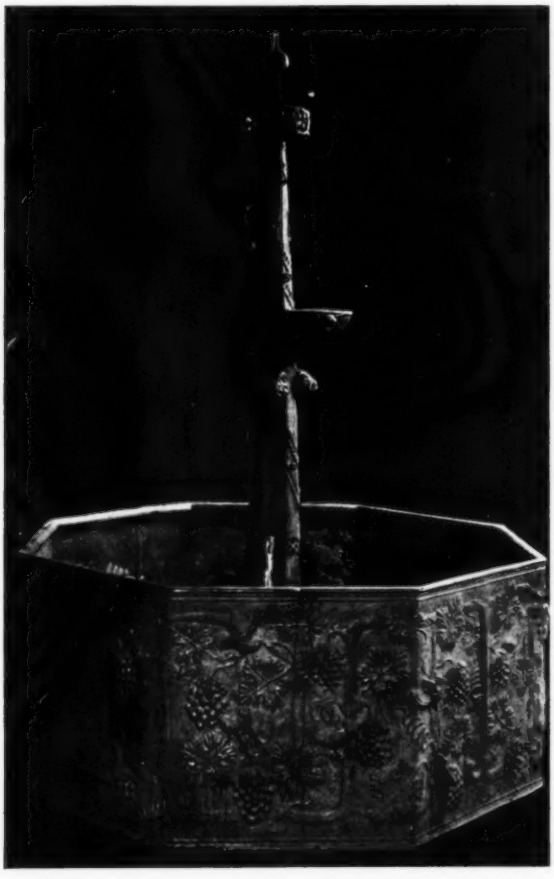
and there found the late Ernest Gimson to be his fellow-pupil. The life-long friendship between the two pupils had a great influence on Mr. Bankart. After serving his articles, Mr. Bankart spent his life during the next few years between carrying on private practice in Leicestershire and Yorkshire, and serving as temporary assistant to various architects in London and the provinces. It must have been rather a restless time, but for a young man not without benefit in meeting many people and seeing many places. It is concerning this time that I am able to insert the only story of my biography. It is, alas! not a story of an infant prodigy, but rather a strange tale of a young architect and arrested development!

It appears that George P. Bankart, craftsman and prolific designer as we know him today, some few years after starting practice required a small piece of ornament in connection with some building he was putting up. Chewing his pencil, and with despair on his face, he turned to Gimson and asked innocently, "How does one start to design a pattern?" Gimson did not think the question out of the way, but was not able to give him any satisfactory answer. He said he supposed that a "pattern just came somehow." I do not think the answer helped Mr. Bankart, and he is next heard of as prowling about Haddon Hall looking at the old plasterwork there. He noticed that the motifs were almost exclusively taken from flowers. Not being particularly tempted to study these adaptations, he enthusiastically began to study the flower forms themselves. On doing this his energy and imagination gave him wonderful results. I believe to this day his favourite executed work is the Ladies' Gardening College at Glynde, Sussex, which he designed and executed for Viscountess Wolseley. Into his work there he introduced practically every known English flower.

Having digressed a little for the purpose of this rather lamentable tale, we will return to Mr. Bankart in the early days of his architectural practice. It would appear that the periodical visits to London very soon brought him into touch with the men whose influence is felt even to these present times. It was at Ernest Gimson's father's house in 1884 that Mr. Bankart first met William Morris. He came into close touch with both the latter and Philip Webb for many years to come. A few years later Gimson, Mervyn Macartney, Sydney Barnsley, and Professor Lethaby set up as a firm, under the name of Kenton and Company, in Bloomsbury for the making of individually designed pieces of furniture. William Morris and Philip Webb interested themselves considerably in the work, and Mr. Bankart was a constant visitor.

These men, together with a few others—among whom should be mentioned Sir Reginald Blomfield, Mr. F. S. Troup, and Mr. R. S. Weir—had established the Artworkers' Guild in 1884, and from it arose the Art Workers' Exhibition Society, established about 1887. At this exhibition the furniture of Kenton and Company was shown. There were, of course, many other incidental activities, such as repairing to supper at Gatti's every Thursday evening after the activities of the "Anti-Scrape" Society. It throws a little sidelight on William Morris to hear recounted that, at one of the meetings of the latter society, an *impasse* was reached on account of no reply being received from the Dean of Westminster in spite of

many letters on a certain matter. The Earl of Carlisle, the then chairman, turned to William Morris and said, "What would you do, Mr. Morris?" The latter replied angrily: "Do? I should knock his ———— head off!" I believe, however, that a further letter was sent.



It is not surprising that in the *milieu* of so many brilliant and enthusiastic craftsmen Mr. Bankart should, on his periodical returns northwards to resume intermittent practice, try and achieve something in his own seclusion. An opportunity first presented itself when he was designing some buildings on the Fairfax-Cholmeley Estate in Yorkshire. Living at the time in a cottage on the estate he started experimenting with some plaster of paris, utilizing the kitchen as his workshop. One may well believe that he did not receive enormous sympathy from his wife in this venture, especially as he owned at the time three or four collie puppies who succeeded in conveying the plaster all over the cottage. The material itself, however, did not satisfy him, and he started in experimenting in lime stucco and other materials, striving to recover the secrets of the old masters of the craft.

At this time he was on the staff of the Municipal Art and Technical School at Leicester, under the late Augustus Spencer, where he conducted the architectural classes and the modelling classes, and he very soon established a class for young plasterers there, giving them employment on his own jobs before he set up a workshop. Shortly after this he established a decorator's and plasterer's works at Bromsgrove, Worcestershire, followed later by one in London. It is in the London organization that he has produced his finest and most important works. His lead-and-plaster products were sent, not only to all parts of the country, but also to the U.S.A.

It was in the early days of experiment, when Mr. Bankart was chiefly engaged in private practice, that his first commission for plasterwork came along. Through his friends in London Mr. Bankart was asked by Mr. Guy Dawber to execute for him a ceiling at Hartpury House, Ashleworth, Gloucestershire. This work turned out completely successful. It took a very short while after that for his work to be in ever-constant demand among the leading men of the day. There is no doubt that his architectural training and practice was of the greatest value to him both in his handling of design and construction. It is quite possible also that the architect's temperament in him has throughout his life urged him from experiment to experiment. The result of these experiments are mostly included in Mr. Bankart's recent re-editing of William Millar's *Plastering, Plain and Decorative*. In re-editing this work Mr. Bankart has added many new chapters on subject-matter of which he is the greatest living authority.

His leadwork is really every bit as interesting as his plasterwork. He is as solely responsible for the revival of the art of the former as that of the latter. Mr. F. S. Troup proved a sympathetic ally in the leadwork, and Sir Lawrence Weaver's authoritative book on the subject helped much to reinstate once more work in this material among the arts.

[*To be continued*]

Above, a fountain in lead. By G. P. Bankart. Below, lime stucco work. By G. P. Bankart. The first done in England for 300 years.

Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. The Fairlie Place front.

A CALCUTTA OFFICE BLOCK

[BY R. M. FIELDS]

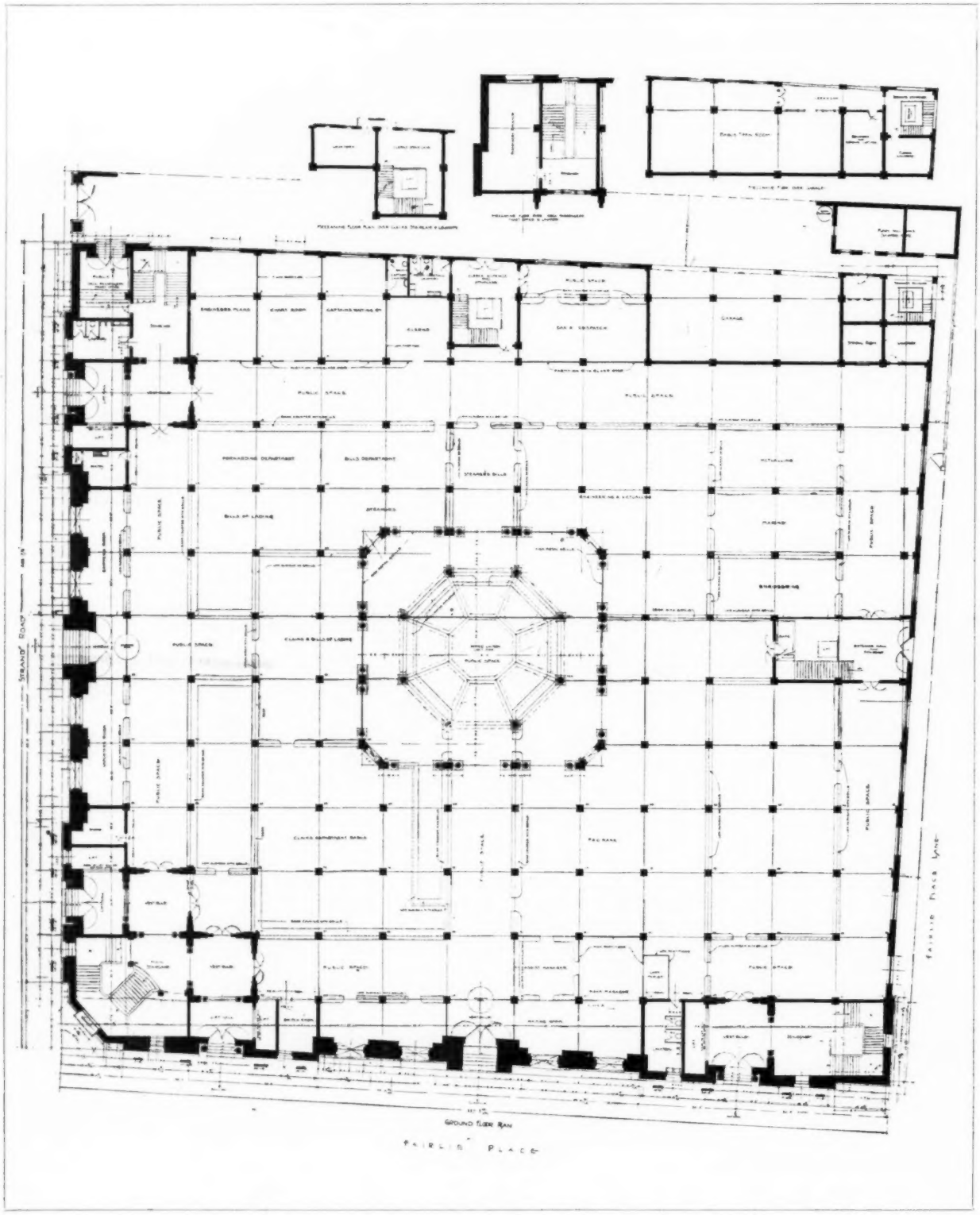
A REFERENCE to the "Plan of Fort William and a part of the City of Calcutta, surveyed in 1753 by William Wills, Lieutenant of the Artillery Company in Bengal," shows that the site of Messrs. Mackinnon, Mackenzie & Co.'s new offices, 16 Strand Road, Calcutta, was at that time a part of the bed of the River Hooghly, one of the deltaic branches of the Ganges. About this point, in 1686, Job Charnock landed and founded the city, which was destined to become the second city of the Empire. It was not, however, till about one hundred years later that the Strand Road, on which the building is now situated, was reclaimed from the river; and it is interesting to note that Fairlie Place, the street on the south of the site, was laid out in 1809 from the proceeds of the Lottery Commission—a body to which the European residential portion of Calcutta owes many fine roads, laid out at right angles in the most approved American manner.

Just to the south-east of the site, at the north-west bastion of old Fort William, named after William III, was the gateway by which, on June 20, 1756, Seraj-ad-Aulah, Nawal of Bengal, after a two days' siege, captured the fort, sacked the city, and made history with the notorious episode of the Black Hole of Calcutta. It was not till ten months later that the fort was recaptured by Clive and Admiral Watson. Nothing now remains of the old fort; but the site of the Black Hole has been identified and preserved through the labours of the late Lord Curzon when Viceroy of India.

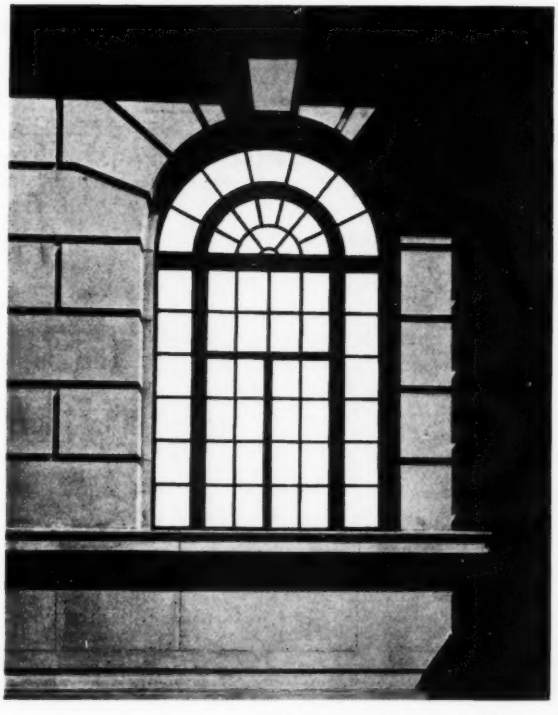
As was to be expected, many interesting finds were made during the course of the excavations for the new building. Hundreds of cannon balls, together with mortar bombs and chain shot, testified to the fierceness of the bombardment of the fort, if not to the power of the guns or the accuracy of the gunners, for the majority of this ammunition must have fallen short or rebounded from the walls. Another feature encountered during the excavation, and which at times caused trouble with the pile-driving for the foundations, was the large quantity of boulders brought out from home as ballast, a seven months' journey round the Cape, to find a resting-place in the river and be replaced by bales of silks and muslins and chests of tea.

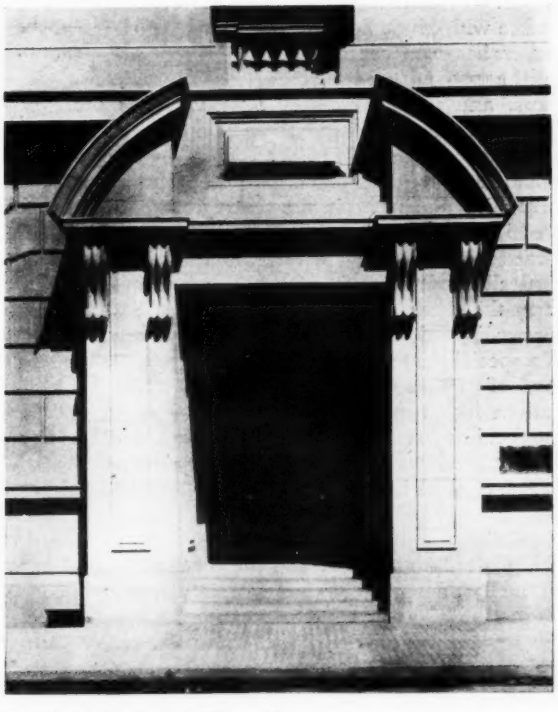
The building, which houses the associated Inchcape concerns, is approximately square on plan, about 260 ft. each way, has five stories, and is nearly 100 ft. in height from pavement level to parapet. In the centre there is an area of 70 ft. square, with a double-glazed dome 48 ft. in diameter lighting the public space of the P.O. Banking Corporation, who occupy the major portion of the ground floor. The back portion of the building, which was erected in 1921-23, is of reinforced concrete construction on a reinforced concrete raft. In the case of the front portion, with its heavy stone façades, it was decided to pile the foundation in addition to rafting over the site. The piles were 16 in. diameter and 2 ft. 6 in. apart under the walls, and the stanchion grillages, etc., and the reinforcement consisted of six $\frac{3}{4}$-in.

diameter mild steel bars, with ⅜-in. diameter hoopings 6-in. pitch throughout, Cafferata ties being used generally. The alternate piles in each row were first driven and, as was to be expected, the soil was found to be immensely consolidated on following up with the second series, and it was impossible to drive these later piles to the same depth as the original ones. The specified set was not more than ¾ in. in the last four blows, with a 2½-ton monkey



Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. The ground-floor plan.





Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. Above, a view from the south-west. Left, a ground-floor window. Right, the entrance to the Post Office Banking Corporation.

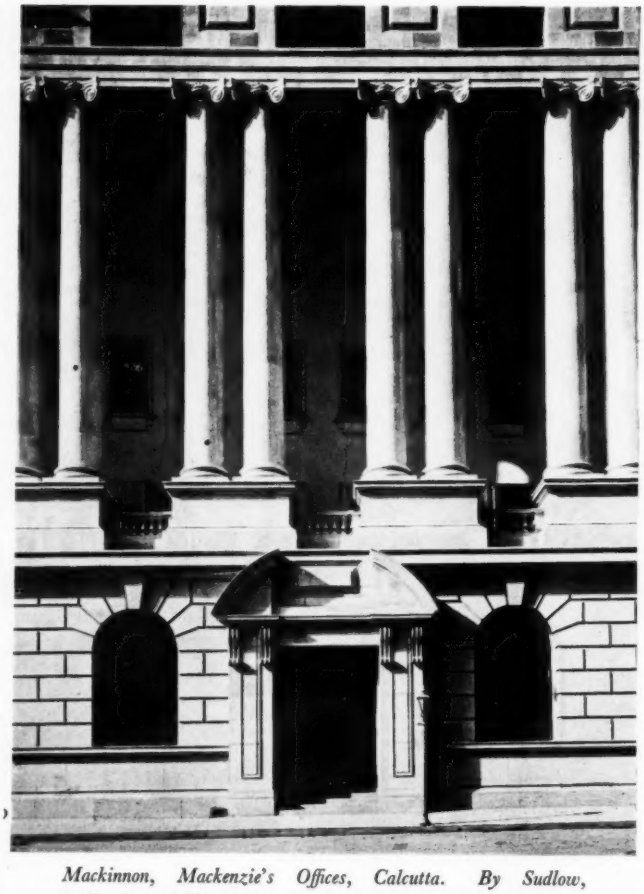
and a drop of 4 ft. The effective lengths driven varied from 11 ft. to 50 ft., the average being 30 ft., and about 2,400 piles were driven altogether.

The stonework to the ground story, up to and including the first-floor string course, is of Norwegian granite finished with a thrice-axed face. The remainder of the Strand Road and Fairlie Place fronts is faced with Chunar stone, a close-grained sandstone from the Benares district which varies considerably in colour from a light buff to a pinkish tinge. No fewer than fourteen quarries were needed to ensure an adequate and uniform supply of stone.

The floors and staircases throughout are finished with marble, rubber composition floors so much in use at home being unable to withstand the extremes of climate and the excessive humidity during the "rains." Italian white marble with black Belgian borders has been employed on the ground and first floors, and white and grey Italian on the other floors. The internal columns to the ground and first floors are cased to a height of 7 ft. with white marble, with white moulded bases and black plinths. The eight columns supporting the dome in the centre of the building are of Breccia Violetta. These columns were each quarried and turned as monoliths, then sawn into three drums and halved vertically and cored for the steel columns which actually carry the dome. This dome is on steel ribs with patent copper-light glazing bars, and glazing of ornamental glass of a special kind to eliminate as far as possible the harmful rays of the sun. Over the domed light is a glazed lantern for protection from the heavy rains, and in the intervening space roller blinds can be installed, but this has not been found necessary upto the present.

The general lay-out of each floor does not call for particular attention. There are no municipal restrictions regulating the subdivision of the building, as fire risks are practically infinitesimal, and the conditions of office work in the East necessitate as large an uninterrupted floor space as possible, both from considerations of airiness and also for supervision of clerks and subordinates by European assistants. Such partitions as are necessary for subdivision of the departments are kept as low as possible, about 7 ft., and glazed in the upper portion, except in the case of the board-rooms, etc. All the partitions are of teak wood framing, French-polished or wax-polished.

Six eight-passenger high-speed lifts have been installed, space being provided for four additional lifts when required.



Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. The colonnade on the south front.

The water supply of Calcutta is obtained from the River Hooghly, there being separate filtered and unfiltered supplies. The former is used for drinking, washing and bathing purposes, and the latter for flushing. Both are at present very inadequate to the growing needs of the city, and the unfiltered supply has the disadvantage that it contains a large percentage of river silt in suspension, which in time causes damage and corrosion to pipes and fittings. To take the place of this supply a 5-in. diameter tube-well has been sunk to a depth of 400 ft. and having a capacity of 6,000 gallons per hour. During the boring operations the old retaining wall of the river, about 40 ft. thick of brick and concrete, had to be passed through. This caused some anxiety to the contractor carrying out the work, for he lost the diamond-headed drill, costing some Rs. 10,000/- in encountering this obstacle, but it is fortunate that he succeeded in recovering it under water pressure.

The question of artificial ventilation for the building was very carefully gone into, particularly with a view to cooling and dehumidifying the air. From the end of February till the middle of June, when the "rains" break, the temperature frequently rises as high as 115 deg. Fahr. in the shade, and from the latter date till the end of October humidity is excessive.

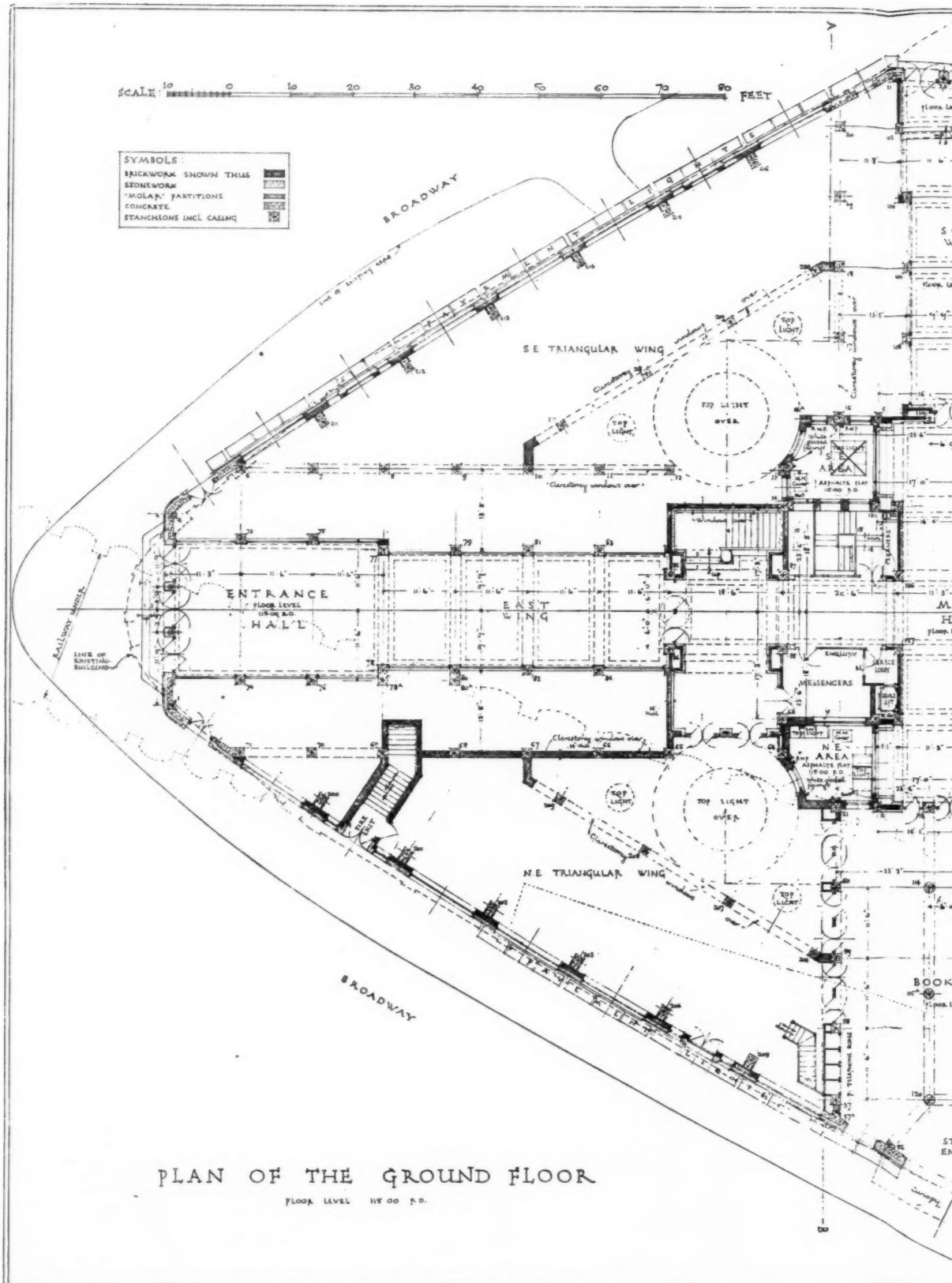
Records were kept of the temperature of the water in the tube-well and of the municipal supply. It was found that the former was more or less constant at about 78 deg. to 82 deg. Fahr. throughout the year, while the maximum temperature of the municipal supply was very much higher.

These temperatures made any scheme for cooling and filtering the air by means of water screens, etc., impracticable, and such a process would have increased the humidity of the air. In the end it was decided to rely on changing the air an adequate number of times per hour, and this has been done by means of ducts connected to large exhaust fans situated on the roof of the building.

The architects for the building were Messrs. Sudlow, Ballardie and Thompson, F. & AA.R.I.B.A., and the resident engineer in charge of the construction was Mr. E. Lonnon. Mr. G. Bartholomew was the consulting electrical engineer. The steel framing of the building was designed by Messrs. Reade, Jackson and Parry, of London, the consulting engineers.

Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. Above, a passage leading to the banking space. Below, the banking space.

Mackinnon, Mackenzie's Offices, Calcutta. By Sudlow, Ballardie and Thompson. Above, the public space for the Post Office Banking Corporation. Below, the entrance to the main staircase.



PLAN OF THE GROUND FLOOR

FLOOR LEVEL 115 00 O.D.

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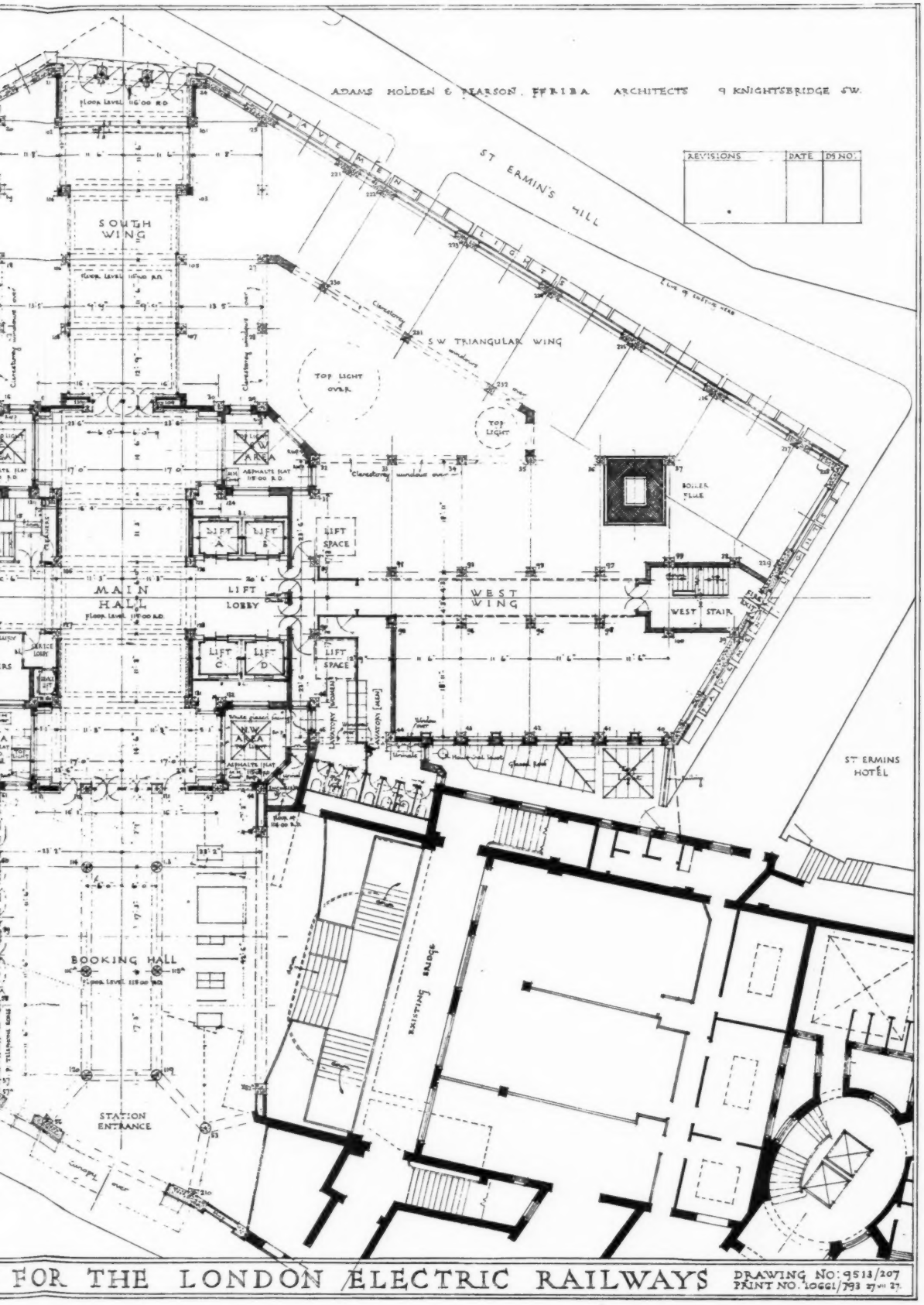
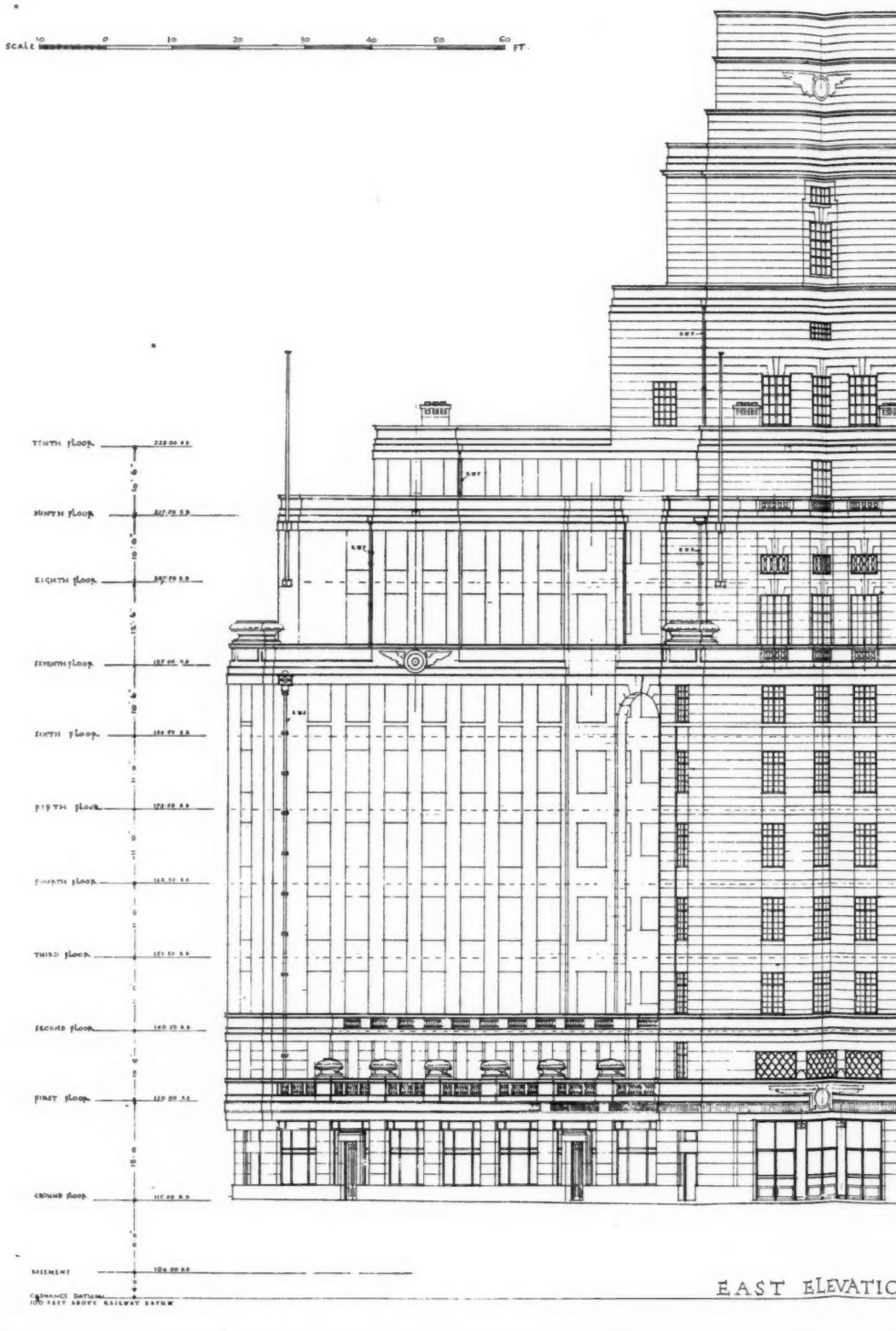


NEW OFFICES IN BROADWAY, WESTMINSTER, LONDON, FOR THE LONDON ELECTRIC RAILWAYS. BY ADAMS, HOLDEN AND PEARSON. THE GROUND-FLOOR PLAN.



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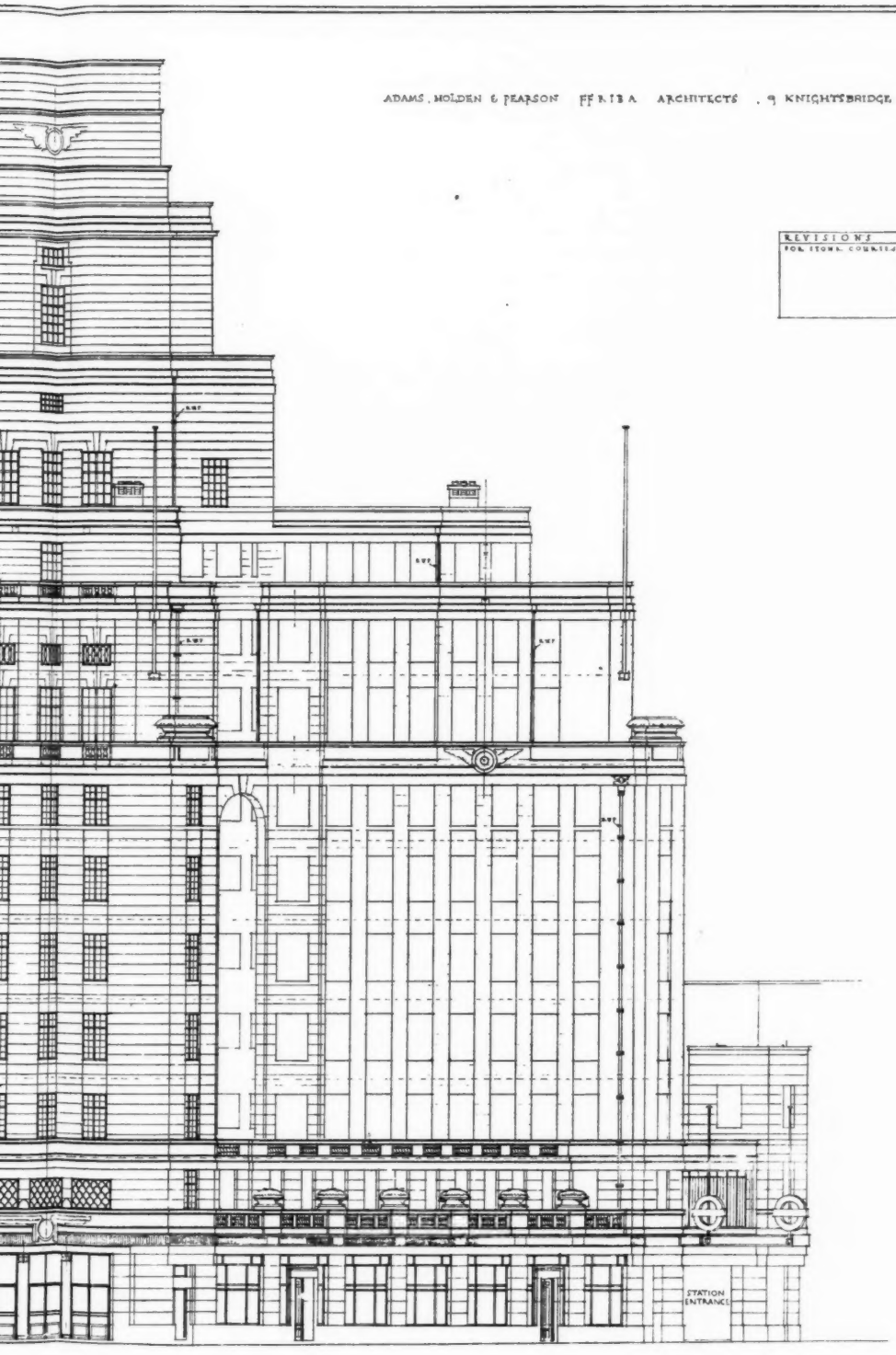


ELEVATION

FOR THE LONDON ELECTRIC RAILWAYS DRAWING NO 10047/466 PRINT NO 10670/802

NEW OFFICES IN BROADWAY, WESTMINSTER, LONDON, FOR THE LONDON ELECTRIC RAILWAYS. BY ADAMS, HOLDEN AND PEARSON. THE EAST ELEVATION (FACING QUEEN ANNE'S GATE).

FIVES COURTS

[BY EDWARD R. BILL]

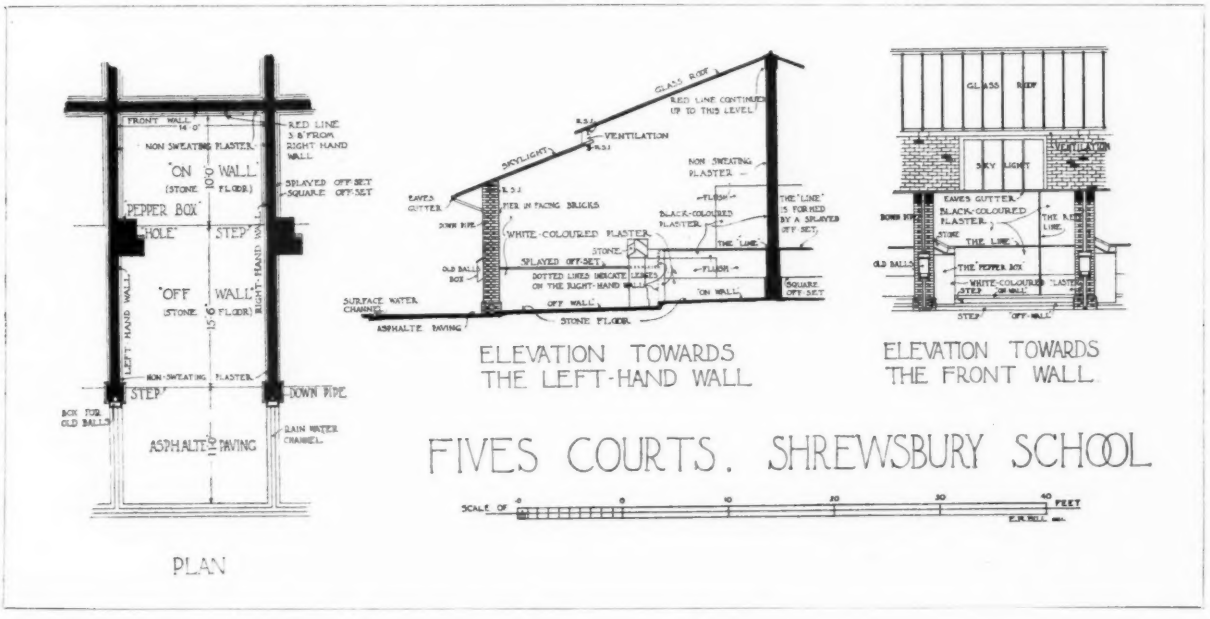
THE game of fives may be briefly defined as hitting a leather or linen-covered ball against vertical walls enclosing a paved floor. It has two variants known as the " Eton " game and the " Rugby " game respectively. The Eton game is played in a court similar to that illustrated in use at Shrewsbury School. The court should measure about 14 ft. wide by 25 ft. 6 in. long, and is divided transversely into two unequal portions, the floors of which are known respectively as " on-wall " (measuring 10 ft. from the front wall to step) and " off-wall " (measuring 15 ft. 6 in. from step to the back of the court). A shallow step of about 5½ in. rise divides the " on-wall " from the " off-wall " portions of the court. The floor of each half is laid to a fall of about 1 ft. in 50 ft. away from the front wall, and the paving should consist of a material providing a hard and smooth (but non-slippery) surface. York stone flags or granolithic paving may be used for this purpose, but if stone is employed, very great care is necessary to ensure that the joints are perfectly true and flush with the surface of the stone, as any little irregularity will detrimentally affect the play.

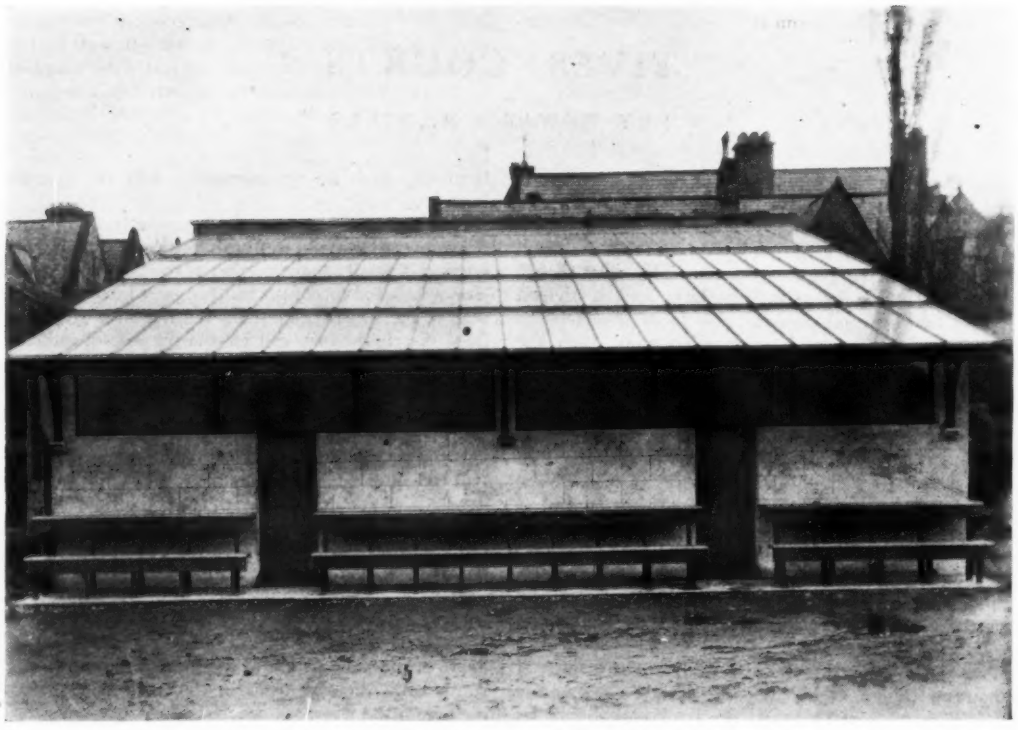
For the Eton game the court is left open at the back, as no back wall is required for the play. The " front " wall is the wall facing the player, and the " right-hand " and " left-hand " walls are the walls on his right and left hand respectively. The front wall should be about 20 ft. high, and if the court is a covered one, the clear height under any roof beams at the back end should be about 11 ft. 6 in.; too great a height at this point is undesirable as it exposes the court to driving rain. The front and side walls may be completely rendered all over with special non-sweating plaster, but where the cost of this would be prohibitive, the front wall and 5 ft. along each side wall from the angle should be rendered for a height of 10 ft. 6 in. above the level of the floor at the back wall with the special plaster, and the remaining surfaces of the front and side walls faced with good, smooth bricks with joints pointed in cement flush with the brickwork. The plaster should be whitish in colour (the colouring matter being incorporated in the plaster), excepting certain portions indicated on the drawings, which should be black. If the plaster has the pigment incorporated with it no painting or colour-washing will be required, and no special means will be necessary to keep it clean.

An important feature is the " pepper-box " or buttress projecting from the left-hand wall; this buttress, together with the " step," encloses a small square portion of the floor known as the " hole." The weathered top of the buttress may be of stone. On the front wall of the court is painted a red line at a distance of 3 ft. 8 in. from the right-hand wall for the purpose of indicating the area which may be hit by the player " in holes " when making " the slam " or " first cut." Another important item is the " line," which consists of a 2¼ in. splayed off-set plinth running horizontally across the front wall at a height of 4 ft. 6 in. above the floor, and continuing horizontally across the side walls of both the inner and the outer portions of the court. Beneath this " line," and at a height of about 1 ft. 10½ in. from the floor on the front wall, there runs a 2½ in. square off-set ledge, which is continued round the " on-wall " court and stopped by the " pepper-box " on the left-hand wall and over the line of the step on the right-hand wall.

The court should be roofed over for preference, but if left uncovered the side walls should be returned for about 2 ft. from the angle at the same height as the front wall, and then raked downwards until the side walls in the " off-court " are about 11 ft. high from the floor. A covered court may have the " on-wall " court roofed over with glass, but the roof over the " off-wall " court need only be glazed for a portion of its area, as this part will receive its light from the open back end. Where the walls are carried right up to the roof line at the front and sides, some form of roof ventilation will be necessary, and may be provided by forming the roof at two levels with a space between, as shown on the section of the courts at Shrewsbury School.

An alternative arrangement consists of carrying the roof on piers about 3 ft. high above the front and side walls, and the space thus formed between the roof and the walls is filled in with wire netting. The eaves should project well over at the back of the court as protection against driving rain, and it is very desirable to have a paved and drained area at the back of the court on to





Two Rugby fives courts, Durham School.

which balls knocked out of the court (good 'uns) may fall. The courts are often built in double ranges with the dividing wall serving as the front wall for two opposite courts. The courts are sometimes numbered, the numerals being cut into a stone built into the outside pier at the back end of the court. Boxes for old balls may be fixed on the face of the outside piers; they should have a hole for the balls in the side and near the top, and there should be a hinged door on the front at the bottom. The bottom of the box should slope downwards towards the front.

The Rugby game is played in a court somewhat similar to the Eton court, but having a back wall containing a door. The upper portion of the back wall may be filled with wire netting. The buttress is sometimes omitted, but where it is included it should project about 10 in. from the left-hand wall at an angle of about 135 deg. and at a distance of 9 ft. 9 in. from the front wall. The play-board along the front wall extends from the floor to a height of 2 ft. 10 in.

The accompanying illustration shows the exterior of a pair of excellent "Rugby" fives courts at Durham School, designed and erected by the well-known firm of specialists, The Bickley Company, of Granfield Street, Battersea.

The outside is plastered on brickwork, and the roof glazed with "non-glare" glass and puttyless glazing bars.

The wire netting in the upper part of the back wall may be seen extending across the whole elevation above the level of the doors.

STANCHIONS FOR SHEDS

[BY PROFESSOR HENRY ADAMS]

LIGHT steel-framed sheds covered with galvanized corrugated iron are much in use for temporary purposes and also in many cases for more permanent employment. It is a fallacy to suppose that a temporary building does not require as high a factor of safety as one for permanent use, although the opinion is very general. The fact that a temporary building is more likely to have the workmanship scamped is alone sufficient to call for a full factor of safety.

The roof trusses may usually be purchased from stock up to 30 ft. or 40 ft. span, but, of course, they can be designed to any given pattern. Assume the pitch to be 30 deg. and the stanchions 12 ft. centre to centre, the same as the roof trusses. The wind being taken at 30 lbs. sq. ft. horizontally the pressure on the roof will be modified as shown in figure one, where if p = horizontal pressure of wind lbs. sq. ft. and θ the pitch of roof, $p \sin^2\theta$ will be the direct effect producing bending moment on stanchions, $\sin^2 30$ deg. = 0·25, reducing the 30 lbs. to $30 \times 0{\cdot}25 = 7{\cdot}5$ lbs. sq. ft. of the sloping surface. If the roof be 40 ft. span and the trusses 12 ft. apart the surface of one side will be $\frac{40}{2} \times sec.\ 30 \times 12 = 20 \times 1{\cdot}1547 \times 12 = 277$ sq. ft., and the total pressure $277 \times 7{\cdot}5 = 2077$ lbs., say, 1 ton, acting horizontally on top of each stanchion and causing a bending moment.

The wind against each vertical bay between the stanchions, assuming the eaves to be 12 ft. above the ground, will be $12 \times 12 \times 30 = 4320$ lbs., or, say, 2 tons, then each stanchion will be under the loads shown in figure two. As the wind may come from either side the stanchion on each side must be sufficiently firm to take the whole of the wind pressure due to the portion supported by it.

Theoretically half might be taken by each side, but there would then be risk of the roof collapsing by the pressure transmitted.

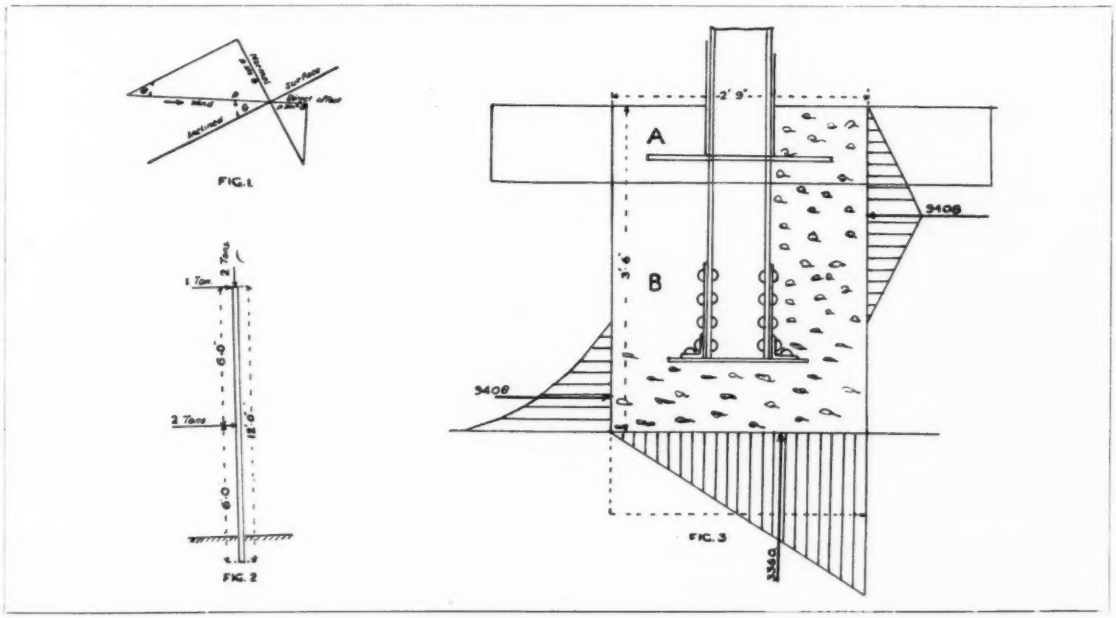
If we allow $7\frac{1}{2}$ tons sq. in. maximum stress, then by the formula $\frac{W}{A} \pm \frac{M}{Z} = 7{\cdot}5$. Try 12 in. × 5 in. × 32 lbs. R.S.J. having a sectional area of 9·41 sq. in. and section moduli of 36·7 and 3·9. Then the loads being given as shown in figure two $\frac{W}{A} \pm \frac{M}{Z} = \frac{2}{9{\cdot}41} \pm \frac{1\times144+2\times72}{Z} = 7{\cdot}5$ or $0{\cdot}212 + \frac{288}{Z} = 7{\cdot}5$, or $\frac{288}{7{\cdot}5-0{\cdot}212} = Z = 39$, which is only a trifle above the figure given by the section we have selected and will retain, but we must see that the stanchion is strong enough in the other direction to support the load. By the L.C.C. rule $6{\cdot}5 - \frac{l}{r}(0{\cdot}025)$ = safe load tons sq. in., $l = 12\times12 = 144$ in., $r = 1{\cdot}02$ in., then $6{\cdot}5 - \frac{144}{1{\cdot}02}(0{\cdot}025) = 2{\cdot}975$, say, 3 tons per sq. in. The sectional area is 9·41 sq. in., therefore the safe load will be $9{\cdot}41\times3 = 28{\cdot}23$ tons, while we have only 2 tons direct load to carry, showing that nearly the whole section is required to resist the bending moment only.

As regards the foundations there is a choice of methods, either it may be shallow and spread out as A, figure three, so as to resist tilting, or it may be narrow and deep to resist the side pressure. We will take an example of each. First with a spread foundation. The principle of calculation will be $\frac{W}{A} \pm \frac{M}{Z} = 1\frac{1}{2}$ tons sq. ft. compression and nil tension, therefore $\frac{M}{Z}$ must equal $\frac{W}{A}$. The direct load is 2 tons, weight of stanchion and base, say, $\frac{1}{4}$ ton, weight of concrete, say, $1\frac{1}{2}$ tons, together equal $3\frac{3}{4}$ tons. The area of concrete $A = bd$, say, $b = 2$ ft. 6 in., then d will be found by calculation. The bending moment on stanchion equals $(1\times12+2\times6) = 24$ ton ft. The section modulus $Z = \frac{1}{6}bd^2$, then $\frac{W}{bd} = \frac{M}{\frac{1}{6}bd^2}$, or $\frac{3{\cdot}75}{2{\cdot}5d} = \frac{24\times6}{2{\cdot}5d^2}$; cancelling leaves $3{\cdot}75 = \frac{144}{d}$, or $d = 38{\cdot}4$ ft., which is absurd. The difficulty arises from the impossibility of tension between the concrete and the earth. It appears hopeless therefore to attempt to design a safe foundation on these lines, and where such foundations are existing there is a great risk of the sheds collapsing unless the trusses have been specially designed and braced to the stanchions to resist the thrust of the wind. If they have been so designed there is only the push of the wind on the sides to counteract by the concrete, say, 1 ton, and allowing $\frac{1}{2}$ ton per sq. ft. for the resistance of the surface soil, the concrete base will require an end area of 2 sq. ft., or, say, 2 ft. wide by 1 ft. deep.

The second method is to bury the end of the stanchion in a block of concrete, as B, figure three, of such depth and width that the resistance of the earth against the sides shall be sufficient to counteract the bending moment. The case is rather complex, but we may assume that the resistances are approximately as shown in figure three.

Say width of concrete in direction of wind twice depth of stanchion = 2 ft., depth of concrete three times the width of stanchion = 3 ft. The width across the wind will be found as follows:

Safe pressure of earth at one-third depth of concrete = $W = wd\left(\frac{1+\sin\theta}{1-\sin\theta}\right)^2$ (see THE ARCHITECTS' JOURNAL, May 18, page 684). Assume the earth to weigh 112 lbs. cub. ft., depth of foundation 3 ft., then d in formula will be 1 ft.; $\left(\frac{1+\sin\theta}{1-\sin\theta}\right)^2$ = say, 14. Then $W = 112\times1\times14 = 1568$ lbs. ft. sup. mean pressure of reaction triangle A (figure three). The depth of the triangle being two-thirds of 3 ft. the reaction will be $2\times3136 = 6272$ lbs. per ft. of the width across the wind. Assuming the stanchion to rotate about a point two-thirds the depth of the concrete the resistance moment per foot width would be 6272×1 ft. to centre of triangle = 6272 lbs. ft. On the opposite side of the concrete the lower portion will press against the earth, probably as ordinates to a parabola with the same total value as the triangle 6272 lbs., making the "couple" complete. The centre of effort being at one-third of 1 ft. above the bottom the leverage from turning point of stanchion will be two-thirds of 1 ft. = 0·67 ft., and the resistance moment $6272\times0{\cdot}67 = 4502$ lbs. ft. The direct load may be assumed to help by the shifting of the centre of reaction as shown in the figure giving $1\frac{1}{2}\times2 = 3$ tons sq. ft. on the outer edge and nothing on the inner edge. The result will be $\frac{3}{2}\times2240 = 3360$ lbs. acting with a leverage from centre of stanchion of $\frac{2}{3}\times3-1{\cdot}5 = 0{\cdot}5$ ft., giving a resistance moment of 1680 lb. ft. The three resistance moments together give $6272+4502+1680 = 12454$ lbs. ft. = 5·56 tons ft. per foot of width. The bending moment we have to provide for is 24 tons ft., therefore the width of the concrete across the wind must be not less than $\frac{24}{5{\cdot}56} = 4{\cdot}3$ ft., say, 4 ft. 4 in. The block will then be 2 ft. × 4 ft. 4 in. × 3 ft. deep. Increasing the 2 ft. will not enable the 4 ft. 4 in. to be reduced as it will not relieve the bending moment.



LITERATURE

THE PRACTICAL EXEMPLAR OF ARCHITECTURE

THE catholic collection of illustrations which go to make this volume and to carry on this series have, in common with all books of this kind, an important part to play in the development of our tradition. Irresponsible deviations from an established course are easy to achieve, but development of that course is based on a knowledge of its history. The one is a hazardous squib in the night of ignorance, the other a confident march in the light of certainty. A knowledge of history is the lode-star of art, ignorance of it a pitfall for the unwary. In a time when unrest is everywhere made manifest, and, on every side, fruitless experiment is seen to waste endeavour, and effort is confused by a babel of tongues, when the cautious but unknowing must flounder in the trampled bog or sink in the waters they know not how to swim, in such a time and in such uncertainty we look with anxious eyes for the beacon that shall guide us home. With every faggot the flames leap higher, farther goes their light through the enshrouding gloom.

A people without a history is like a ship without compass, charts or rudder. Blown on by every wind, at the mercy of every gale, knowing not what course to make and unable to make it if that course were known, in danger of hidden reefs and sunken sands, what wonder if the seamen throw hope by the board and wait in stupor for the doom that shall be theirs.

This book contributes to our knowledge of our own history. To all who aspire to proficiency in architectural navigation I would say, study this book, to those about to embark, put this book in your chart-room.

Under Mr. Mervyn Macartney's guiding hand the illustrations have been generally well chosen. Their presentation maintains the standard we have learnt to expect from the Architectural Press.

The measured drawings are clear and adequate to their purpose. Mr. Christopher Woodbridge and the other researchers who have contributed to this book have our gratitude for the care and accuracy of their delineations of buildings and parts of buildings, which mark the line of architectural history.

A few of the details shown no longer grace the positions for which they were designed. After long, if perhaps uneventful lives, they have fetched up at last in benevolent museums. To be thus preserved is doubtless better than to be irretrievably abandoned, but, uprooted and transplanted, much of their historical significance is lost. Historical architecture should be seen by the light of its human associations. It should be viewed as an expression of the culture of its period, studied as the embodiment of the thought which fashioned it. This is difficult to do within the unsympathetic walls of a museum. In those guarded halls we are too apt to see mere external form, and, like the crass professors in Kingsley's tale, with their embottled water-baby, to miss the wider and essential truth.

The large majority of illustrations in this assembly are of buildings in London or round about. The few instances deriving from a wider field seem to hesitate amongst so much urbanity, like country cousins on a visit to the town; but we are always glad to see our friends from the shires and find them not so rustic as we had arrogantly supposed.

This book gives us, in a form and compass convenient to handle, much valuable historical evidence which will help to build our knowledge of our history and to make a sure base from which we may advance with certainty.

J. B.

The Practical Exemplar of Architecture, being Measured Drawings and Photographs of Architectural Details selected by Mervyn E. Macartney, B.A., F.S.A., F.R.I.B.A. Seventh series. The Architectural Press. Price £1 1s. The seven series, ordered complete, can be obtained for £6 6s.

KELLY'S DIRECTORY OF THE BUILDING TRADES

This directory covers, and constitutes an invaluable guide to, the building and allied trades. It embraces England, Scotland, and Wales, and the principal towns in Ireland, the Channel Islands, and the Isle of Man. In addition to the names of upwards of 20,000 builders, it gives also the names of those engaged in the allied professions and trades, such as builders in concrete, plumbers and glaziers, gasfitters, sanitary engineers, architects, land and estate agents, surveyors, etc., and of manufacturers and suppliers of the different articles and materials used. The book comprises: 1: A places section, giving the names for each county, arranged alphabetically under the towns and villages; also such details as population, early closing and market days for each place; 2: an alphabetical classification of trades for the London postal district, arranged with the names under each trade heading in alphabetical order; 3: a similar classification of trades for the rest of England, Scotland, and Wales. There is also an extensive section giving, in alphabetical order, the names of branded articles and specialities used in the building trades, together with the names and addresses of the manufacturers. The tasks of revision and correction for the purposes of compilation of this edition must have been as arduous as ever, and the work has been done with thoroughness.

Kelly's Directory of the Building Trades. Sixteenth edition. Kelly's Directories Ltd., London. Price 50s. net.

ARCHITECTURAL CONSTRUCTION

This volume deals with construction in timber, and is divided into five parts, viz. design of beams; design of floor construction; design of roof construction; design of columns; and miscellaneous framing. We do not remember a modern book in which timber construction as applied to buildings is dealt with in such considerable detail as the present book, which will be found of considerable interest to all who wish to study timber construction from the point of view of strength. The book is very well printed, has excellent illustrations, and is provided with a number of illustrative worked problems so that the student may have numerical exercise in the use of the various formulæ. In recent years we have heard so much of steel-frame and reinforced concrete buildings in America that we have almost lost sight of the fact that in vast areas of America good home-grown timber is available practically at the site, and that factory buildings as well as domestic buildings are still commonly erected of timber in that country. The present book contains much that is of value to all who engage in the design of timber structures. E. S. A.

Architectural Construction. Vol. II. Part I: Wood Construction. By Walter C. Voss and Edward A. Varney. 224 pp.; large 4to. London: Chapman and Hall, Ltd. Price 32s. 6d. net.

CORRESPONDENCE

MEASURING, ESTIMATING, AND COSTING

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I regret that a mistake—my fault entirely—has crept in in the issue of the JOURNAL of September 28, in my article: "Measuring, Estimating, and Costing." Item 1, in the item of quantity of slates, under the sub-heading "Bill of Quantities," page 428, should read 4·183 thous., and consequently the example illustrating the extension of price should be:

4 thous. at £11 13s. 4d. per thous.=	..	..	£46 13 4
·183 thous. at £11 13s. 4d. per thous. (=[£11 13s. 4d. × 183] ÷ 1,000)=	..	..	2 2 8
			£48 16 0

T. SUMNER SMITH

The Gates, No. 5 Cheyne Walk, Chelsea, S.W. [*From* The Practical Exemplar of Architecture. Seventh series.]

THE DAMP-PROOF BUILDING

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—As regards Mr. Walker's comments on the trowelling of the first coat, I would like to point out that the allusion was to *rough* trowelling. Thus, if a small steel trowel is used, good work is done by shutting up the pores of the rendering while leaving numerous irregular ridges, which, in my experience, have always afforded a quite sufficient key for the succeeding coat.

W. BEESTON

PATINA

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I liked Mr. Attlee's article on "Patina" in last week's paper. May I say that I have a dustbin of the stuff every week?

HORATIO JAY

COMPETITION CALENDAR

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

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

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

R.I.B.A. EXAMINATION DATES

The dates of the forthcoming R.I.B.A. examinations are as follows:

Intermediate Examination

November 11, 12, 14, 15, and 17, 1927. Last day for receiving applications, October 18, 1927.

May 11, 12, 14, 15, and 17, 1928. Last day for receiving applications, April 11, 1928.

Final Examination

December 7, 8, 9, 10, 12, 13, 14, and 15, 1927. Last day for receiving applications, November 7, 1927.

July 4, 5, 6, 7, 9, 10, 11, and 12, 1928. Last day for receiving applications, June 4, 1928.

Special Examination

December 7, 8, 9, 10, 12, and 13, 1927. Last day for receiving applications, November 7, 1927.

July 4, 5, 6, 7, 9, and 10, 1928. Last day for receiving applications, June 4, 1928.

Special Examination in Design for former Members of the Society of Architects

December 7, 8, 9, 10, and 12, 1927. Last day for receiving applications, November 7, 1927.

July 4, 5, 6, 7, and 9, 1928. Last day for receiving applications, June 4, 1928.

Special Examination of Licentiates to qualify as Fellows

November 28, 29, 30, December 1 and 2, 1927. Last day for receiving applications, October 31, 1927.

April 16, 17, 18, 19, and 20, 1928. Last day for receiving applications, March 16, 1928.

Statutory Examination for the Office of District Surveyor in London and Building Surveyor under Local Authorities

October 17, 18, and 19, 1928. Last day for receiving applications, October 1, 1928.

Town-planning Examination

June 27, 28, 29, and July 2, 1928. Last day for receiving applications, March 1, 1928.

ARCHITECTURAL EDUCATION

We have received the prospectuses of the University of Manchester School of Architecture and of the Technical College, Cardiff, Department of Architecture and Civic Design.

The director of the University of Manchester School of Architecture is Professor A. C. Dickie, M.A., F.S.A., A.R.I.B.A. The Honours School of Architecture was established in 1903 pursuant to an arrangement made between the university, the Manchester Education Committee, and the Manchester Society of Architects. This arrangement came to an end in 1922, and the school is now solely under the control of the university. Special buildings in the university have now been provided in which all subjects in the curriculum can be taught. The accommodation includes studios, lecture rooms, antique and life room, library and reading-room, etc. Materials testing will be conducted in the engineering laboratory. The school is one of the "recognized" schools of the R.I.B.A., and its examinations are accepted as equivalent to those set in the Intermediate and Final Examinations for the Associateship of the R.I.B.A. The courses are intended to meet the needs of students who desire (1) To take a degree of the university with honours in architecture in the Faculty of Arts; (2) to take the certificate of the university in architecture. These degree and certificate courses are full-time courses and are arranged to cover a period of five years. In the fourth and fifth years the classes are taken at the university during the two terms from October to Easter; the remaining six months of each year must be spent in an architect's office. At the end of the third year successful candidates are exempted from the Intermediate Examination for Associateship of the R.I.B.A., and at the end of the fifth year are exempted from all subjects in the Final Examination for the R.I.B.A. except "professional practice," which examination is conducted independently by the R.I.B.A.; (3) to take a part-time course in architecture in which examinations in certain specified subjects are accepted as equivalent to the Intermediate A.R.I.B.A.; (4) to take a course in architecture without proceeding to a degree or qualification. In THE ARCHITECTS' JOURNAL for September 21, page 394, we stated that there are evening classes at the Manchester University School of Architecture. We are now informed that there are no evening classes at the Manchester University School of Architecture.

The head of the Department of Architecture and Civic Design at the Technical College, Cardiff, is Mr. W. S. Purchon, M.A., A.R.I.B.A. The department is approved and recognized by the R.I.B.A., which grants exemption from its own Intermediate Examination to students who pass successfully through the three years' full-time (day) course. Individual students who pass successfully through the diploma course are exempted from the R.I.B.A. Final Examination with the exception of the subject of professional practice. Full-time students in the department are eligible for the "R.I.B.A. Archibald Dawnay Scholarships."

The object of the atelier is the provision of facilities for the study of architectural design and draughtsmanship for architects' assistants who cannot attend day courses, and who have passed through three years' articles or other approved training. In the atelier instruction in design with criticisms will be available in all stages of the subject. In order that all classes of students may benefit from the course, the work will be divided into three grades, a prize being awarded in each grade if there is sufficient competition and the work reaches a proper standard. A jury will meet

three times during the session to mark and prepare a criticism of the designs. In each grade three subjects will be set during the session.

Selected subjects set in the atelier, if countersigned by the head of the department, may be submitted for approval by candidates for the R.I.B.A. Final. The Technical College is one of the well-known group of civic buildings in Cathays Park, and arrangements have been made for the students in this department to study these buildings under proper supervision, and to visit from time to time the National Museum of Wales and the new laboratories of the University College, now in course of construction.

A NEW PHOTO-PRINTING PROCESS

Any means by which a reduction can be effected in the annual expenditure incurred by architects, engineers, and contractors on plan reproduction is a matter of more than passing interest—especially if it can be shown that the procedure involves no lowering of standards. Both these conditions are fulfilled by the Coralin photo-printing paper—recently introduced by Messrs. B. J. Hall & Co., Ltd.—which gives a permanent non-fading print in red-brown lines on a light ground at the same cost as a blue print. When one remembers that a blue print can only be altered in the most inadequate fashion with a red chalk pencil or with ink lines that cannot be deciphered without difficulty, very considerable advantages are offered by the Coralin print, which costs no more, and at the same time can be evenly coloured, and corrected or altered in ink or pencil with the same ease as an ordinary blue line or black line photo-print. In addition to this, professional men are well aware how readily the lines on ordinary photo-prints are liquefied by soap, soda, limewater and acid splashes, and the mistakes and delays attendant thereon. Coralin lines, on the other hand, cannot be dissolved or removed by any of the fluids ordinarily in use on building works or in the machine-shop.

Coralin sensitized paper requires no special apparatus of any description, and can be used in conjunction with the customary electric photo-printing machine or sun frame. After the paper has been exposed to either form of light, the only other operation necessary in order to obtain the finished print is to pass a developing pad lightly over the surface. The development is instantaneous and odourless, and the definition—even of the finest line and figure—is excellent. Moreover, the use of developing and washing baths, which causes delay while the print is drying, is entirely dispensed with.

At a demonstration given to our representative it was shown that prints by this method from pencil tracings and pencil drawings on detail paper yielded a fidelity of delineation which was far in advance of what is obtainable with blue prints or true-to-scale reproductions—the reason being that Coralin paper is more sensitive to the delicate lines of pencil work. For the convenience of those who wish to amend or make additions to a Coralin print, a solvent for the removal of any part of the reproduction, and a special ink which matches the red-brown colour of the lines, can be obtained from the patentees.

To architects and engineers who possess electric photo-printing machines as part of their plan reproduction equipment, the advantage of the new sensitized paper will be obvious, in view of the speed, low cost, and excellence of the results which are ensured by its use. The paper should also be invaluable to professional men who practise in remote districts and are out of touch with the larger towns. With the aid of a sun frame and a developing pad they will at once become independent of the post. There are ten yards in every roll of Coralin paper, and it can be obtained in widths of 30 in. or 40 in. Each roll contains in its hollow centre an envelope holding sufficient powder to develop the entire length, together with the necessary instructions. It may be added that the paper will keep in good condition for many months.

ANNOUNCEMENTS

Mr. W. A. Williams, architect, is opening an office at Bank Chambers, Devizes, Wilts, at which address he will be glad to receive catalogues, etc.

Mr. E. B. Musman, B.A., A.R.I.B.A., has removed to 7 Carteret Street, Westminster, S.W.1.; telephone, Victoria 2835.

TRADE NOTES

The motor travelling exhibit of the National Radiator Co., Ltd., will give the following demonstrations: October 13 and 14, open space, Bull Green, Halifax; October 17, 18, and 19, open space, bottom of Cambridge Road, St. John's Road, Huddersfield.

The directors of Messrs. Bell's United Asbestos Co., Ltd., have declared an interim dividend on the old ordinary shares, Nos. 1 to 140,000 and Nos. 200,001 to 353,532, of 1s. per share, being 5 per cent. (actual), less income tax, on account of the current year. The dividend will be paid on October 17 to shareholders on the register on October 3, and the ordinary share transfer books are closed from October 4 to 15, both dates inclusive. The directors desire to point out that in raising the interim dividend from 2½ per cent. to 5 per cent. they are merely reverting to their practice prior to 1921, and that this does not indicate that an increased total dividend for the year will be paid.

Messrs. Rayner & Co., patent agents, have written to us to call attention to the new situation which is created by the coming into force of the new Patents and Trade Marks Act in the Irish Free State on October 1, 1927. They state: "Previously, British patents and trade marks have covered the whole of Ireland, but, with the new Act in force, they will automatically cease to function in the Irish Free State. It is therefore necessary, for all holders of British patents and trade marks desiring to retain their protection in Southern Ireland, to "validate" their patents and trade marks there. British patents and trade marks will therefore be continued upon the Irish Register if a certificate of the patent or trade mark is lodged in the Free State and renewal fees paid as in England, together with other conditions which are required." Should readers desire more detailed information on this subject, Messrs. Rayner & Co., 5 Chancery Lane, W.C.2, will be glad to supply it free of charge.

A CALCUTTA OFFICE BLOCK

Following are the names of the architects, contractors, etc., for the new offices, 16 Strand Road, Calcutta, for Messrs. Mackinnon, Mackenzie & Co., illustrated on pages 473 to 478. Architects: Messrs. Sudlow, Ballardie and Thompson, F. and AA.R.I.B.A.; resident engineer, Mr. E. Lonnon; consulting engineers, Messrs. Reade, Jackson and Parry, London; consulting electrical engineer, Mr. G. Bartholemew, Calcutta; Britannia Building and Iron Co., Ltd., and Indian Patent Stone Co., Calcutta, excavation; Simplex Concrete Piles, Ltd., Westminster, and Indian Patent Stone Co., Calcutta, foundations; Mr. D. K. Bose, B.SC.(Edin.), Calcutta, reinforced concrete floors and staircases; Indian Patent Stone Co., Calcutta, reinforced concrete skeleton; Fenning & Co., Ltd., Hammersmith, granite work to ground story; Martin & Co., Calcutta, Chunar stone to superstructure; Luxfer Co., London, glazed dome and casements; Russa Engineering Works, Ltd., Calcutta (Henley wiring), electric wiring; General Electric Co., Calcutta, electric light fixtures; Davidson & Co., Belfast, Sirocco fans; J. B. Norton and Sons, Ltd., Calcutta, plumbing; James Gibbons, Ltd., Wolverhampton, metalwork, door and window furniture; Bengal Telephone Co., Ltd., Calcutta, telephones; Britannia Building and Iron Co., Ltd., Calcutta, plaster and decorative plaster; Garden Reach Workshops, Calcutta, joinery, furniture, and office fittings; L. E. Salsiccione, Ltd., Calcutta, marble; Smith, Major and Stevens, lifts; Scott and Saxby, Calcutta, tube well for water supply; Worthington, Simpson & Co., electric pumps. The steelwork was manufactured by Messrs. Dorman Long & Co., Ltd., and erected by Messrs. Braithwaite & Co. Engineers, Ltd.

THE WEEK'S BUILDING NEWS

In order that condemned houses may be demolished, the CHELMSFORD Corporation has instructed the borough engineer to prepare plans for the erection of fifty houses on the Boarded Barn estate for the accommodation of the displaced tenants.

*

The CHELMSFORD Corporation is giving the cathedral authorities the option of sites in King's Road and Swiss Avenue on the Boarded Barns estate for the erection of a church.

*

Plans passed by the SANDERSTEAD U.D.C.: Twelve houses, Foxearth Road, for Messrs. R. Costain and Son, Ltd.; transformer and switch house, Addington Road, for County of London Electric Lighting Co., Ltd.

*

Plans passed by the PURLEY U.D.C.: Fourteen houses, Woodcrest Road, for Mr. R. D. Taylor; seven houses, Brancaster Lane, for Messrs. Lawes Cherry & Co.; three houses, Brancaster Lane, for Mr. H. J. Frowing; two houses, Green Lane, for Mr. A. T. Bate.

*

Plans passed by the COULSDON U.D.C.: Two houses, Woodmansterne Road, for Mr. R. Chart; ten houses, Rickman Hill, for Mr. D. King; forty-two houses, Rickman Hill and Westleigh Avenue, for Messrs. H. Hemmings, Ltd.; new streets, Coulsdon Heights estate, for Coulsdon Heights Estate Co., Ltd.; four houses, St. Andrew's Road, for Mr. H. J. Salter; six houses, Clifton Road, for Mr. H. C. Doddrell.

*

Plans passed by the SELSDON (Surrey) U.D.C.: Forty houses, Farleigh and other roads, for Mr. E. C. Astington; alterations and additions, Selsdon Park Hotel, for Mr. A. D. Sanderson; new streets, Selsdon Garden Village, for Messrs. Costain and Son, Ltd.

*

The COULSDON U.D.C. is purchasing land in Farleigh Road, Addington, for a housing scheme.

*

The EPSOM R.D.C. has prepared preliminaries in connection with the town planning of Banstead and Woodmansterne.

*

The London Baptist Association is to build a church and church hall at Addington Road, SELSDON, Surrey.

*

The Surrey Garden Village Trust, Ltd., has prepared a scheme for the erection of houses near Farleigh Road, ADDINGTON, Surrey.

*

The COULSDON U.D.C. is to invite specialist firms to submit designs for the construction of a road bridge at Foxley Hill, Purley.

The Post Office authorities are to erect a post office in Malcolm Road, COULSDON.

*

The SHIPLEY U.D.C. has called for a report as to the need for the erection of further houses.

*

The SHIPLEY U.D.C. has asked a committee to report as to the erection of additional municipal office accommodation.

*

Plans passed by the SHIPLEY U.D.C.: Bank, Bradford Road, for Barclays Bank, Ltd.; six houses, West End Place, for Mr. G. West; new road off Bankfield Grove, for Messrs. A. and J. Chippindale.

*

Plans passed by the MARYLEBONE B.C.: Shelters, Marylebone Road and Allsop Place, for Madame Tussaud, Ltd.; garages, Edgware Road and Lyons' Place, for Messrs. O'Donoghue and Halfhide; new building, Grove Road and Hall Road, for Mr. A. J. Healy; additions, 37-39 Elm Tree Road, for Mr. F. J. Wills.

*

On behalf of the MARYLEBONE Borough Council Sir Owen Williams is preparing preliminary designs for the reconstruction of the canal bridge at Grove Road, St. John's Wood.

*

The Roman Catholic Trustees give notice of their intention to proceed with the erection of a central school in CHORLEY.

*

Plans passed by the NEWBURY Corporation: Additions, Shefford Lodge, Station Road, for Messrs. Cooke Bros.; alterations and additions, White House, public-house, London Road, for proprietors; alterations and extensions, West Street, for Messrs. Pass & Co.; alterations and additions, 33-34 Cheap Street, for Mr. James Tufnail.

*

The Improvements Committee of the KENSINGTON B.C. recommends the adoption of the subjoined scheme, drafted by the borough engineer, for the reconstruction of the town hall and the provision of additional accommodation: Demolish the present public library building, formerly the vestry hall; acquire part of the burial ground; erect a new central library, additional municipal offices and other buildings for public purposes; and connect the existing town hall and the new municipal offices and new library by means of a bridge or bridges over the Church Walk passage-way and also by means of tunnels under the walk.

*

A scheme is proposed for the erection of a block of flats at Holland Park Tube Station, abutting on Holland Park Avenue and Lansdowne Mews, KENSINGTON.

The CHORLEY Education Committee reports in favour of the provision of a central school.

*

The Hebrew Community is to erect a Jewish school on the site of 111-117 Lancaster Road, KENSINGTON.

*

The Borough Engineer of EAST HAM has prepared plans for the erection of tenements on the Flander's Road site and tenders are to be obtained.

*

Plans passed by the EAST HAM Corporation: Two steel-framed buildings, High Street South, for Sommerville-Barnard Construction Co., Ltd.; alterations, Social Club, Barking Road, for Mr. T. F. Ingram, F.R.I.B.A.; alterations, 58 Barking Road, for Mr. H. Byron, F.R.I.B.A.; extensions, Trebor Works, Shaftesbury Road, for Messrs. J. C. Mellis & Co.; alterations, 809-813 Romford Road, for Messrs. F. W. Woolworth, Ltd.; extensions, Co-operative Stores, High Street, for Mr. L. G. Ekins, F.R.I.B.A.

*

Plans passed by the HORNSEY Corporation: New road at Bishop's Wood, Hampstead Lane, for Messrs. R. B. Grantham & Co., 5 Little College Street, S.W.1; twelve houses, Page's Hill, for Messrs. Ellyatt & Co., of Muswell Hill; twelve houses, Eastern Road, for Mr. W. B. Collins of Muswell Hill; telephone exchange, Muswell Hill Road, for Canonbury Construction Co., Ltd.; additions, St. Mary's School, High Street, for Mr. A. Cox, 11 Southampton Row.

*

Plans passed by the BATTERSEA B.C.: Extensions, 44-48 Lavender Hill, for Messrs. T. Jay Evans and Son; lead mills, York Road, for Messrs. J. W. Falkner and Sons; house, Blenkarne Road, for Mr. W. F. Goodchild.

*

The BATTERSEA B.C. has obtained sanction from the Ministry of Health to proceed with the erection of the ninth and tenth blocks of dwellings on the York Road site. The eighth block is now in hand, the work being carried out by the Council's works department.

*

The WIMBLEDON Corporation has in view land in Grove Road for another housing scheme.

*

The WIMBLEDON Corporation has received sanction to borrow £20,000 for further housing advances.

*

A report of the CHELMSFORD Corporation upon the new water scheme shows the present commitments to be £78,000, and estimated further works for which contracts have not been arranged at a cost of £8,000.

The Governors of Christ's College, FINCHLEY, are to adapt the old school premises for a gymnasium and workshops.

*

The Rev. Herbert Trundle, the vicar, is raising funds for the erection of a permanent church for St. Alban's, GOLDERS GREEN.

*

The TRURO Corporation has provisionally passed plans for the erection of a territorial drill hall at Hendra.

*

Plans passed by the BRISTOL Corporation: fourteen houses, Maple Road, Horfield, for Messrs. W. Hendy and Sons; eight houses, Hottom Gardens, for Messrs. A. G. and G. H. Hill; sixteen houses, Toronto Road, for Mr. W. J. J. Lee; and nine houses, Crew's Hole Road, for Messrs. William Butler & Co., Ltd.

*

The BRISTOL Corporation is to borrow £300,000 for the construction and equipment of dock extensions.

*

The LEEDS Corporation has approved the elevations of premises to be erected in Regent Street by Messrs. Joseph Hobson and Son.

*

Messrs. Prices (Tailors) Ltd. propose to erect a factory and offices in Cardigan View, LEEDS.

*

The Thomas Edmondson trustees are to erect business premises on the White Horse estate, York Road, LEEDS.

*

The LEEDS Corporation Electricity Committee is endeavouring to obtain a site in the widened portion of Guildford Street for the erection of showrooms.

*

Plans passed by the MANCHESTER Corporation: details of steelwork to offices, South Parade, Back South Parade, Southgate, and St. Mary's Parsonage; conveniences at St. Mark's Schools, Holland Street, Newton Heath; three shops and houses, Waterloo Road, Cheetham; alterations, Jockey Inn, Coral Street, Ardwick.

*

Messrs. John Robinson & Co., Ltd., are acquiring land in the vicinity of Avonmouth Old Dock, BRISTOL, for the extension of their oil-cake mill.

*

Plans passed by the KENSINGTON B.C.: additions, rear 35 Hyde Park Gate; new streets, Holland Park estate; building site of 605-609 Harrow Road; iron and glass shelters at Harrods Stores in Brompton Road, Hans Road, and Hans Crescent.

*

The HERNE BAY U.D.C. has reviewed the various schemes for the improvement of the pier entrance and instructed the surveyor to prepare plans for one of the schemes which can be carried out in stages.

Plans passed by the ILFORD Corporation: sixteen houses, Chepstow Crescent, for Mr. W. H. Lewis; alterations, Britannia Works, Roden Street, for Ilford Ltd.; choir room, Wesleyan Church, High Road, for Mr. R. Stroud; fifteen houses, Newbury Road, for Mr. C. F. Fryatt; six bungalows, Babbacombe Gardens, for Messrs. Brand and White; thirteen houses, Exeter Gardens, for Mr. A. P. Griggs; six houses, Somersby Gardens, for Mr. A. Smith; twelve houses, Auckland Road, for Messrs. W. Longworth & Co.; alterations, 94 St. Andrews Road, for Dr. Barnardo's Homes; six houses, Grange View Villas, for Mr. F. D. Pipe; workshop, showroom and garages, Vernon Road, for Mr. A. Gilderson; rebuilding "The Plough," Ilford Lane, for Mr. S. A. S. Yeo; shops and hall, Green Lane, for Mr. F. D. Pipe.

*

Plans passed by the BARKING Town U.D.C.: sixteen houses, Lyndhurst Gardens, for Mr. H. Samborough; three timber stores, River Road, for Messrs. Pearson and Son; four houses, Tanner Street, for Mr. J. Bauckham; buildings, West Bank, for Russian Oil Products, Ltd.

*

The ILFORD Corporation and the Barking Town U.D.C. have formed a joint committee to carry out a sewerage scheme for the districts at an estimated cost of £275,250. Sewage works are to be constructed on the Ripple marches.

*

Plans passed by the GRAVESEND Corporation: cooper's shop and extension of landing stage at West Street brewery, for Messrs. Bridgland and Clay; six houses, Cecil Road, for Mr. W. Gould; new road off Singlewell Road, for Gravesend Land Co.; four houses, Parrock Avenue, for Messrs. Robert Hopkins and Sons; additions, 11 Harmet Street, for Gravesend Co-operative Society; four houses, Ferndal Road, for Messrs. Reid & Co.; additions, 3-4 New Road, for Messrs. Marks and Spencer, Ltd.; four houses off Cross Lane West, for Mr. J. R. Pettman; four houses, Ridgeway Avenue, for Messrs. W. E. and H. E. Thomas, Ltd.

*

The YORK Corporation Housing Committee has authorized the erection of a further 110 houses on the Tang Hall estate, and tenders are to be invited.

*

The Board of Education has approved the proposals of the YORK Education Committee for remodelling the Bilton Street elementary school.

*

The GUILDFORD Corporation has obtained sanction for a loan of £30,000 for further housing grants.

*

The council of the GUILDFORD Congregational Church is acquiring a site on the Aldershot Road housing estate for the erection of a church.

Plans passed by the YORK Corporation: additions, 1-4 Richard Street, for York House Improvement Society, Ltd.; additions, 11 Bishopthorpe, for Messrs. Mallory's, Ltd.; two houses, Bootham Crescent, for Messrs. H. Colman and Son; additions, Palais de Danse, Goodramgate, for National Electric Picture Theatres, Ltd.; two houses, Finsbury Avenue, for Mr. H. C. De Burgh; three houses, Melrosegate, for Mr. C. Tessyman; additions, York County Hospital, Monkgate, for governors.

*

Messrs. Watson and Everitt are in negotiation with the LOWESTOFT Corporation regarding plans for buildings on the site of Messrs. Morse's maltings in Commodore Road.

*

The MANCHESTER Education Committee is acquiring a site for the new Aspinal municipal school at Gorton.

*

The MANCHESTER Education Committee has asked the architect to prepare plans for the enlargement of the Burnage municipal school.

*

The MANCHESTER Education Committee has acquired a site of eight acres on the Ladybarn housing estate for the erection of a school.

*

The MANCHESTER Corporation is to proceed with the erection of 1,144 houses on the Ladybarn housing estate.

*

At the request of the Lord Bishop of Manchester the Corporation has allocated sites on the WITHINGTON and Blackley housing estates for the erection of churches to be built by the Church Building Commission of the Manchester Diocese.

*

The Rev. F. W. Kershaw is to erect a Roman Catholic elementary school at Deane, BOLTON, for about 250 children.

*

The Director of Education has prepared specifications outlining the accommodation to be provided at the proposed new elementary school to be erected at Castle Hill, BOLTON, and the Education Committee have approved the scheme.

*

The YORK Corporation has obtained sanction to borrow £16,000 for the purchase of 83 acres of land at Heworth for a housing scheme.

*

The CHELTENHAM Corporation is in negotiation for land in Folley Lane for a re-housing scheme in connection with slum clearances.

*

The SALFORD Corporation has appointed Mr. Charles Swain, of Manchester, as architect for the extension of the tramcar and motor bus depot at Eccles Road, Weaste.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₁	Abergavenny	S. Wales & M.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W. Counties	1 8	1 3½
A₂	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
G₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B₂	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A₂	Atherstone	Mid. Counties	1 6½	1 2
B₂	Aylesbury ..	S. Counties	1 4½	1 0½
B₂	BANBURY	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₂	Basingstoke	S.W. Counties	1 4½	1 0½
B	Bath ..	S.W. Counties	1 6	1 1½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₂	Bewdley ..	Mid. Counties	1 7	1 2½
B₂	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	*1 10	1 4½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W. Counties	1 8	1 3½
A	Blackpool	N.W. Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₂	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W. Counties	1 8	1 3½
A₂	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
B₂	Bovey Tracey	S.W. Counties	1 5	1 1
A	Bradford ..	Yorkshire	1 8	1 3½
A₂	Brentwood	E. Counties	1 7	1 2½
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₂	Brixham ..	S.W. Counties	1 4½	1 0½
A₂	Bromsgrove	Mid. Counties	1 7	1 2½
O	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A₁	Buxton ..	N.W. Counties	1 7½	1 2½
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W. Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon	N.W. Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
A₂	Cheltenham	S.W. Counties	1 6½	1 2
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	*1 8	1 3½
B₂	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
B₁	Colwyn Bay	N.W. Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₂	Crewe ..	N.W. Counties	1 6½	1 2
A₂	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B₂	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W. Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
G₁	Dorchester	S.W. Counties	1 4	1 0½
A₂	Driffield ..	Yorks	1 6½	1 2
A₂	Droitwich ..	Mid. Counties	1 6½	1 2
A₁	Dudley ..	Mid. Counties	1 7½	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	*1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₂	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B₂	Folkestone	S. Counties	1 5	1 1
A	Frodsham ..	N.W. Counties	1 8	1 3½
B₂	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
A₂	Gloucester	S.W. Counties	1 6½	1 2
A₂	Goole ..	Yorkshire	1 7	1 2½
B	Gosport ..	S. Counties	1 6	1 1½
A₂	Grantham	Mid. Counties	1 6½	1 2
A₁	Gravesend	S. Counties	1 7½	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A	Hanley ..	Mid. Counties	1 8	1 3½
A	Harrogate	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S. W. Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W. Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

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

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₁	Kendal ..	N.W. Counties	1 5½	1 1½
B₁	Keswick ..	N.W. Counties	1 5½	1 1½
B	Kettering ..	Mid. Counties	1 6	1 1½
A₂	Kidderminster	Mid. Counties	1 7	1 2½
B₂	King's Lynn	E. Counties	1 5	1 1
A	LANCASTER	N.W. Counties	1 8	1 3½
A₂	Leamington	Mid. Counties	1 7	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₂	Lewes ..	S. Counties	1 4½	1 0½
A₂	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W. Counties	*1 10	1 4½
B	Llandudno	N.W. Counties	1 5½	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₂	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₂	Margate ..	S. Counties	1 4½	1 0½
A₂	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
	Middlesbrough	N.E. Coast	1 8	1 3½
A₂	Middlewich	N.W. Counties	1 6½	1 2
B₂	Minehead ..	S.W. Counties	1 5	1 1
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₂	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
A₂	Norwich ..	E. Counties	1 6½	1 2
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 8	1 3½
A₂	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₂	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	*1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₂	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₂	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₂	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₂	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
B₂	Salisbury	S.W. Counties	1 4½	1 0½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₂	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
A₂	South'pton	S. Counties	1 6½	1 2
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swadlincote	Mid. Counties	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W. Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
B	Teignmouth	S.W. Coast	1 6	1 1½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 4	1 0½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₁	Walsall ..	Mid. Counties	1 7½	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A₂	Warwick ..	Mid. Counties	1 7	1 2½
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₂	Whitby ..	Yorkshire	1 7	1 2½
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₂	Worcester ..	Mid. Counties	1 6½	1 2
A₂	Worksop ..	Yorkshire	1 6½	1 2
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3

* In these areas the rates of wages for certain trades (usually Painters and Plasterers) vary slightly from those given. The rates for each trade in any given area will be sent on request.

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

*

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	11	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	15	0
Screened ballast or gravel, add 10 per cent. per yd.			
Clinker, breeze, etc., prices according to locality.			
Portland cement, per ton	£2	19	0
Lias lime, per ton	2	10	0
Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.			

Transport hire per day:

Cart and horse	£1	3	0	*Trailer*	£0	15	0
3-ton motor lorry	3	15	0	*Steam roller*	4	5	0
Steam lorry, 5-ton	4	0	0	*Water cart*	1	5	0

*

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube	0	3	0
Exceeding 6 ft., but under 12 ft., add 30 per cent.			
In stiff clay, add 30 per cent.			
In underpinning, add 100 per cent.			
In rock, including blasting, add 225 per cent.			
If basketed out, add 80 per cent. to 150 per cent.			
Headings, including timbering, add 400 per cent.			
RETURN, fill, and ram, ordinary earth, per yd.	£0	1	6
SPREAD and level, including wheeling, per yd.	0	1	6
FILLING into carts and carting away to a shoot or deposit, per yd. cube	0	10	6
TRIMMING earth to slopes, per yd. sup.	0	0	6
HACKING up old grano. or similar paving, per yd. sup.	0	1	3
PLANKING to excavations, per ft. sup.	0	0	5
DO. over 10 ft. deep, add for each 5 ft. in depth, 30 per cent.			
If left in, add to above prices, per ft. cube	0	2	0
HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	0	2	1
DO. 6 in. thick, per yd. sup.	0	2	10
PUDDLING, per yd. cube	1	10	0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3	0
DO. 6-2-1, per yd. cube	1	18	0
DO. in upper floors, add 15 per cent.			
DO. in reinforced-concrete work, add 20 per cent.			
DO. in underpinning, add 60 per cent.			
LIAS-LIME CONCRETE, per yd. cube	£1	16	0
BREEZE CONCRETE, per yd. cube	1	7	0
DO. in lintels, etc., per ft. cube	0	1	6
CEMENT concrete 4–2–1 in lintels packed around reinforcement, per ft. cube	0	3	9
FINE concrete benching to bottom of manholes, per ft. cube	0	2	6
FINISHING surface of concrete spade face, per yd. sup.	0	0	9

DRAINER

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

*

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

*

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

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

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

BRICKLAYER

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

*

London stocks, per M.	£4	15	0
Flettons, per M.	2	18	0
Staffordshire blue, per M.	9	10	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers per M.	24	10	0
DO. *headers, per M.*	24	0	0
Colours, extra, per M.	5	10	0
Seconds, less, per M.	1	0	0
Cement and sand, see "Excavator" above.			
Lime, grey stone, per ton	2	17	0
Mixed lime mortar, per yd.	1	6	0
Damp course, in rolls of 4½ in., per roll	0	2	6
DO. *9 in. per roll*	0	4	9
DO. *14 in. per roll*	0	7	6
DO. *18 in. per roll*	0	9	6
BRICKWORK in stone lime mortar, Flettons or equal, per rod	£33	0	0
DO. in cement do., per rod	36	0	0
DO. in stocks, add 25 per cent. per rod.			
DO. in blues, add 100 per cent. per rod.			
DO. circular on plan, add 12½ per cent. per rod.			
DO. in backing to masonry, add 12½ per cent. per rod.			
DO. in raising on old walls, etc., add 12½ per cent. per rod.			
DO. in underpinning, add 20 per cent. per rod.			
HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup.	£0	1	0
BEDDING plates in cement mortar, per ft. run	0	0	3
BEDDING window or door frames, per ft. run	0	0	3
LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run	0	0	2
CUTTING do. in old walls in cement, per ft. run	0	0	4
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup.	0	0	7
TERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cuttings, per ft. run	0	3	6
DO. 14 ft. by 9 in. do., per ft. run	0	6	0
FLAUNCHING chimney pots, each	0	2	0
CUTTING and pinning ends of timbers, etc., in cement	0	1	0
FACINGS fair, per ft. sup. extra	0	0	3
DO. picked stocks, per ft. sup. extra	0	0	7
DO. red rubbers gauged and set in putty, per ft. sup. extra	0	4	9
DO. in salt white or ivory glazed, per ft. sup. extra	0	5	6
TUCK pointing, per ft. sup. extra	0	0	10
WEATHER pointing, do. do.	0	0	3
TILE creasing with cement fillet each side per ft. run	0	0	6
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1¼ in., per yd. sup	0	6	0
DO. 2 in., per yd. sup.	0	7	0
If coloured with red oxide, per yd. sup.	0	1	0
If finished with carborundum, per yd. sup.	0	0	6
If in small quantities in finishing to steps, etc., per ft. sup.	0	1	4
Jointing new grano, paving to old, per ft. run	0	0	4
Extra for dishing grano, or cement paving around gullies, each	0	1	6
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ¾ in., per yd.	0	8	6
DO. SKIRTING, 6 in.	0	0	11
BREEZE PARTITION BLOCKS, set in cement, 1¼ in. per yd. sup.	0	5	3
DO. DO. 3 in.	0	6	6
BREEZE fixing bricks, extra for each	0	0	3

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

MASON

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

*

Portland Stone:			
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	9

SLATER AND TILER

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

N.B.—Tiling is often executed as piecework.

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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

*

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

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

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

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

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

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

*

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

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

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

continued overleaf

CARPENTER AND JOINER: *continued.*

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

SMITH

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

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

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

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

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

PLASTERER

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

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

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LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ¾ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	3
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, *1s. 8½d. per hour.*

*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	4½
DO. 26 oz.	0	0	5
Cathedral white, per ft.	0	0	7
Polished plate, British ¼ in., up to 2 ft. sup. per ft.	0	1	6
DO. *4 ft. sup.* „	0	2	9
DO. *6 ft. sup.* „	0	3	0
DO. *20 ft. sup.* „	0	3	7
DO. *45 ft. sup.* „	0	3	9
DO. *65 ft. sup.* „	0	3	11
DO. *100 ft. sup.* „	0	4	4
Rough plate, ⅛ in., per ft.	0	0	6½
DO. *¼ in., per ft.*	0	0	6⅞
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, 1s. 6d. to 2s. 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, 6½d. to 8d. per ft. according to size.

PAINTER AND PAPERHANGER

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

*

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

*

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

SUNDRIES

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

FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, 1/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 3/16 in. punched per M. grey	16	0	0
DO., *red*	18	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ¼ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7

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

PLYWOOD, per ft. sup.

Thickness	1/16 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	—	—	—	—	—