Wednesday, August 12, 1925. Vol. LXII. No. 1597.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

VERSAILLES LE GRAND!

. . . Stand by, clear the way, make room for the pompous appearance of Versailles le Grand! But no; it fell so short of my idea of it, mine, that I have resigned to Gray the office of writing its panegyric. He likes it. They say I am to like it better next Sunday; when the sun is to shine, the king is to be fine, the waterworks are to play, and the new knights of the Holy Ghost are to be installed. Ever since Wednesday, the day we were there, we have done nothing but dispute about it. They say, we did not see it to advantage, that we ran through the apartments, saw the garden en passant, *and slubbered over Trianon. I say, we saw nothing. However, we had time to see that the great front is a lumber of littleness, composed of black brick, stuck full of bad old busts, and fringed with gold rails. The rooms are all small, except the great gallery, which is noble, but totally wainscotted with looking-glass. The garden is littered with statues and fountains, each of which has its tutelary deity. In particular, the elementary god of fire solaces himself in one. In another, Enceladus, in lieu of a mountain, is overwhelmed with many waters. There are avenues of water-pots, who disport themselves much in squirting up cascadelins. In short, 'tis a garden for a great child. Such was Louis Quatorze, who is here seen in his proper colours, where he commanded in person, unassisted by his armies and generals, and left to the pursuit of his own puerile ideas of glory.—Correspondence of* HORACE WALPOLE: *To* RICHARD WEST, ESQ.

9 Queen Anne's Gate, Westminster.

Frascati

From a water-colour by E. Guy Dawber, P.R.I.B.A.

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate. Westminster.

Wednesday, August 12, 1925. Volume LXII. No. 1597.

On Exhibitions

IF exhibitions nowadays grow more numerous it is doubtful if they grow more magnificent. The Shushan exhibition, organized by King Ahasuerus, at which he showed "the riches of his glorious kingdom," for a hundred and fourscore days, described in the Bible, must surely be the prototype of our British Empire Exhibition. The exhibits included "white, green, and blue hangings, fastened with cords of fine linen and purple to silver rings and pillars of marble; the beds were of gold and silver, upon a pavement of red and blue and white and black marble." A truly gorgeous architectural setting one surmises.

At Venice, in 1268, Lorenzo Tiepolo organized a very splendid exhibition of art and industry, combined, too, with a water fête, and so on right through the Middle Ages. The first modern exhibition was held in London in 1756. It was organized, like so many subsequent ones, by the Society of Arts, who offered prizes for improvements in the manufacture of tapestry, carpets, and porcelain. From that time the exhibition became a recognized expedient for stimulating trade and commerce, both nationally and internationally, and a large number of exhibitions were held in various European towns. Of these the next of great importance was the International Exhibition held in Hyde Park in 1851, in the huge building designed by Joseph Paxton—who was afterwards knighted—which was subsequently moved to Sydenham.

Paris then started a series of exhibitions. The first of any note was held in 1878, and resulted in the purchase by the city of the Palais du Trocadéro. Eleven years later another was held in Paris, this time bequeathing Eiffel's tower to posterity. Paris reached its zenith as an exhibition centre in 1900, when the largest exhibition until then held in Europe filled a great part of the city. For this exhibition there were many specially designed buildings, which have since been absorbed into the town. The most important are the Petit Palais, by Charles Girault; and the Grand Palais, by Deglane, Louvet, and Thomas.

Meanwhile, as may be imagined, America was not altogether idle in the organization of these gatherings which were doing so much to stimulate trade in the various European countries, and in 1893, after much advertising, the great World's Fair at Chicago was opened. America was probably the first country, at any rate in modern times, to realize the architectural possibilities which such an enterprise afforded, and those concerned with the organization did not hesitate to consult the best architects of the day, and so McKim and Burnham, Sullivan and Post, were set to work to design a Horticultural Hall, a Women's Palace, a Machinery Hall, an Art Palace, and subsidiary buildings. From 1850 many designs, which emanated from the Ecole des Beaux-Arts, found their way to America, and it may be presumed that there was an unprecedented search for whatever could be turned to account in the production of the World's Fair buildings, and that these became prototypes for most of the subsequent large exhibitions for some time.

And so it comes about that exhibitions to-day afford great architectural opportunities, and should exercise a profound influence. The exhibition exists primarily for the interchange of ideas and commodities, and this should apply not only to the exhibits themselves, but also to the buildings which house them. There is little doubt that the recent Gothenburg exhibition has had an important architectural influence, not only in Sweden itself, but also in other countries. The particular advantage of the exhibition as a form of architectural expression is that it is so little hampered by material considerations. The accommodation which the various buildings are required to provide is, for the most part, neither exacting nor intricate: restrictions of ancient lights, building lines, party-wall questions, do not, as a rule, arise. The exhibition building tends, in fact, to become "pure architecture" rather than "programme architecture," and thus affords an opportunity for the expression of ideas which often fail to find utterance under more mundane conditions. This does not mean to say that each separate building can be a law unto itself; far from it.

It is now realized that coherence in the arrangement of an exhibition is essential. The success of our own Empire Exhibition is due to consideration of this fact, and its lay-out is masterly. The supreme difficulty confronting the organizers of large exhibitions is how to admit of variety and yet retain formality. Balance of plan is useless without balance in elevation, and so the best of lay-outs can be easily ruined. Unless strict control is maintained, the exhibition becomes a mere catalogue in its diversity without any coherence. But balance is not synonymous with repetition, neither does rhythm entail symmetry. The British Empire Exhibition is primarily industrial, and this fact—and this is no disrespect, but rather praise—is expressed in the best of the buildings, which have, moreover, about them a certain stolidity that is perhaps essentially British. If the architecture at Wembley is not inspired, it may be said to be fitting. The Paris Exhibition, on the other hand, is primarily, if not entirely, an art exhibition. Moreover, it is situated in the middle of the city, instead of being a city to itself, as it were. There are architectural advantages and disadvantages from each of these positions, although there can be little doubt by now which is most favourable for the gate returns. At Paris there is a diversity in the buildings which is a little bewildering; but, as might be expected, the general note is rather one of gaiety and pleasure than of industry and business. The two exhibitions are, in fact, peculiarly characteristic of their country's outlook. France never has, and never will, become industrialized. (Was it, we wonder, with prophetic vision that she foresaw the mess and chaos awaiting those countries which bowed to the gods of iron and steel?) France respects the arts, particularly the art of living, and

so, as is fitting, when she has an exhibition it is one devoted to art, and she builds it in the heart of her city, astride her river, along the banks of which she sets her exhibition restaurants, and whose glittering surface she garlands with gay barges and floating fountains.

It is doubtful if the Empire Exhibition will give much impetus to architecture, although it has certainly hinted that the potentialities of concrete construction are immensely greater than has hitherto been realized. The Paris exhibition, however, is full of ideas, and this, in our opinion, is one of the fundamental purposes of an exhibition: indeed, where other conditions prevail, opportunity has been wasted.

A synthesis of the best at both the London and Paris exhibitions might, however, produce results far in advance of anything that has hitherto been done. It would seem that we have once and for all broken away from the wedding-cake exhibition architecture of twenty years ago, but the problem of achieving harmony for the whole with sufficient diversity for the parts still awaits solution.

Archæology as a Profession

During the past few weeks there has been much newspaper discussion as to whether or not archæology has any substantial claims to become a recognized profession for which educated youth should be systematically trained, and from which a livelihood could be reasonably expected. Hitherto, the business of finding, appraising, and classifying the various works wrought with art in the old times before us has not been very seriously regarded as offering a remunerative career. In Britain, especially, archæology has been too commonly regarded as a pastime for the wealthy amateur, who was permitted, as a sort of grudged favour, to exhaust time, money, and energy in prospecting for hidden treasures. Scattered all over the country there are promising fields for exploration that have been reluctantly abandoned for want of means to carry on very promising research; while plough and pick have frequently uncovered treasures of which the worth was not always recognized, no professor of archæology being available to afford guidance. For the profession of archæology many architects are eminently fitted, and their adoption of it should afford a certain measure of relief to their own overcrowded vocation.

Architectural Partnerships

Partnerships in architectural practice are doubtless less common in Britain than they are in the United States of America. In Britain, too, the partnership tends less to plurality, but is generally what we trust that our contributor Mr. Trystan Edwards will refrain from calling an "unresolved duality." Here such associations seldom extend to a trinity; in America, the firm often "begins to look like a crowd," commonly mixed in the proportions of three engineers and a concrete specialist, with an architect to advise on applied art. In Britain, however, and on the Continent, partnerships in the making of architectural books are perhaps less rare than in America. Dr. William Kelly, in referring to this subject at the ninth annual convention, in Aberdeen, of the Incorporation of Architects in Scotland, cited such familiar instances as Stuart and Revett, Belcher and Macartney, and several others; while many additions could be made to his list. Happily the one partner in such joint authorship is nearly always complementary to the other. But it is less difficult to evolve in partnership the perfect book than the perfect building. In each case, however, partnership necessarily implies a certain loss of individuality in the joint product; or perhaps it would be safer to say, in any product that stands in joint names. For it is not easy to forget the charge insinuated by some ribald rhymester in regard to the partnership of Liddell and Scott in making their immortal lexicon: "'Twas Liddell that wrote it, Scott did not." Which was perhaps a subtle compliment to Liddell.

The Great Masonic Memorial

The imposing gathering at the Freemasons' festival at which the Duke of Connaught presided at Olympia last Saturday gives assurance of complete success of the Grand Lodge's building fund. When at length the new million-pound Freemasons' Temple arises on the large freehold site in Great Queen Street, may the building be in every way fully worthy of the great Craft and the great cost! As the eliminating competition produced more than 200 designs, the main difficulty confronting the assessors in making the final selection, the result of which is to be announced next spring, should be an embarrassment of riches. There is but little doubt that eventually patience and perseverance will be rewarded with the world's noblest memorial to peace and fraternity. "So mote it be."

Defiling a Statue

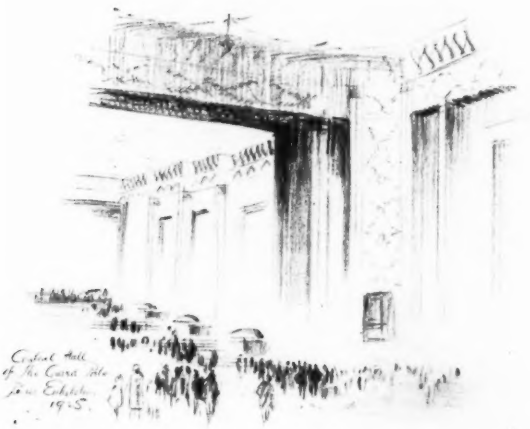
That there is so little veneration for statues is a reason for taking them indoors, where they would suffer neither from the weather nor from undetected vandalism. News comes from Bideford that the Kingsley statue there has just suffered a gross indignity, the nose having been painted a brilliant carmine, while a black beard was added to the chin. To make them ridiculous with paint is a stale old trick, which one had thought to be played out when buffoons gave a spotted coat of many colours to an equestrian statue in Leicester Square. That happened as long ago as 1866, and there was some faint suspicion of an excuse for it in the fact that the statue had been allowed to get into a most disreputable state. Daubing it with paint was something in the nature of an informal protest. But such booby tricks are never funny: they are simply stupid.

Michelangelo's Models for St. Peter's

As yet there has appeared no sufficient reason to doubt the genuineness of the models attributed to Michelangelo as eight of sixteen figures which he designed for the dome of St. Peter's at Rome. Seven of them were found in an attic in Rome by Mgr. Cascoli, director of the Museo Petriano, and the eighth has since come to light in a private house at Treviso. It has been conjectured that, being doubtless the work of his old age, these models for statues of the prophets are the latest designs for sculpture that the great master made, and it is thought that they have the sublimity of his fresco paintings of the same or similar subjects. As the models are but 2 ft. high, whereas the actual marble statues were intended to be of colossal size, it is a mere matter of conjecture how they would have looked when finished and in position on the dome of the artist's heart's desire.

Did Rennie Design Waterloo Bridge?

It is a cheap sneer, too often repeated, especially during the past few months, that architects need not be solicitous for the preservation of Waterloo Bridge: it was designed by an engineer. Mr. W. J. H. Leverton seeks to discount that lame *non sequitur* by stating that Rennie was an architect as well as an engineer. "Consequently, in designing the bridge he produced a work of architecture." Yet the indefatigable John Timbs ("Curiosities of London") gives this account of the bridge: "It was partly projected by George Dodd the engineer, and designed for him by John Linnell Bond, architect, who died in 1837; but the bridge was eventually built for a public company by John Rennie, F.R.S." Yet the argument from history is futile. Timbs quotes the familiar phrase of Canova that it is "the noblest bridge in the world," and the even more extravagant opinion of Baron Dupin, who declared it "a colossal monument worthy of Sesostris and the Cæsars." To a County Council avid of tramway lines, Canova and Dupin, to say nothing of Sesostris and the Cæsars, equally with the redoubtable John Timbs, would carry no conviction.



The Paris Exhibition of Decorative Arts

By S. D. ADSHEAD

THE "Exposition Internationale des Arts Décoratifs" at Paris is frequently compared with our own exhibition at Wembley; but in making such a comparison it must be remembered that whereas at Wembley the exhibits are representative of colonial expansion, industry, engineering, and art, the Paris exhibition is exclusively devoted to "Les Arts Décoratifs."

But perhaps the term "decorative art" is too broad and covers too wide a field. More correctly the exhibition is of "les arts modernes." Moreover, it is, perhaps, the biggest effort that has yet been made in any country, or at any time, to work out a problem which the French describe as "l'architecture vivante."

The periodical "L'Illustration," which devotes its June number to a first impression, observes: "The effort of little exhibitions during the last twenty years has caused so much confusion, has presented us with such bizarre effects, such extravagant examples, so many absurd pieces of furniture and insolent pieces of decoration, that it is not certain whether, in this confusion and tangle, the public have appreciated the meaning of what has been accomplished." Further, it remarks: "The word 'moderne' has produced in the eyes of the same people an unfavourable feeling that the artists of to-day claim for their works a new label." And it follows with a long argument explaining that "l'art moderne" is not the enemy of tradition, and that it resembles styles of other times in the measure of our resemblance to the men from whom we are descended. A definition which, if true, gives us great hope in the new movement.

We need not follow this involved argument further, but may say at once that in the common effort to escape from "Period architecture" and "the styles" there are examples of architecture and decoration that are both "original creations" and at the same time "real resuscitations of the past." Would that this could be said of every exhibit. Unfortunately it is not so; the general effect is overwhelming, and the majority of the exhibits are nothing more than confused efforts. Amongst such are buildings like the Belgian pavilion, the tower restaurants, and the Italian pavilion, which, with due respect for the great nations responsible for them, represent nothing more than piles of architectural bric-à-brac without any marked indication of purpose or idea. Others are merely extravagant exaggerations, and amongst these one might class the Denmark pavilion and the Dutch pavilion. But of the Polish pavilion, the Swedish pavilion, and the Swedish room in the Grand Palais, one can only say that here, as in many of the French interiors—in particular the great hall of the Grand Palais and the interiors in the different pavilions—we have a real living art, a handing on, and not a revival, of those strong traditions in method rather than in form that in a sense permeate all good decoration, in whatever style.

But this curious combination of old tradition with the freshness of everything that is modern is perhaps more

evident in some of the best examples of the sculpture and the painting than in the architecture. The "Three Graces," by Jannot, which stands near the Mulhouse pavilion, is as old as the efforts of the cavemen, and as accomplished in technique as the work of any fifteenth-century Italian. How confidently the creator of this living group indulges in a suggestion of colouring in the hair; it is done so cunningly that it seems more like an indigenous colour of the stone than the painted colouring of a scheme.

But there are abundant examples of this fresh outlook in sculpture. Indeed, it is perhaps an outstanding feature of the exhibition, and one feels that one's admiration is for the inspiration and the method, rather than (as in sculpture of which we see so much in less imaginative circles) in clever copyism of nature or indulgence in passionate expression. We feel that in the above-mentioned "Three Graces," in the woman by Kana, and in the many bas-reliefs that decorate big stones, we are looking at stones cut into the shapes of men, rather than, as in more commonplace and bad sculpture, at "men carved in stone." But there is also sculpture in metal—in metals that are like polished steel, silver, or bronze—here, as in the case of the figure that crowns the Czecho-slav pavilion, the qualities of the materials are challenged, and the figure is attenuated, stretched, and drawn.

Of the best of the decorative paintings the same remarks may be made. In particular one may refer to the great outdoor fresco by Jean Adler, on the end of the pavilion for important foreign countries, in the Place des Invalides. On a close examination of this splendid resuscitation of the best characteristics of ancient art, one realizes that much of its fine quality is due to great care and skill in surface treatment. The groundwork is a rough, gritty plaster, and the paint is permanent, but dry. Of an entirely different technique are the paintings in the Polish exhibition; the absolutely gorgeous treatment of these rustic frescoes, with much green and pale yellow, is unsurpassable in clean colouring and directness of technique.

As might be expected, whilst many examples of wall paintings are superlative in their apparent easy and simple success, there are others which all but fail. Generally, what will be considered to be the greatest effort in the exhibition is the decoration of the Cour des Métiers, which at first sight appears absolutely gorgeous, but which on closer acquaintance is seen to be common and almost vulgar in its technique; and so there is unevenness throughout. It seems apparent that failures are usually due to the exercise of intense effort without that subconscious imagination which is ever built upon a panorama of the past. Perhaps an even more obvious cause of failure is the continuous effort to introduce the modern figure into a scheme of decoration that is not modern throughout. How different is the terra-cotta of a modern woman in the Swedish room in the Grand Palais! This charming creature with floral wreath is as old as the Cretan sculptures, and as modern as a mannikin in a Parisian store.

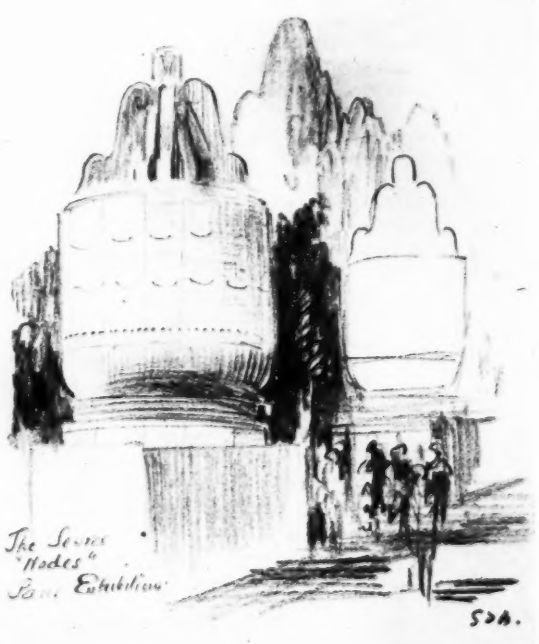
At best, the exhibition is a strange medley of experiment, failure, and surprising success.

Very characteristic of "l'art moderne" are the two main entrances, the one from the Place de la Concorde, the other from the forecourt of the Grand and Petit Palais. The former is a clever "announcement"—a very original collection of pylons, obviously designed for erection amongst trees; the latter is a great metal gateway—a white metal gateway—constructed of what appears to be rustless steel. It has all the characteristics of the new style. The design of its posts is reminiscent of asparagus shoots, or the primitive budding of some gigantic primeval tree. They are neither the most original nor the most successful effort in the new endeavour, but they are so striking, and the workmanship of the silvery grilles is so wonderful, that they cannot be ignored.

More symbolic of what is meant by "l'art moderne," and perhaps more successful, are the huge "nodes," built up of glazed ware, which connect together the two pavilions erected to contain the Sèvres porcelain exhibits. We describe them as "nodes," which means "knobs"; no other word will properly explain what they are. They are not vases, pineapples, cones, nor posts; but, like the silver gates referred to, call to mind some primeval growth.

But a word about the pavilions of the different nations. Naturally, it is difficult to give architectural character to

(*Continued on page 237.*)



The Paris Exhibition of Decorative Arts : Porte de la Concorde

Patout, Architect

Though not the main entrance to the exhibition, this is the natural way of approach from the neighbourhood of the Opéra.

The Paris Exhibition of Decorative Arts: The Swedish Pavilion

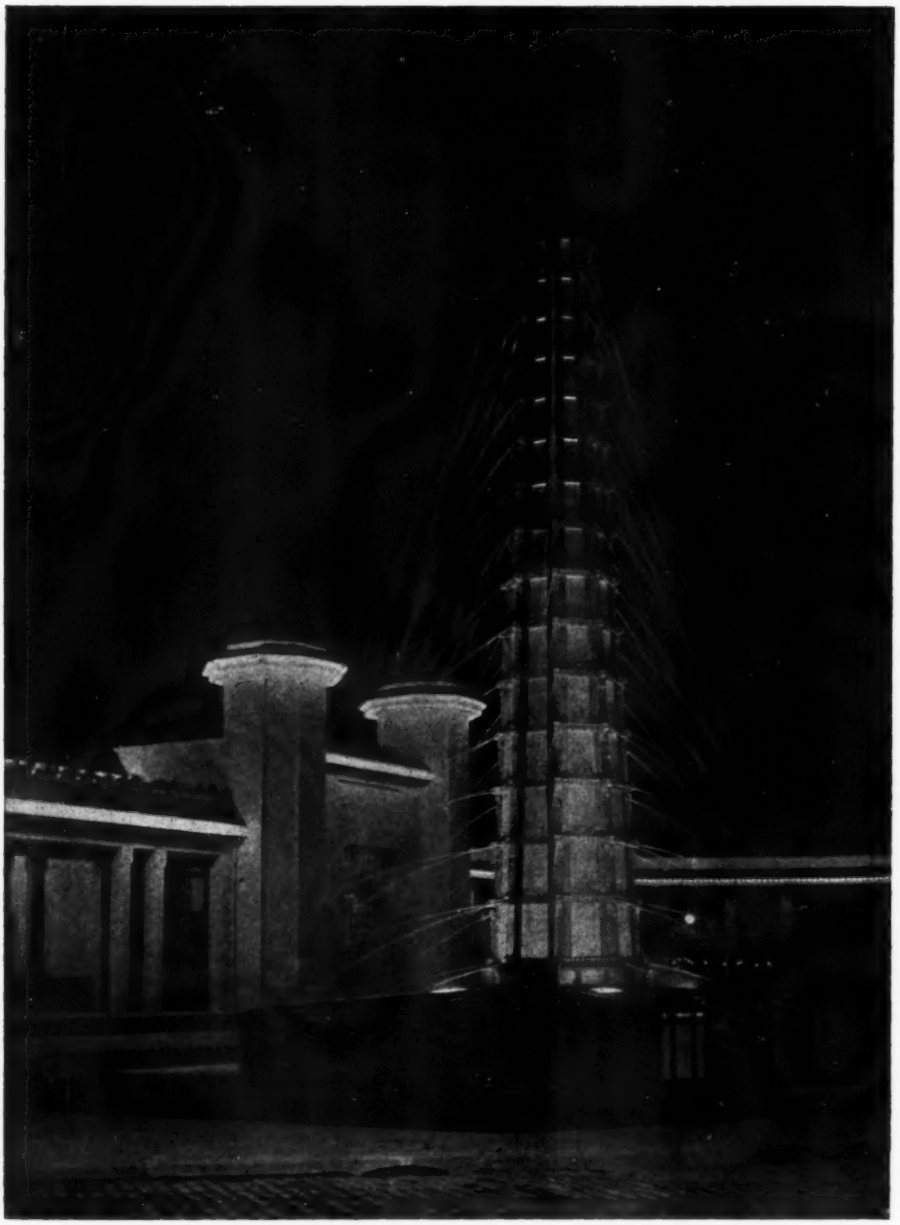
Carl S. Bergsten, Architect

The Swedish Pavilion stands in an Avenue, the Cours la Reine, enclosing the majority of the foreign exhibits.

PAVILLON DE LA VILLE DE PARIS. LE THEATRE D'ENFANT.

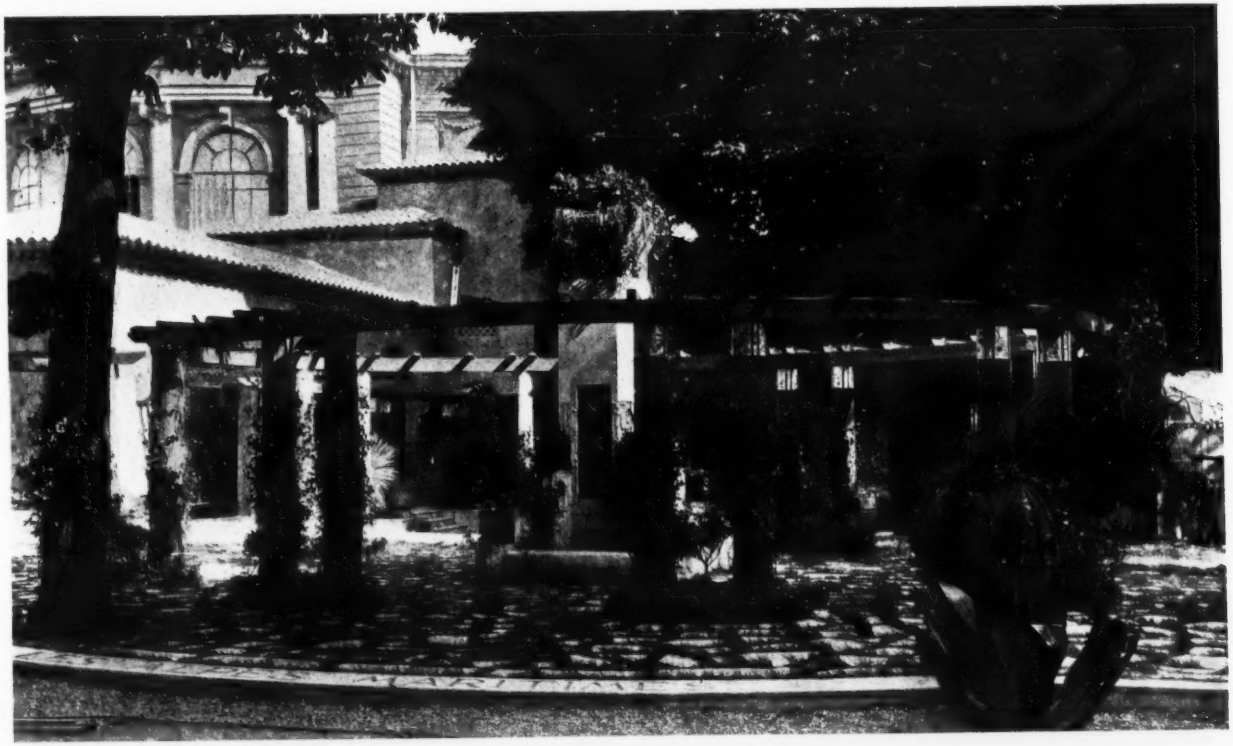
PAVILION IN THE PLACE DES INVALIDES.

THE PARIS EXHIBITION OF DECORATIVE ARTS.



THE PARIS EXHIBITION OF DECORATIVE ARTS:
THE FOUNTAIN OF LALIQUE, PLACE DES INVALIDES

The Paris Exhibition of Decorative Arts: A Garden in the Cours la Reine



The Cours la Reine, lying just within the entrance, is a magnificent avenue of trees, amidst the foliage of which the foreign exhibits are half-hidden.

THE PARIS EXHIBITION OF DECORATIVE ARTS: THE AUSTRIAN PAVILION. JOSEPH HOFFMANN, ARCHITECT.

A GARDEN.
VACHERAT AND RIOUSSE, ARCHITECTS. MAX BLANDAT, SCULPTOR.

THE VILLE DE PARIS.
ROGER BOUVARD, ANDRÉ VINCENT, SIX AND LABREUILLE, ARCHITECTS.

THE PARIS EXHIBITION OF DECORATIVE ARTS.

what are essentially small museums or caskets for the exhibits. Had they been examples of houses or of well-known types of public buildings, there would have been no difficulty in determining their architectural worth. But the type is novel, and the style of architecture modern, so that we can only expect something surprising, something, in fact, like nothing on earth ! In most cases we have got it, and, perhaps, the most original and successful efforts are the pavilion du Printemps, the pavilion du Bon Marché, the pavilion Galeries Lafayette, and the pavilion du Louvre. Of these, the Lafayette, designed by Hiviart, Tribout, et Beau, is certainly the most extraordinary, though that of the Bon Marché, by Boileau, runs it very close. Queer plaster surfaces in scales, scratches, and diapers, and walls of strange leaded lights, seem to characterize both of these buildings. Built as of cubes or piles of packing cases, the little ones leaning against the big ones, they are sufficiently elemental in shape, but their simplicity is entirely spoilt by their fantastic and irresponsible construction. Windows are queer things when they alternate with sides of walls and are without heads or any apparent frame !

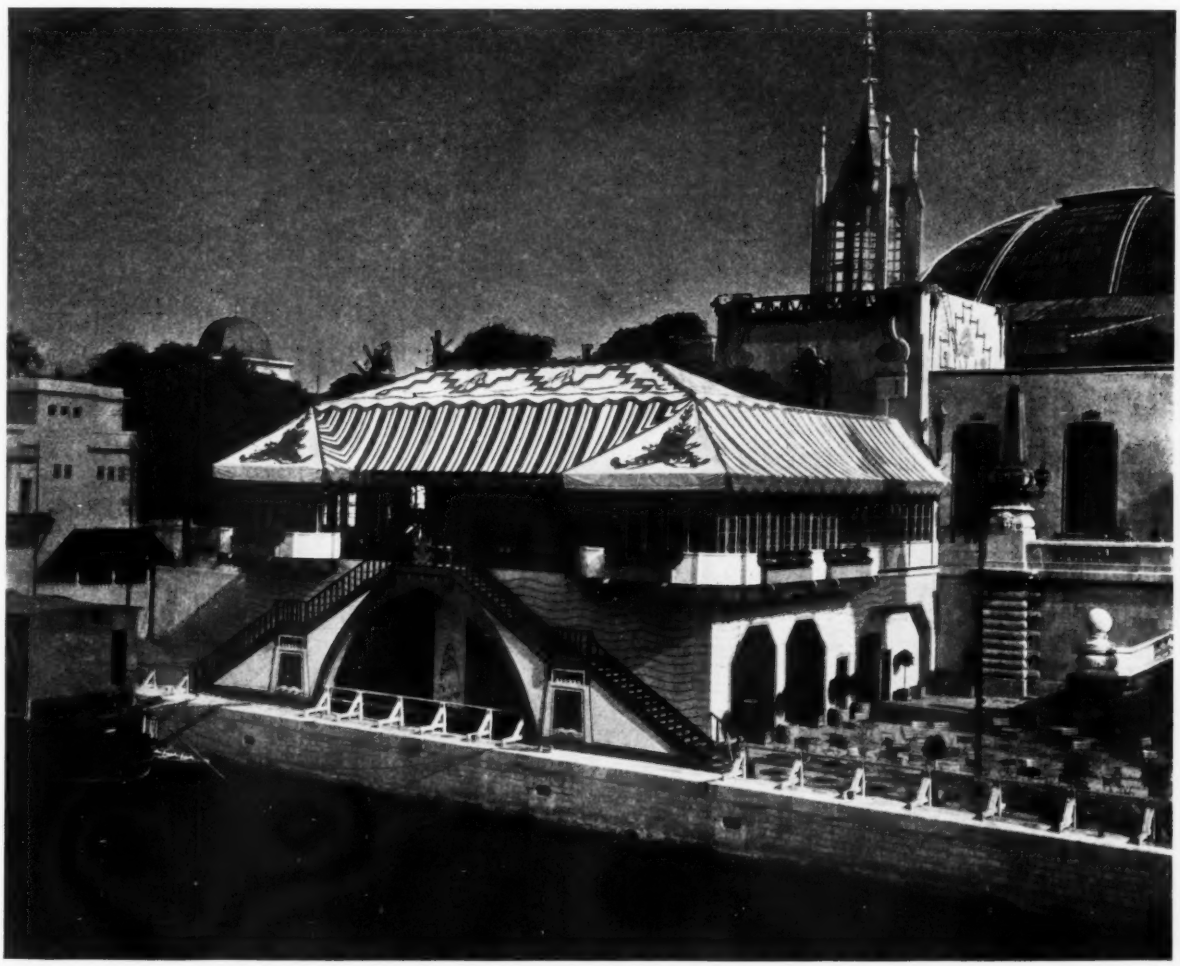
But the really valuable exhibits are the series of decorated and furnished rooms that they contain. These are perhaps the most interesting and important features of the exhibition. There are wonderful wall-coverings, entirely new ideas for electric light fittings, mostly made up out of new assemblages of bent and cut glass. The picture has entirely vanished from off the walls; its place is taken by the single decorated painted panel. The furniture, generally very solid, is made of beautiful wood. Much gilding is used; there are very simple and very new wall-papers, and there is a wonderful harmony of colouring throughout the decoration and furnishing in most of the rooms.

Rooms that should not be missed are those in the pavilion of the Bon Marché, the interior of the pavilion for Sèvres porcelain, and the interior of the Musée d'Art.

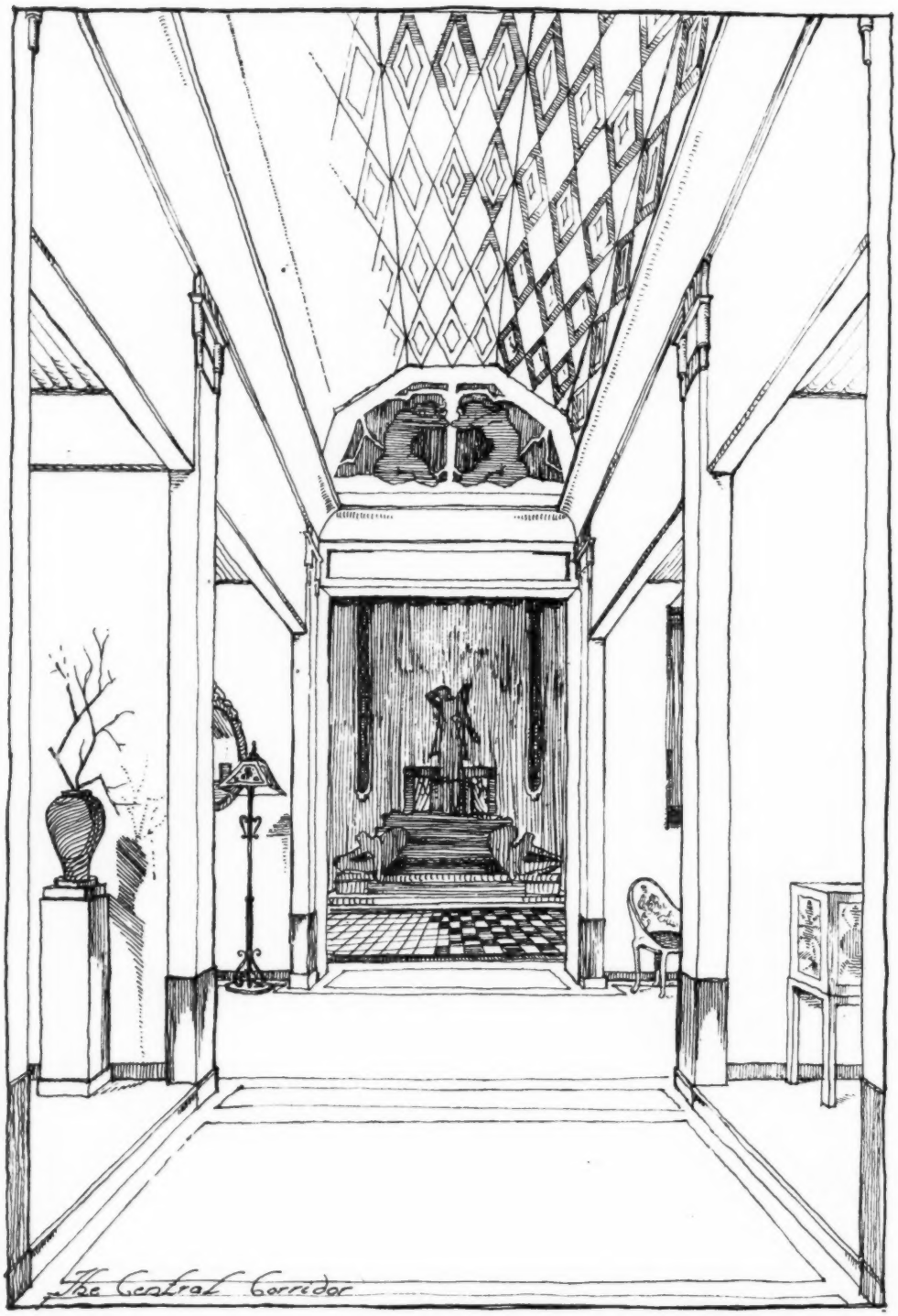
It would be quite impossible to refer to all the pavilions, halls, and chambers that make up this wonderful exhibition, but there is one important feature that must not be missed, and that is the Grand Salon and staircase to the Grand Palais. Here we have an interior simple in shape and gigantic in scale. It is most successful. The wall-surfaces are of rough plaster coloured a light brown and brushed over with gold, and are decorated with a diaper in gold; and this treatment is very indicative of the importance that the French architect attaches to the surface of his walls.

Of the English exhibits, it may be said that the British pavilion, perhaps over-picturesque in form, suffers from having passed through too many hands. The colouring of the exterior is a little over-elaborate, and perhaps confused. The interior is better, and there is a fine red ceiling in the central gallery.

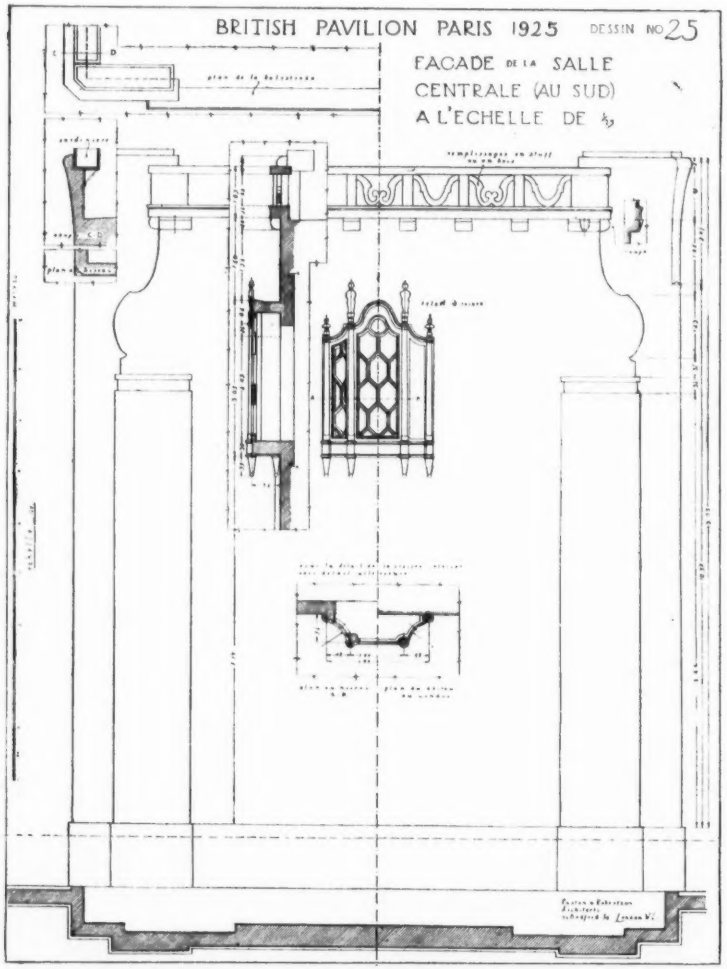
The interior of the pavilion, given over to exhibits for important foreign countries, which was also decorated by an English architect, is more successful, but one would hesitate to say as much for the British room in the Grand Palais.

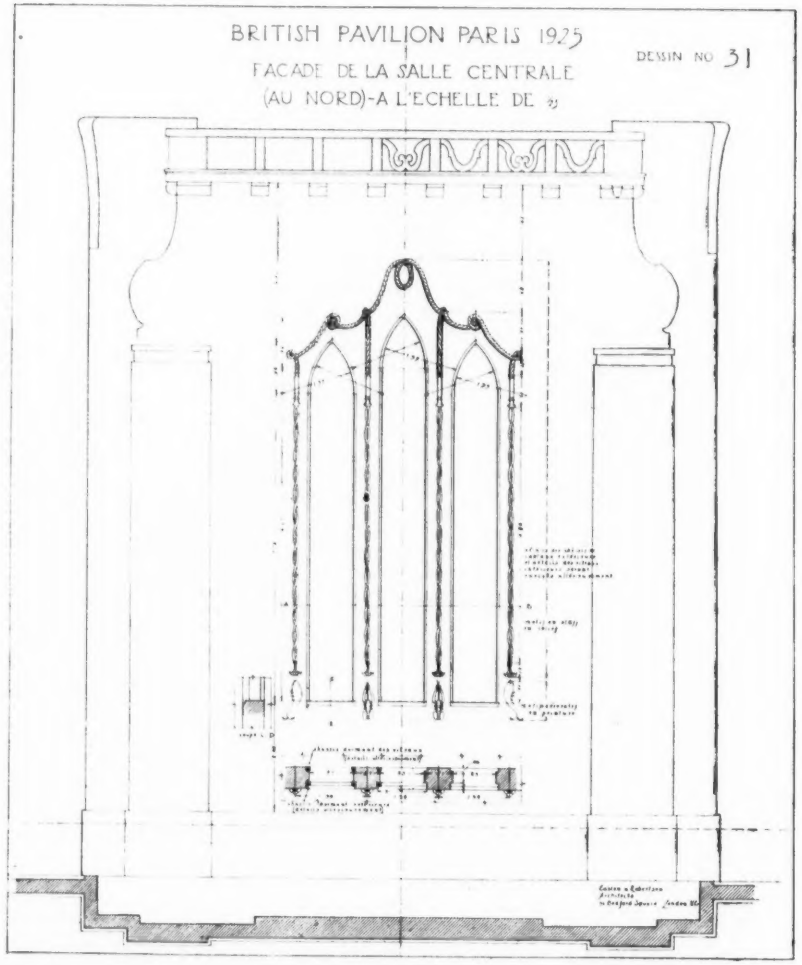


THE BRITISH PAVILION AND RESTAURANT FROM THE PONT ALEXANDRE III.
EASTON AND ROBERTSON, ARCHITECTS.



THE PARIS EXHIBITION OF DECORATIVE ARTS. THE BRITISH PAVILION: CENTRAL CORRIDOR. EASTON AND ROBERTSON, ARCHITECTS.

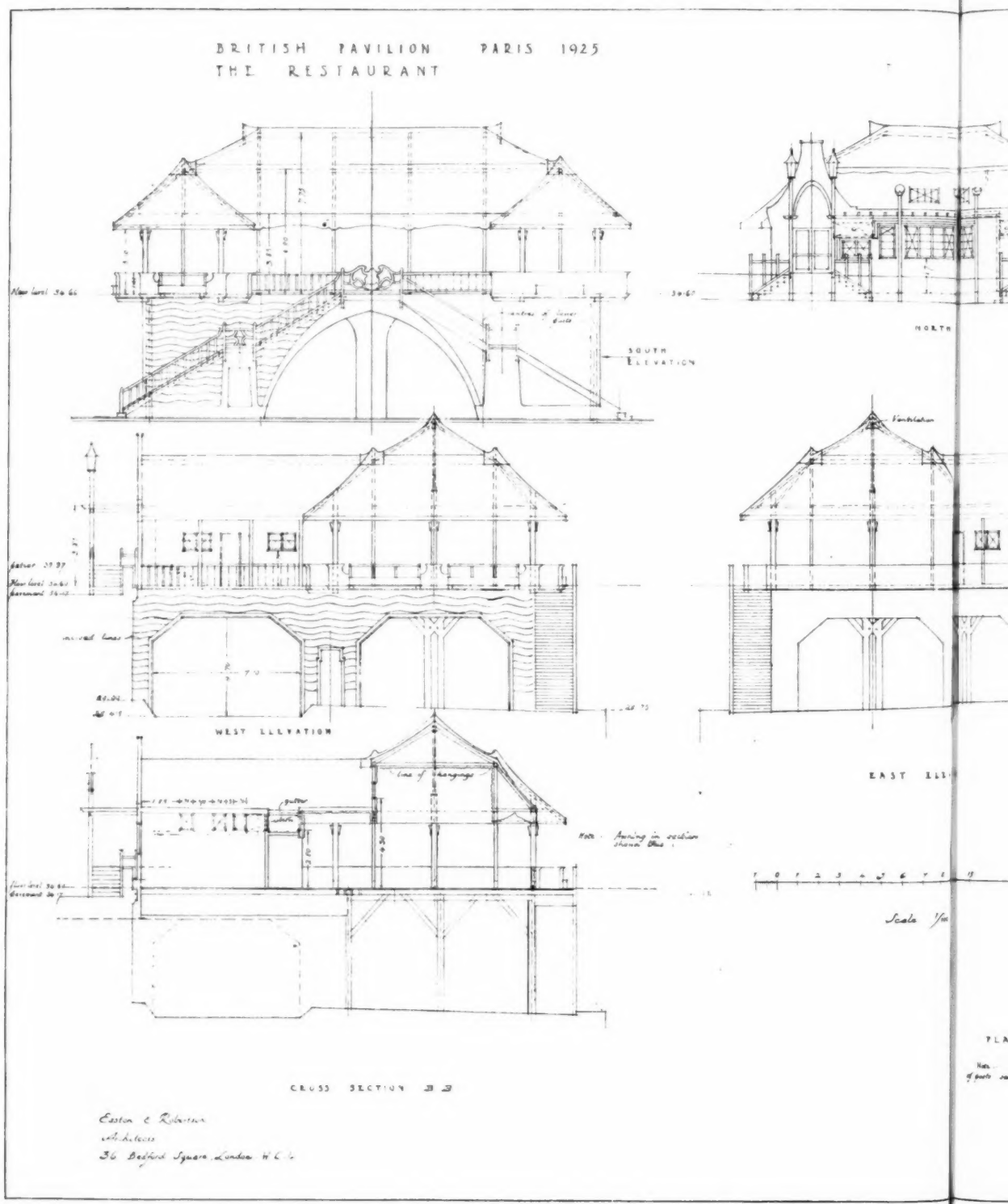




THE PARIS EXHIBITION OF DECORATIVE ARTS. THE BRITISH PAVILION: WORKING DRAWINGS.
EASTON AND ROBERTSON, ARCHITECTS.

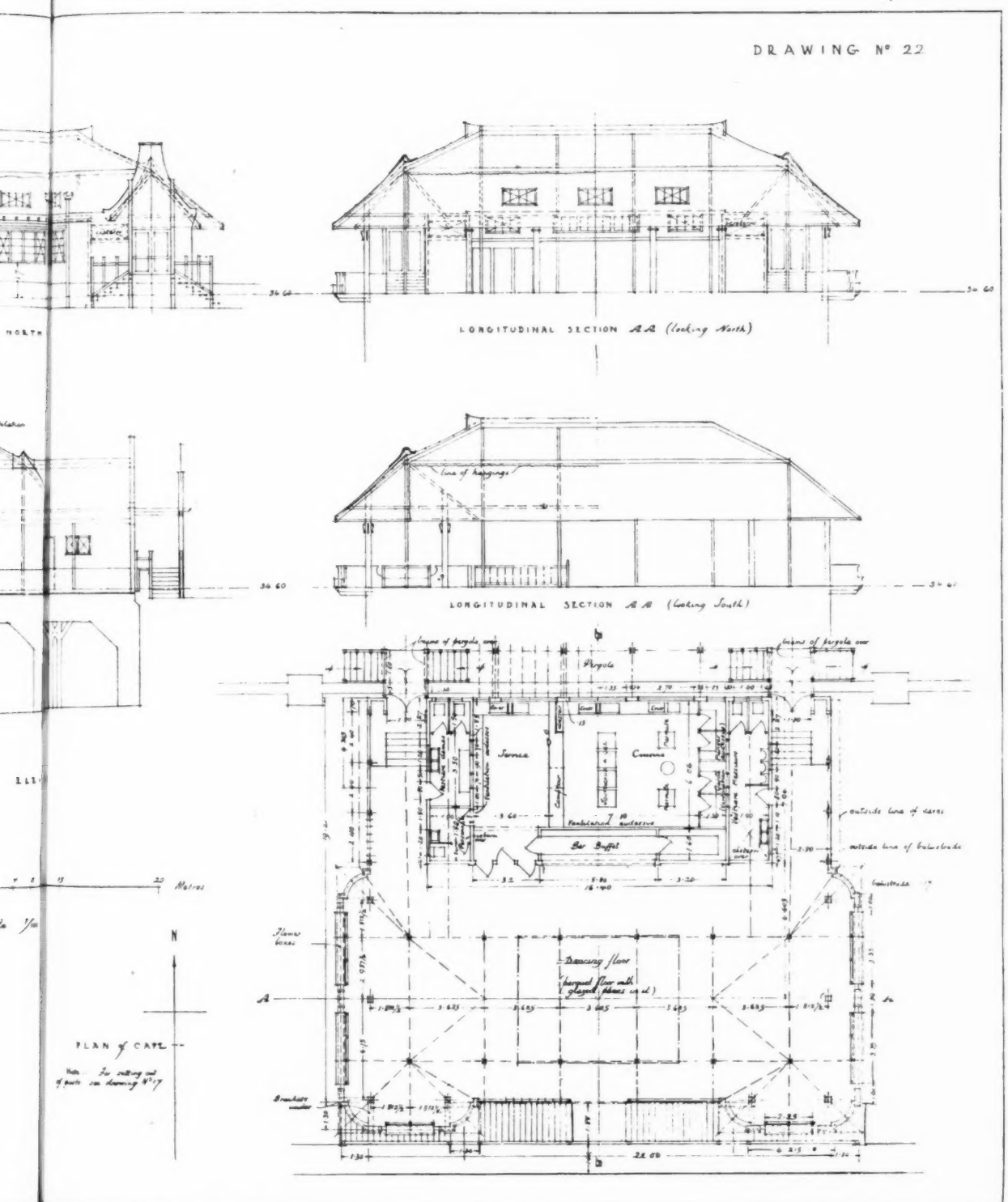
Architects' Working Drawings. 102.—The Paris Ex[hi]f D

Easton and Arch



Exhibition of Decorative Arts. British Pavilion : The Restaurant

Messrs. Easton and Robertson, Architects



The National Bank of New Zealand, Auckland

CLAUDE PLUMER-JONES, Licentiate R.I.B.A., Architect

THE entire block occupies an area 153 ft. 10 in. long, and 66 ft. 10 in. wide, the height of the buildings fronting Shortland Street and Port Street being over 100 ft.

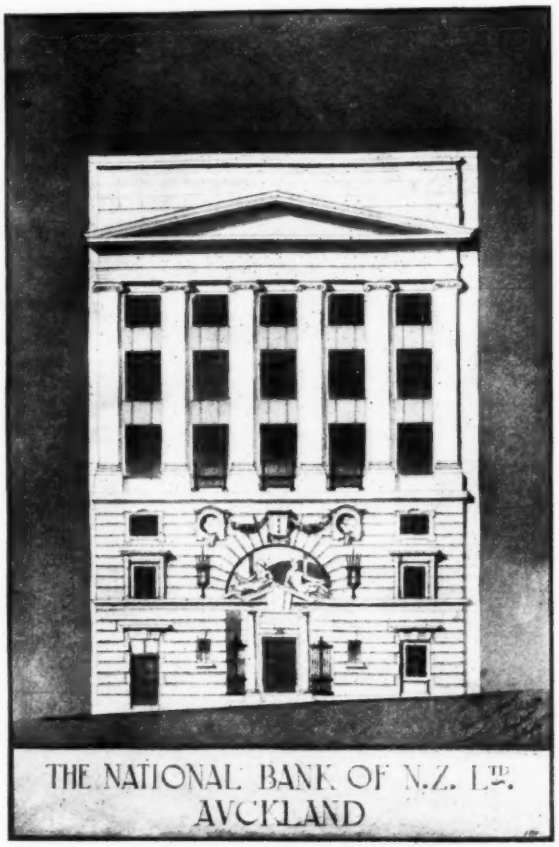
The sculptured figures surmounting the pediment of the main entrance doorway represent "Security" and "Prudence"; the artist who executed the sculpture work being Mr. R. O. Gross.

The two Doric columns on either side of this entrance are monoliths of polished trachyte. The main doors are of hardwood, richly mounted and studded with bronze. The entrance vestibule is semicircular in form, thus concealing the change in the axial line of the building occasioned by the angle at which Shortland Street runs.

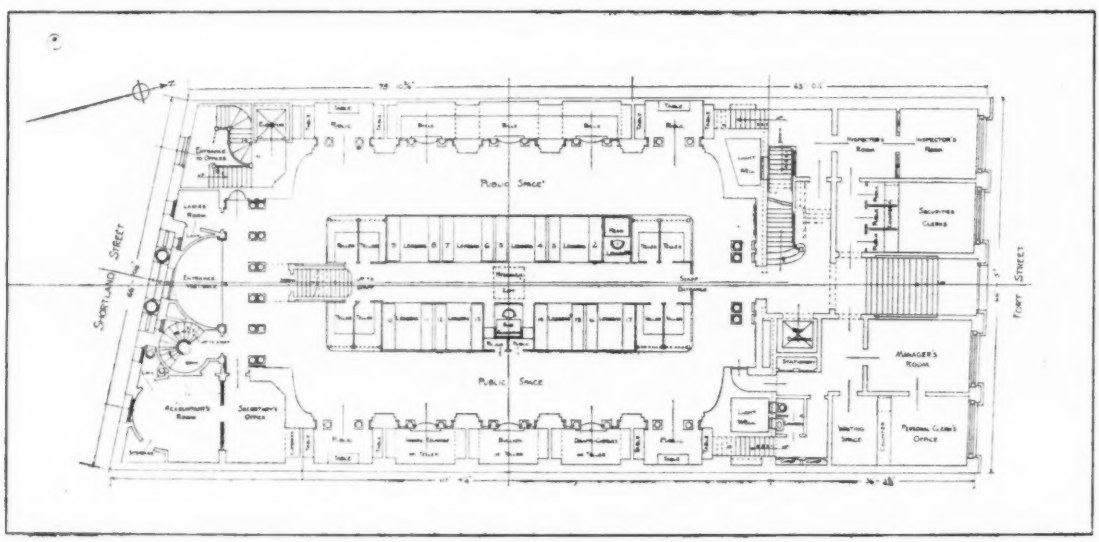
The floor of this vestibule is laid with vitrous mosaic, representing the sun surrounded by the signs of the zodiac. The walls of the vestibule are panelled in New Zealand marble, so cut and arranged as to produce geometrical effects, the centre of each panel being marked by a bronze ornamental patera. Dividing this vestibule from the banking hall is a marble screen, glazed with bevelled plate glass set in bronze grilles, and having three sets of swing doors, the latter carrying the bank's monogram. The banking hall itself is built with elliptical ends, the walls and piers supporting the barrel vaulted ceiling being executed in masonry. Each side is divided into five bays, with circular heads, the lower portion of each bay having a screen of polished black marble, designed in the Doric order—the screens carrying a mezzanine floor or gallery around three sides of the hall. This arrangement enables the officers and staff of the bank to intercommunicate without encroaching on that portion of the building alotted for use of the general public.

The lighting of the banking hall is by means of delicately coloured glass, inserted in octagonal coffers sunk in the vaulted ceiling referred to. This produces a perfectly even distribution of light free from glare and reflection, and will be amply sufficient during ordinary working hours on any day of the year without recourse to artificial aids. The height from floor to crown of ceiling measures 40 ft.

Leading from the opposite end of the banking hall (and in direct communication with the Fort Street entrance lobby) will be found the staircase giving access to the manager, assistant manager, and securities department.

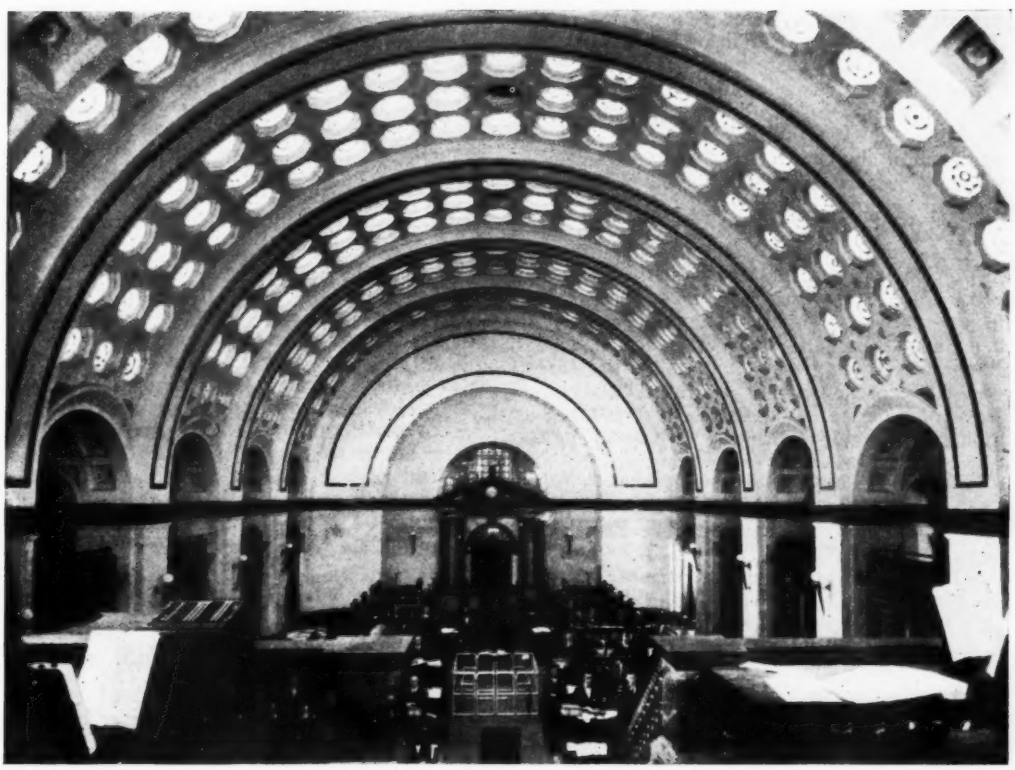


SHORTLAND STREET FAÇADE.



GROUND FLOOR PLAN.

THE BANKING CHAMBER, LOOKING SOUTH.



THE BANKING CHAMBER, LOOKING NORTH.

THE NATIONAL BANK OF NEW ZEALAND, LTD., AUCKLAND, N.Z.
CLAUDE PLUMER-JONES, LICENTIATE R.I.B.A., ARCHITECT

Book Reviews

Rotherham Regional Planning Scheme Report.

The report is illustrated by a map indicating the main proposals and by the following coloured plates: Industrial and Residential Areas and Park Proposals; Public Services; Tram, Trackless Car, and Omnibus Routes. Plans of the towns and villages are also printed, and indicate local road proposals, and there are a large number of photographic illustrations.

The region includes eight local authorities, and covers an area of 70,127 acres. It adjoins the Doncaster region, for which a report was issued in 1922.

The report includes a considerable amount of general survey, and is strong on the general historic side, but rather lacks definiteness on the practical side.

It is encouraging to find that the local schools already take considerable interest in regional survey, in elucidating the geography and natural history of the region, and in compiling its historical record. A full note, well illustrated, by Mr. J. A. Mair, secretary to the Education Committee, Rotherham, is incorporated in the report.

The main industry of the region is mining (22,795 persons out of 67,570 employed) and that of next importance is the allied one of metal working (10,650 persons). It would, therefore, have added to the value of the volume if a special report on mining could have been included like that prepared for the Doncaster region by Mr. Joseph Humble. The importance of further information under this head is referred to, and the assistance of the colliery companies is invited to map out the probable lines of colliery development.

Happily the region stands much higher than does Doncaster, and therefore the consequences of subsidence are likely to be less injurious, but it is stated that 700 acres are already liable to flood, so that the danger is not negligible. Also the double disturbance where walls of coal are left between the boundaries of collieries is a factor of great importance in relation to surface development, drainage, etc., and needs to be mapped out.

The region is undulating, and it has been of considerable help to the joint committee, in studying the problem, to have the assistance of a contour model.

The outline zoning proposals suggest that the principal industrial areas be located in the valleys of the Don and Rother, where transport facilities are available, and can be improved. Topography has been well studied, but hardly sufficient attention appears to have been given to surface geology in its relation to zoning. There is a general recommendation that supplementary industrial areas should be provided for in the neighbourhood of the coal pits, but the relation of these to the residential areas is not specified. Village industries are also vaguely recommended, but it is not considered that they will require special zones.

The development of existing towns and villages is recommended in preference to the starting of new centres, chiefly on the ground that public services are available in existing places, but would have to be provided afresh for a new site. It is, however, sometimes cheaper to start with a new outfit than it is to try to expand an old machine. A revival of village life is hoped for, and it is anticipated that business men will make their homes in more rural parts now that the motor makes transport so simple. The retention of the amenities and picturesqueness of existing villages is advocated, although methods by which this may be done are not indicated, other than a recommendation to prepare detailed development plans that take into account all the needs of community life.

Suggested residential areas are coloured on a map, and the criticism suggests itself that so large an accretion round the centre of Rotherham would produce a vast area of bricks and mortar, and would be likely to cause serious internal congestion. No definite intervals of agricultural land are specifically recommended.

It is suggested that, as a general rule, not more than four houses should be built in one block, especially on hilly sites, and that in no circumstances should houses be allowed to be erected with foundations or floors at a lower level than 1 ft. above the highest flood level of any river or canal. Possible subsidence is not mentioned in this respect, but should of course be taken into account.

The Traffic Census of the Ministry of Transport is given, and is indicated relatively on a plan. It is curious to note a greater volume of traffic on some of the Class B roads than on some Class A.

A number of proposals are made for new roads, of which the most important appear to be a 120 ft. industrial road along the north side of the Don Valley, and an 80 ft. road which would provide an alternative route for lighter traffic to Doncaster and the North by way of the hills but at reasonable grades. It is proposed that the Dinnington and Anston by-pass should be made a tree-planted parkway. It is suggested that in any road 80 ft. or more in width, duplicate water, gas and electric mains should be provided, and doubtless it was intended to add sewers to this list of services.

One or two large park reservations are advocated, including Wentworth Woodhouse, and it is recommended that the valleys of the various streams should be preserved from building development for a width of at least 100 yds. An admirable general proposal, but perhaps hardly applicable is indicated on map to the Don and the Rother where they pass through the industrial zone, unless in the latter case this be intended as a means of keeping the door open for a future Rother canal. One welcomes the proposition that at least one acre of public open space should be provided for each 300 of the expected population, and that open space or playing-field should be within fifteen minutes' walk of any part of the community.

It is recommended that all buildings of architectural or historical interest should be carefully scheduled for preservation and as far as possible kept in the present setting, but only a few of such buildings appear to be indirectly indicated individually.

There is a valuable general recommendation that the local authorities should take power in their town planning schemes to limit the height of spoil banks and to indicate the low-lying lands on which spoil may be spread. Early opportunity should be taken to discuss with the colliery proprietors the precise method of dealing with this important question.

It is stated that there are at the present time nearly forty sewage disposal works discharging into the natural watercourses, but no suggestion is made that joint action is at present required in this matter.

The report contains a number of suggestive comments that will give members of the constituent councils food for thought in respect to their own districts, and that should lead them to prepare schemes that together will result in the successful development of the region as a whole.

G. L. PEPLER.

Report prepared by W. R. Davidge (Vice-President) and adopted by the Rotherham Region Joint Town Planning Committee. Copies of the report can be obtained, price 7s. 6d., from Mr. Charles des Forges, Town Hall, Rotherham.

More Little Things that Matter.

Genius has somewhere been defined as the capacity for taking infinite pains; might not good architecture be defined as the capacity for giving attention to details? At any rate we feel convinced that the average client would be well satisfied with his architect if he took over a house that was conveniently and economically planned, that was absolutely dry, that was well ventilated and yet free from draughts, and that was not unduly expensive. Mr. Harvey aims, in his book, at assisting in the achievement of this ideal. In his first chapter he deals with the questions of site, aspect, and subsoil, and, incidentally, shows that the phrase,

never omitted from an architect's country-house specification, "deposit garden mould on site where directed," should receive more serious consideration than it often does, for upon proper use being made of the opportunities contained therein depends the immediate success of the garden which every country-house owner is anxious to create at the earliest moment.

The second chapter deals with country sewage disposal, a most important matter, and one about which the average client has but the vaguest ideas. Then certain aspects of planning are considered; how best to arrange storage, and how best to minimize unnecessary movement from place to place in performing the daily routine. Next we have ventilation and the avoidance of draughts. Although, to be sure, modern medical theories are proving that draughts are not responsible for all the petty ailments that the last generation attributed to them, and that we need no longer fear them; many still dislike them as at all events uncomfortable. The exclusion of the weather, both by wall and well-fitting doors and windows, comes next, and, finally, we have a chapter devoted to reinforced concrete.

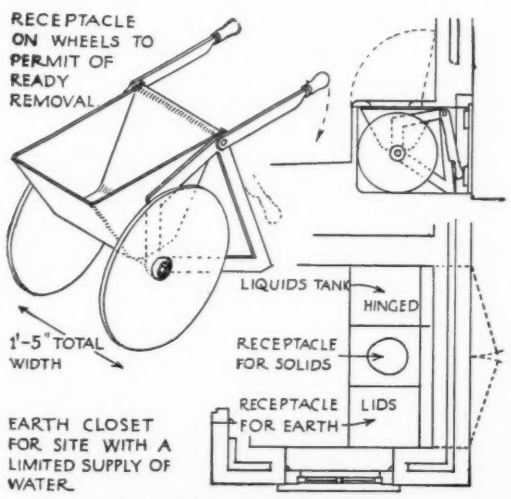
Most laymen have no conception of the amount of detail which has to be considered in even the most straightforward building operations, and again and again surprise is expressed if they are brought into actual contact with the routine of building, perhaps on account of some undertaking of their own. It is then that they realize how many are the "little things that matter." Mr. Harvey's is the second volume of the series that goes by that name; a series to which we hope to see many additions, for it is one that will surely be as invaluable to architects as it will be interesting to laymen.

"Modern Building Practice." By William Harvey. London: The Architectural Press. Price 5s. net.

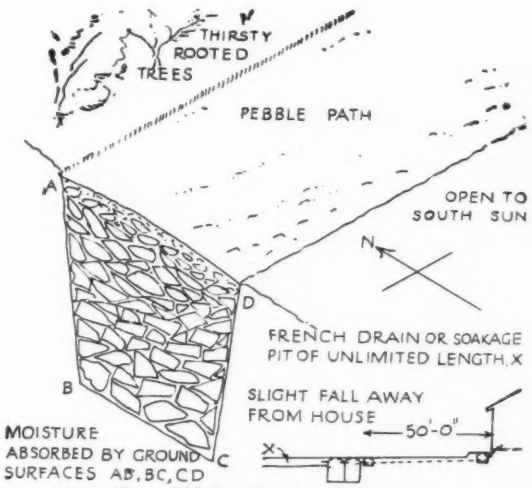
The Consett Internal Improvement Scheme.

We have had reports from the City of Sheffield, and the County Borough of Northampton, and now one arrives dealing with an urban district with a population of only 13,000 people. Owing to the generosity of the principal industrial concern of the town, the Council were given the opportunity of clearing away a considerable amount of congested area in the centre. They wisely took the opportunity to consider the replanning of the whole town.

In an introduction to the report the chairman says that they are not idealists, but are just plain practical folk, with that intense northern pride in their district which, while perhaps blinding them to many of their shortcomings, inspired them to try to make the best of what they had. The object of the plan is to ensure that the streets shall be conveniently placed, be adequate to deal with increasing traffic, and that growth shall be on right and economical lines.



(From "Modern Building Practice.")



(From "Modern Building Practice.")

Mr. Hardy-Syms has divided his report into three parts: the first, retrospective and general; the second, Consett of to-day—the scheme and its objects; the third, Consett of the future—the creation of a business centre. Three maps are published showing Consett in 1857, Consett in 1896, and Consett of to-day. The report is otherwise fully illustrated by maps, photographs, and diagrams.

The town had its origin in 1841, when the Derwent Iron Company commenced to work ironstone. Mr. Hardy-Syms draws attention to the risk run by a single-industry town of experiencing suffering and lean periods owing to any depression which may overtake the industry upon which it is dependent, and by the absence of alternative employment. This is more particularly applicable to the case of a single-industry town, the industry of which does not require or is unsuitable for family labour. Girls who desire employment have to go elsewhere, and the breaking of family life has an unstabilizing effect, to the great disadvantage of the town.

The main objects of the scheme, in addition to rehousing, are:

1. Construction of a traffic road through the town from north-west to south-east.
2. Provision of a market-place for the accommodation of the stalls now occupying road space in Middle Street and streets adjoining.
3. Provision of parking place or station for motor buses.
4. Provision of parking places for private vehicles and cars.
5. Arrangement of the site of the Roman Catholic Church.
6. Generally the creation of a business and civic centre.

These problems are dealt with *seriatim* by the author. Amongst the points brought to light one notices that the temporary increase of population for shopping on Saturday is about 10,000, indicating that it would be wise to provide footpaths of generous width in the vicinity of the market-place.

The method of illustration, by indicating on a photograph the lines of suggested new streets, is excellent. Where there is likely to be stopping road traffic, Mr. Hardy-Syms advocates bays 6 ft. wide beside the road for traffic to stand in. It is not clear why he makes these rows of recesses not continuous for streets flanked on each side by shops, but recommends carriageway of 40 ft., two footpaths of 12 ft., and two parking recesses of 6 ft., making a total width of 76 ft. in all. In one case he advocates a central parking place of 26 ft. wide, and it would be interesting to know how he arrives at this dimension: probably because he intends cars to be parked back to back set diagonally.

In dealing with heights of buildings the author draws attention to the high latitude of Consett, and suggests that the angle of 56 deg., from centre of street, might be usefully

reduced. In one of his sections he adopts an angle of 53 deg. Alternative suggestions are made for the development of the centre of the town, and the first one illustrated seems better to meet the needs of traffic circulation.

In the paragraph dealing with tree planting one is surprised to see the English elm advocated, and the wych elm not mentioned.

The whole of the study revealed in the report is most interesting, and it is to be hoped that the Council will be encouraged to proceed with a scheme and to link it up with a plan for the whole area.

G. P.

"Consett Urban District Council: Preliminary Report on Internal Improvement Scheme." By R. Hardy-Syms, F.S.I. Published by the Garden Cities and Town Planning Association, 3 Gray's Inn Place, London, W.C.2. Price 7s. 6d.

The Passing of a Derbyshire Village

WE here illustrate the historic mansion Derwent Hall and village, which was purchased some months ago by the Derwent Valley Water Board for the purpose of removal later, to make room for a new waterworks for the supply of water to Sheffield, Derby, Nottingham, Leicester, etc. Lord Fitzalan of Derwent sold the ancient and famous mansion of Derwent Hall and village for the purpose of making big reservoirs, which will cover the site of the hall and village.

The hall was built in 1672 by Henry Balguy, a member of an illustrious Peak family, who also built the halls of Aston, now a farmhouse, and Hope, now the Hall Hotel. It afterwards became the property of Newdigates, who sold it to the Duke of Norfolk in the early 'sixties. The Duke restored it, spending over £30,000. He also packed it with valuable oak antique furniture collected from all parts of the world. A marvellous old-English four-poster bed bears the inscription "Rex Carolus I., Anno Do. 1646." A corner cabinet dates 1643. Another one for books and china is inscribed "Good With Us 1653." A fine hall settee with a royal hunting scene carved on its panels is dated 1598. But perhaps the most interesting study in the whole place was the tapestry with which the entrance hall is hung. It came from Worksop Manor, once the place of captivity of Mary Queen of Scots.

THE ANCIENT BRIDGE IN DERWENT VILLAGE, WHICH WILL HAVE TO BE PULLED DOWN.

DERWENT HALL.

THE MAIN ROAD TO MANCHESTER OVER THE SNAKE MOORS, AT ASHOPTON, WHICH WILL HAVE TO BE DIVERTED WHEN THE DAMS ARE MADE.

Societies and Institutions

Examination for the R.I.B.A. Diploma in Town Planning.

The questions set at the recent examination for the R.I.B.A. diploma in town planning are obtainable at the R.I.B.A., 9 Conduit Street, W.1. Price 6d. per set.

Registration as Probationer R.I.B.A.

Special attention is called to the fact that, except in very special cases, a headmaster's certificate will not be accepted after October 1, 1927, and no one will be registered as a probationer of the R.I.B.A. unless that person has passed one of the recognized examinations in the required subjects. A list of the examinations recognized may be obtained free at the R.I.B.A.

Amendments of the By-laws of the R.I.B.A.

By an order of the Lords of His Majesty's Privy Council, dated July 10, 1925, the following amendments to by-law 29, with regard to the representation of Dominion allied societies on the R.I.B.A. Council and the addition of the chairmen of the four standing committees, were approved :

By-law 29 (d).—To be amended by the addition of the following words :

"Provided always that in the event of the representative nominated by any such society being absent from the United Kingdom such society shall be entitled to nominate a member of the Council of the Royal Institute for the time being who is practising in the United Kingdom to represent it upon the Council during the absence of the representative first so nominated as aforesaid."

By-law 29 to be amended by the addition of the following words after paragraph (g) :

(h) "The chairman for the time being of each of the four standing committees referred to in by-law 52."

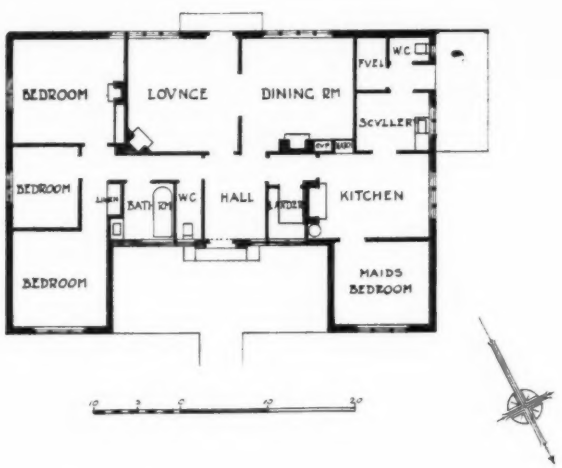
The Beauty of Architecture.

A lecture on "The Beauty of Architecture" was delivered to the teachers of the Education Authority of Dumbartonshire by Professor Charles Gourlay, B.Sc., of the Royal Technical College, Glasgow. Mr. A. M. Burdon, executive officer of the authority, occupied the chair. Professor Gourlay said that the internal equipment of all schools was most important, in order that a beautiful environment might exist in which the youthful mind could develop. Beauty was one of the greatest things in life, and continually to observe beautiful things cultivated the taste and elevated the æsthetic sense. He highly commended the action of the Education Authority of Dumbartonshire in purchasing a series of large photographs of beautiful buildings for the walls of the central halls of the secondary schools of the county. Slides made from the photographs were shown in the lecture. The slides were chronologically arranged so as to give the sense of the development of the history of architecture. The lecturer remarked on the beautiful features of the buildings shown, and emphasized the constructive basis of architecture. The subjects illustrated numbered thirty-four, and ranged from the temple of Edfou in Egypt to the Taj Mahal in India. They expressed the essentials of beautiful architecture as regards mass, proportion, scale, and detail, to an excellent degree.

An Architectural Course at Geneva.

The International Universities League of Nations Federation has organized a series of courses at Geneva this summer, and these are now in progress. Whilst many of the courses are naturally concerned with such subjects as international law, economics, and administration, a large number of others are devoted to studies of the culture and institutions of the various nations. Architecture is included amongst the latter group, and Professor Budden of the University of Liverpool has been invited to deliver the course of lectures on this subject. He will speak on "English Architectural Traditions and their Relation to the Architectural Traditions of Europe." Sir Michael Sadler, Master of University College, Oxford, and late vice-chancellor of the University of Leeds, is lecturing on "England and the English," and amongst the other lecturers are Mr. Desmond Fitzgerald, Minister of External Affairs, Irish Free State; Mr. W. S. Culbertson, vice-chairman of the United States Tariff Commission; Dr. R. W. Livingstone, vice-chancellor of Queen's University, Belfast; Professor J. L. Brierly, Professor of International Law, Oxford; besides many other distinguished British and foreign authorities. University students from all countries are attending the courses in large numbers.

THE ENTRANCE FRONT.



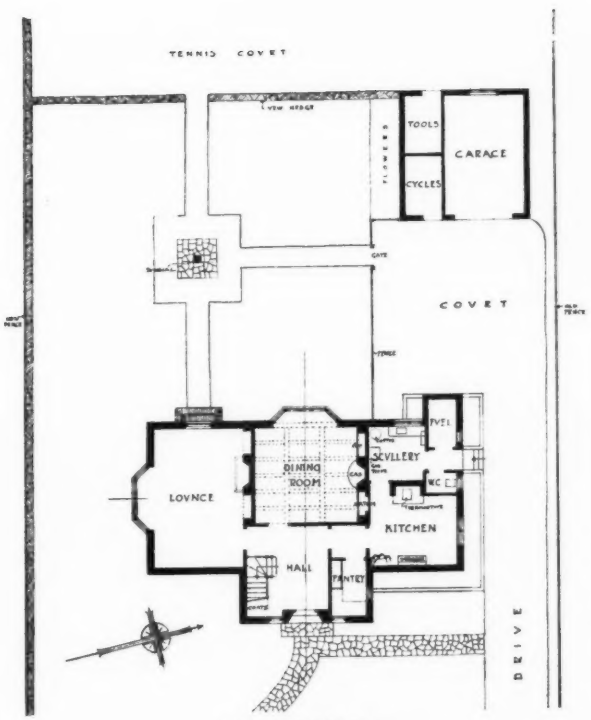
THE GARDEN FRONT.

"DRINGFIELD," CHEVELEY ROAD, NEWMARKET. L. E. COLE, A.R.I.B.A., ARCHITECT

(Particulars of the bungalow illustrated above appear on page 255.)

THE ENTRANCE FRONT.

THE LOUNGE.



GROUND FLOOR PLAN.

FIRST FLOOR PLAN.

PINE COTTAGE, NEWMARKET. L. E. COLE, A.R.I.B.A., ARCHITECT

(Particulars of the house illustrated above appear on page 255.)

Contemporary Art

A Restored Stained-Glass Window.

Mr. Reginald Bell, of 9 Clifford Street, W., London, has just accomplished successfully the delicate operation of re-leading the St. Edmundsbury "Susanna" window. The glass has, until recently, occupied the westernmost window of the north aisle of what is now the cathedral church of St. James at Bury, placed there probably by Scott in his restoration last century. The leading was in a rotten condition and the difficulties of reconstruction were great. The window as now shown consists of various components of probably both English and Flemish origin, and certainly exhibits a strong Flemish influence in parts of its design. The design, however, is not homogeneous. In its origin the window dates back to the building of the church in the fifteenth century, and is derived from possibly half a dozen sources. The lower panels and those of the upper portion, including the tracery, form two distinct parts and styles. The three panels of the lower tier comprise the "Susanna" subjects, and the green tree cut from a single piece of glass, with a white flower inlay, suggests the highly developed technique of the continental glaziers.

The design itself is attractive, and the panels provide three fine pictures, with here and there good naturalistic details, as in the case of the dog, the background being occupied by buildings and landscape. The state of the glass holding the pictures varies, from fine strong line of both human and animal figures to almost obliterated features.

The upper tier shows the remains of a "Jesse" window of a later date, with figures of five kings in the Flemish style, and in the St. John of the centre light are fragments which suggest the English period of King's College, Cambridge. The tracery embraces very different elements and very few of the pieces correspond. A boldly painted and almost complete figure of St. Joachim is very likely of German origin; the half-figure of St. Lucy probably fifteenth-century English, and an angel with a red stole, crudely painted, but with beautiful silver strain, is most likely of mid-sixteenth century, and is one of the best preserved items. So far as chronological interest is concerned, two diamond scratches are of interest: one on the upper part of the centre light records "Saml. Brown, glazier, Feb. 20, 1813," and on the angel piece in the tracery, "J" (the rest of the name missing), "glazier, Nov. 29th, 1825," thus providing an interesting comment on the pride of the workman in this beautiful and ancient craft. Seeing that these re-glazings are of such comparatively recent date, and that in about a hundred years the process has had to be repeated, it is reassuring to know that the craft still survives in its strength, and with its ancient pride and skill intact. The difficulties and anxieties of accomplishing this work without a catastrophe can be assessed only when it is realized that, apart from the precious glass itself, with its inherent faculty for destruction, and in this case its extraordinary thinness, the stonework had practically perished, and the last metal of the leading was obviously of a quite inferior composition to have oxidized so soon.

FROM THE ST EDMUNDSBURY "SUSANNA" WINDOW

Mr. Reginald Bell is also showing some interesting glass-paintings, which are only preserved intact by a miracle. Most of them are cracked, for their glass, transparent in this case, is very thin, and as the little panels were painted —mostly of marine subjects—by their Dutch authors of the late seventeenth and early eighteenth century for insertion as panes in windows, their risk of destruction has been very great. Originals and replicas of them are now being used by architects for houses, yachts, and similar applications, largely in the United States, and to some extent in England.

KINETON PARKES.

Public Pictures.

The Imperial Pavilion at the Dunedin Exhibition this year is to be an interesting experiment in English art. The interior, designed by Messrs. Richardson and Gill, is in the form of a tent-shaped structure in wood and plaster, and it is to be decorated by a number of large panels painted by Mr. Maurice Greiffenhagen with the assistance of Slade School students. The painting is now being done in London. The panels will tell the story of England from the coming of the Romans to the Great War. This series, says "The Manchester Guardian," following Mr. Frank Brangwyn's decorations for the pavilion at the Rio Exhibition, are welcome signs that the gifts of our artists for public decorative art are getting some outlet, but it still remains the case that hardly any decorative paintings have been used in recent times in all the great public buildings that have gone up. Much money was spent in carving in the Port of London Authority building, and a few panels were painted in the great L.C.C. Hall until somebody apparently noticed them and "stopped that nonsense" at once.

The only completely satisfactory mural decorations in London done since the war, adds the same newspaper, are the Pickwick panels in a tavern in Duncannon Street, Charing Cross. It is a curious commentary on the English appreciation of native art, that although these panels seem to be but little known to Londoners, it is recorded that foreign visitors interested in art are usually taken there by their Chelsea friends. The painter, Mr. Thomson, although deaf and dumb, gives an extraordinary impression of life, movement, and racy exchanges. "What a noise—what a jolly noise," was the admirable criticism expressed about these panels by one discriminating visitor. Mr. Thomson is a well-known exhibitor at the New English and the Academy. One picture of his, of costers, was considered, I believe, for a Chantrey purchase, and most critics would have welcomed its acquisition. Such subjects as the characters from Dickens, and costermongers shown "in their habits as they lived," are obviously well suited to the purposes of panel decoration. They naturally admit of bold and vigorous treatment. Moreover, they will serve hereafter as valuable pictorial records.

"Oxen pulling marble."

A reproduction from the original drawing by John Sargent, R.A.

Reinforced Concrete Retaining Walls—IV

By PROFESSOR HENRY ADAMS, M.Inst.C.E., F.R.I.B.A., Etc.

IN the two previous sections we have contrasted two forms of reinforced concrete retaining walls, a plain uniform wall, and one with counterforts and panels; the former will generally be preferred, although both are in common use. Either of these may be adopted in forming a dry area round a building, or for the walls of a sunk reservoir.

We have now to consider a similar wall with a surcharge due to a bank of earth sloping up above the top. Let the wall be 12 ft. high above lower ground level as before, and 2 ft. 6 in. below; the earth with a natural slope of 36 deg. and the surcharge with a slope of 30 deg.; the earth weighing 100 lb. per cub. ft. Fig. 12 shows Rankine's graphic diagram from which the thrust may be obtained. Draw a vertical line, AB, for the height of wall, draw the natural slope, and bisect the angle that it makes with the vertical to give the line of rupture which cuts the slope of surcharge in point C. Set off BD making an angle with BA equal to the natural slope, D being in line with surcharge. Bisect BD in E, and describe a semicircle. Drop a perpendicular from A on to BD, cutting it in point F, and when produced, cutting the semicircle in point G. From D describe an arc GH. Then the horizontal thrust (T) per foot run at one-third the height $=\frac{1}{2}w(BH)^2=\frac{1}{2}\times 100\times(7{\cdot}75)^2=3003{\cdot}125$ lb.

The maximum possible thrust occurs with the maximum surcharge, viz. when the angle of surcharge equals the angle of repose, it is then $=\frac{1}{2}wh^2\cos^2\theta$, θ being the angle of slope.

The bending moment at ground level due to the thrust just found will be $B=3003{\cdot}125\times 4=12{,}012{\cdot}5$ lb. ft. This will be resisted by the weight of earth upon the sole slab, the width of which, from back of wall, must be not less than

$$x=\sqrt{\frac{12{,}012{\cdot}5}{\frac{1}{2}\times 100\times 12}}=\sqrt{20}=4{\cdot}47 \text{ ft. behind wall.}$$

This is rather more than is absolutely necessary, because the weight of the surcharge is omitted. The approximate effective thickness of the wall at lower ground level will be

$$B=95bt^2, \text{ or } t=\sqrt{\frac{12{,}012{\cdot}5\times 12}{95\times 12}}=\sqrt{126{\cdot}45}=11{\cdot}25 \text{ inches}$$

from outer face to centre of reinforcement. Taking the economical proportion for the reinforcement of ·675 per cent., it will be $=\frac{{\cdot}675\times 12\times 11{\cdot}25}{100}={\cdot}91125$ sq. in., say, alternate $\frac{3}{4}$ inch and $\frac{13}{16}$-inch rods at 6 inches intervals = ·96 sq. in. and 1 inch cover will give a total thickness of, say, $12\frac{3}{4}$ inches, making the sole slab, say, 4 ft. $5\frac{1}{2}$ in. $+12\frac{3}{4}$ in. = say, 5·5 ft.

We can now test the stress produced in the steel and concrete; $r=\frac{A_s}{A_c}=\frac{{\cdot}96}{12\times 11{\cdot}25}={\cdot}007$, $m=\frac{E_s}{E_c}=15$,

$$k=\sqrt{r^2m^2+2rm}-rm=\sqrt{{\cdot}007^2\times 15^2+2\times{\cdot}007\times 15}-{\cdot}007\times 15$$
$$=\sqrt{{\cdot}221}-{\cdot}105={\cdot}365 \text{ in., } a=1-\tfrac{1}{3}k=1-\tfrac{1}{3}\times{\cdot}365={\cdot}878$$
$$t=\frac{B}{fbd^2a}=\frac{12{,}012{\cdot}5\times 12}{{\cdot}007\times 12\times 11{\cdot}25^2\times{\cdot}878}=\frac{144{,}150}{9{\cdot}334}=15{,}443 \text{ lb. sq. in.}$$
$$c=\frac{2B}{kbd^2a}=\frac{2\times 144{,}150}{{\cdot}365\times 12\times 11{\cdot}25^2\times{\cdot}878}=\frac{288{,}300}{486{\cdot}7}=592{\cdot}3$$

lb. sq. in., which is quite satisfactory.

In the first example we assumed that at half the height there would be half the stress, so that half the reinforce-

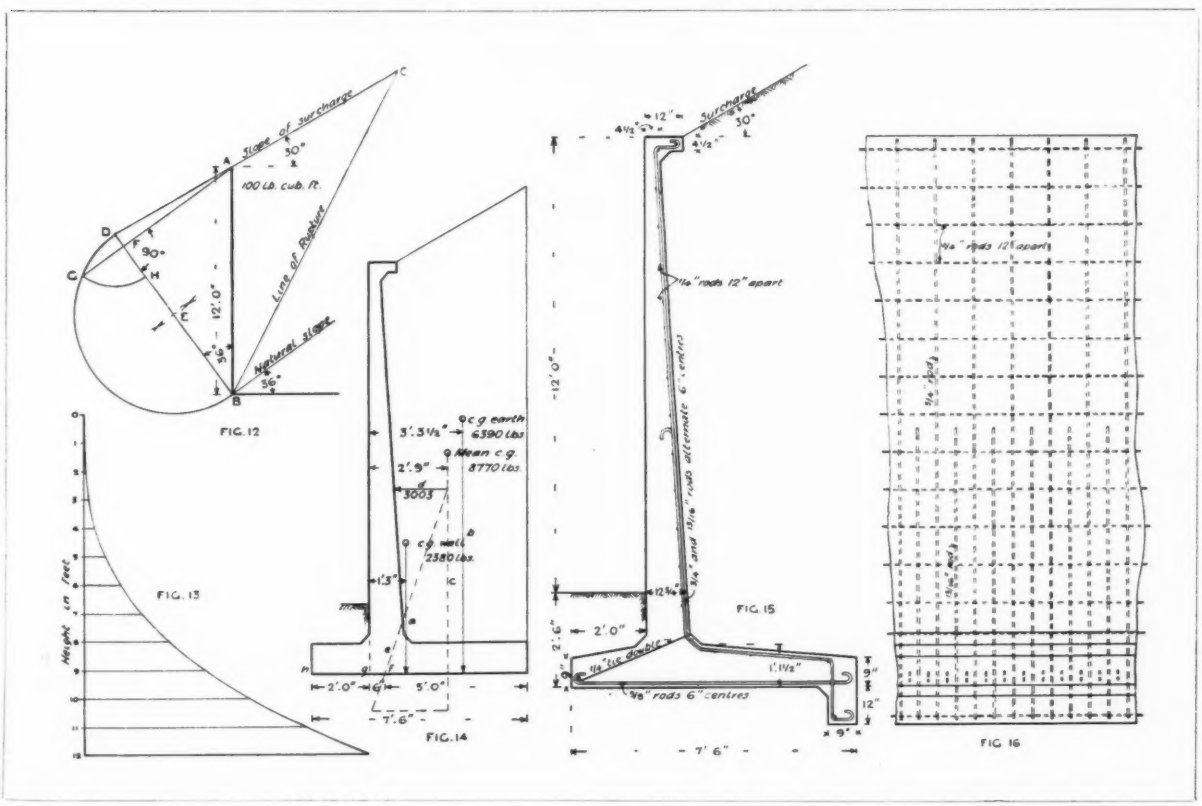


Fig. 12.—Graphic determination of thrust. Fig. 13.—Variation of bending moment in height of wall. Fig. 14.—Determination of width of base. Fig. 15.—Section through finished wall. Fig. 16.—Elevation of finished wall.

ment would be sufficient and showed by calculation that that would be ample. It is, however, important to note that the bending moment does not vary as ordinates to a triangle in the height of wall, but as ordinates to a curve, as shown in Fig. 13, where the ordinates $= \frac{1}{2} wh^2 tan^2 \frac{90-\theta}{2} \times \frac{1}{3} h$, according to the height of the part considered. In the present example $(BH)^2$ takes the place of $h^2 tan^2 \frac{90-\theta}{2}$ and BH will be proportionate to the height taken if we wish to consider any intermediate point. Suppose it be suggested to stop alternate vertical reinforcement bars at one-third height of wall. Then $BH = 7{\cdot}75 \times \frac{8}{12} = 5{\cdot}17$, and the bending moment will be $\frac{1}{2} \times 100 \times (5{\cdot}17)^2 \times \frac{1}{3} \times 8 = 3569$ lb. ft. The effective thickness of wall at 8 ft. from top $= 10 - 1\frac{3}{8} = 8{\cdot}625$ in. Reinforcement, say, 1—$\frac{3}{4}$ inch rod $= {\cdot}442$ sq. in.

Then $r = \frac{A_s}{A_c} = \frac{{\cdot}442}{12 \times 8{\cdot}625} = {\cdot}0043$, $m = 15$; $k = \sqrt{r^2m^2 + 2rm} - rm = \sqrt{{\cdot}0043^2 \times 15^2 + 2 \times {\cdot}0043 \times 15} - {\cdot}0043 \times 15 = \sqrt{{\cdot}1332} - {\cdot}0645 = {\cdot}3$.

$a = 1 - \frac{1}{3}k = {\cdot}9$.

$$= \frac{B}{rbd^2a} = \frac{3569 \times 12}{{\cdot}0043 \times 12 \times 8{\cdot}625^2 \times {\cdot}9} = \frac{3569 \times 12}{3{\cdot}455} = 12{,}396$$ lb. sq. in.

$$c = \frac{2B}{kbd^2a} = \frac{2 \times 3569 \times 12}{{\cdot}3 \times 12 \times 8{\cdot}625^2 \times {\cdot}9} = \frac{7138 \times 12}{241} = 355{\cdot}4$$ lb. sq. in., showing that there is ample reinforcement left if the $\frac{3}{4}$-inch rod alone is carried above this point.

The sole slab will be under the same maximum bending moment as the wall at its base, the thickness and the reinforcement will, therefore, be the same, the latter being continued across the slab. The sole slab was made sufficiently wide to prevent the overbalancing of the wall, but it may not be sufficient to keep the final resultant within the middle third of the base. The weight of concrete, 2,380 lb., acts through its centre of gravity on line *a*, Fig. 14; the weight of earth on slab, including that due to slope of wall and surcharge, 6,390 lb., acts through centre of gravity line *b*; the mean centre of gravity line is *c*, with total weight = 8,770 lb. to be compounded with horizontal thrust *d* = 3,003 lb., giving the resultant *e*, having a vertical component = 8,770 lb., acting at point *f*, cutting the base at 5 ft. from inner edge and 6 in. from *g*, where the outside face of wall cuts base. For the condition of no tension on inner edge of base the base must be extended in front of wall, so that resultant cuts the middle third. This will make the projection in front of wall $= \frac{5}{2} - {\cdot}5 = 2$ ft. to point *h*, making whole width of base 7 ft. 6 in. The design may now be completed as in Fig. 15 cross section and Fig. 16, part elevation.

(To be continued.)

[The previous articles of this series appeared in our issues for May 13, June 17, and July 29.]

In the instalment appearing at pp. 171–2 of the JOURNAL for July 29, the following should be substituted for the corresponding part appearing on p. 172:—

Tee-beams involve a rather more complicated formula than plain beams.

Let m = modular ratio of steel and concrete $= E_s/E_c = 15$.

p = ratio of steel to concrete $A_s/A_c = \frac{2 \times {\cdot}52}{(88{\cdot}5 \times 6) + (36 \times 7{\cdot}5)} = {\cdot}0013$.

b = breadth of flange of beam = 36 in.

d = effective depth of tee-beam = 88·5 in.

d_s = total thickness of slab = 7·5 in.

k = fraction of depth given by distance of neutral axis from compressed edge $= \sqrt{p^2m^2 + 2pm} - pm$
$= \sqrt{{\cdot}0013^2 \times 15^2 + 2 \times {\cdot}0013 \times 15} - {\cdot}0013 \times 15$
$= {\cdot}206 - {\cdot}021 = {\cdot}185$.

n distance of neutral axis from compressed edge $= dk$
$= 88{\cdot}5 \times {\cdot}185 = 16{\cdot}37$ in.

z = modulus when neutral axis is outside slab
$= \frac{d}{3} \frac{3n - 2d_s}{2n - d_s} = \frac{7{\cdot}5}{3} \times \frac{3 \times 16{\cdot}37 - 2 \times 7{\cdot}5}{2 \times 16{\cdot}37 - 7{\cdot}5} = 3{\cdot}38$

B = bending moment = 1,359,600 lb. in.

t = maximum intensity of tensile stress in steel reinforcement

$$= \frac{B}{A_s(d-z)} = \frac{1{,}359{,}600}{1{\cdot}04(88{\cdot}5 - 3{\cdot}38)} = 15{,}358$$ lb. sq. in.

The concrete is sure to be ample, and the design may be proceeded with as in Fig. 4 cross section, and Fig. 5 part back elevation.

Architectural Education

The Bartlett School of Architecture.

The following awards have been made in the Bartlett School of Architecture at University College:

Bartlett Entrance Exhibitions.—Edna M. L. Mills, Brighton and Hove High School; Harold F. Hoar, Latymer Upper School, Hammersmith.

Herbert Batsford Prize (First Year Classes).—E. Somaké.

Certificates in Architecture.—F. S Bardell, G. R. Cochrane, Margaret A. de Quincy, H. T. Dyer, L. P. Ellicott, E. Forster, Jessie M. Greig, H. Kendall, D. H. Mirams, C. G. Weald.

Sub-Department of Town Planning: Lever Prizes.—First—C. D. J. Benton; Second—L. M. Chitale and S. L. G. Beaufoy (equal).

Certificates in Town Planning.—S. L. G. Beaufoy, A. J. E. Benton, C. D. J. Benton, L. M. Chitale, Gertrude W. M. Leverkus, B. A. Moss.

The Teaching of Architecture.

The Board of Architectural Education held a conference at the R.I.B.A. with teachers of building who are in London attending a course arranged by the Board of Education. Mr. Maurice E. Webb presided.

Professor Beresford Pite dealt with the teaching of building construction from the architect's point of view. He laid it down that the primary element of architecture was construction or building, but it must be animated by intelligence, so that it might be useful construction. The animating intelligence which converted a heap of material into a useful building was architecture. It was the human element imparted into physical materials, and being human it was likely that it would express more than usefulness. It would seek for rhythm, and it would include the beginnings of other interests seeking to charm by beauty of form and afterwards by decoration. The second primary element was idea, and the combination of both primary elements in education was vital. Under ideal conditions there should be no distinction between the teaching of building and the teaching of beautiful building.

Mr. Martin S. Briggs, who spoke from the teachers' point of view, urged that building construction must never be taught as an isolated subject. It was impossible to understand building without some training in mathematics, science, and geometry. In a two years' course they could take the student through the constructional work of an average dwelling-house, but not much more. There should be supplementary lessons in building science in a laboratory.

The Royal West of England Academy School of Architecture.

At the annual prize-giving of the Royal West of England Academy School of Architecture, Bristol, the Lord Bishop of Bristol gave an address and distributed the prizes. An exhibition of the work of the students was also held. Following is a list of the awards for the session 1924–5:

The Dame Janet Stancombe-Wills Travelling Studentship (value £25).—F. Bowden.
Architectural Association Prize of £5 5s.—J. R. Bourne.
Bristol Society of Architects Silver Medal and £3 3s.—A. E. Powell.
Bristol Society of Architects Bronze Medal and £2 2s.—A. E. Barrington.
Savory Design Medal.—R. S. Redwood.
Headmaster's Prize, £2 2s.—R. Newman.

Industrial Art Designs.

The industrial designs sent in for the competitions for prizes offered to British subjects with certain age limitations and students in British schools of art by the Royal Society of Arts, which are being exhibited in the North Court of the Victoria and Albert Museum, South Kensington, will be open to the public until August 31 on Mondays, Tuesdays, Wednesdays, and Fridays, from 10 a.m. to 5 p.m., on Thursdays and Saturdays from 10 a.m. to 9 p.m., and on Sundays from 2.30 to 6, free of charge.

Enquiries Answered

Enquiries from readers on points of architectural, constructional, and legal interest, etc., are cordially invited. They will be dealt with by a staff of experts, whose services are specially retained for this purpose. If desired, answers will be sent direct through the post. In no case is any charge made for this service. Whenever diagrams accompany an enquiry, they must be clearly drawn and lettered and inked in.

A SQUASH RACQUETS COURT.

"R." writes: "Can you give me particulars as to the design and method of construction, materials, etc., of a squash-racquets court, with or without a roof?"

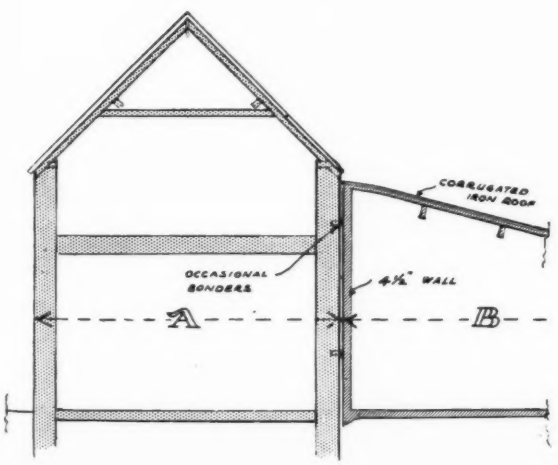
—The Squash Racquets and Tennis Association, Princes Racquet Club, Knightsbridge, may profitably be consulted as to their latest requirements and rules, but racquets courts in the past have been constructed with walls of brick cemented to a smooth surface, and floors of stone flags, or less frequently of wood. Cemented floors are best. The use of a roof is optional, but where the court is roofed, ample light must be provided by two rows of windows high up in the side walls and by skylights or lantern lights in the roof.

For use at night electric lights are sometimes fitted to the roof-beams or in the corners of the court. The lamps must be protected by wire screens, and light can be economized by choosing a light colour for the walls and providing the windows and skylights with opaque blinds of cream or white material. The size of the court varies in different examples, the proportion of width to length being about two to three, and the approved maximum length 36 ft. Courts of greater length are, however, in use. The height of the cemented walls also varies in different courts. Side walls may be as high as 15 ft. clear to window cills, and the end wall up to 20 ft. The standard height for both is 14 ft., and though courts have been made with walls of less height the type of play is adversely affected by the reduction. W. H.

RIGHT OF SUPPORT.

"Architect" writes: "I have been asked to advise on a dispute between two adjoining owners of property. The dispute has arisen under the following circumstances. A and B are owners of adjoining property. A has recently pulled down his building (see accompanying sketch), and left B's building standing alone. B's building has been built considerably over twenty years, and has only a 4½-in. brick wall along the back. There appears to be no doubt that A's building was built before B's, and that when B's building was erected a few bonding bricks were cut into A's wall, as indicated. These have now been snapped off. There is no evidence of any permission having been given to B or the then owner to bond into A's wall, but there is no doubt that B's wall has derived support from A's wall for a number of years. Can you give me your opinion: (1) Whether B is entitled to claim a right to support? (2) Whether B is entitled to claim for damages?"

—An easement of "right to support" can be acquired to a building either by adjacent soil or by an adjacent building. It is in the nature of a "negative easement," by which the servient owner must refrain from doing something which would take away the support of his neighbour.



By the "Prescription Act" 1832 (2 & 3 Will. IV, c. 71) a presumptive right of support can be acquired by twenty years' uninterrupted user (section 2).

I am of opinion that on the facts stated it is quite possible that B has acquired a right of support from A's building, but in view of the gimcrack construction of his lean-to one cannot but think he should not press that right too hardly. F. S. I.

CHARRED PAPER FROM FURNACE CHIMNEY.

"R. H." writes: "Clients of mine who own a large printing works find it necessary to burn up a considerable quantity of paper in their basement furnace every day. The small charred fragments of paper escape at the top of the furnace chimney, and float down through crevices in skylights, through open windows, etc., causing a considerable nuisance. Can you tell me of some device whereby these fragments of charred paper can be retained and so put an end to the nuisance?"

—The size and type of basement furnace are not stated, but if this is designed for the production of steam or hot-water it is probably not particularly well suited for incinerator work. Where light combustible matter is to be destroyed by fire it is usual to install a furnace specially designed for the purpose. The Incinerator Company, Walter House, Bedford Street, Strand, London, W.C.2, are prepared to furnish designs and estimates from their customers' particulars. The quantities of paper dealt with, and the size and height of flue, should be made clear.

One of the simplest devices in use in small furnaces used for incineration is to take the flue well down into the body of the fire-box, so that all products of combustion have to pass through the hottest part of the fire, and solids stand a chance of being fairly completely consumed before passing into the flue.

If the furnace is connected to a tall chimney-stack the trouble may be due to excessive draught. An expansion chamber and dampers should be arranged near the foot of the stack to slow down the draught and allow of the deposition of light particles of solid matter that would otherwise be carried up and out at the top of the stack. There are several ways of arranging the expansion chamber which may be either placed between the furnace and the foot of the shaft, when it will affect the draught as a whole, or it may be placed beyond the base of the stack as a sort of bag's-end with a baffle wall leading obliquely in towards the opening to the chamber. The opening should be low, and the upper part of the chamber separated from the stack by a solid fire-brick partition to stop the swirl of draught returning to the flue by any other course than by the single opening. An access door must be provided for cleaning out the expansion chamber, but this would be kept shut while the fire is burning.

Experience shows that while this expansion chamber may be counted upon to reduce the nuisance, charred paper is so extremely light that some will probably escape. It would be better, therefore, if the nuisance could be avoided by finding some alternative method of disposing of the paper; either by pulping it for re-use, or by digging it into the ground; for although its manurial value is small it is at least inoffensive if mixed in small quantities with an ample bulk of earth.

W. H.

ARCHITECT'S APPOINTMENT BY RURAL COUNCIL.

"Tonic" writes: "I have been appointed architect for a small housing scheme for a rural district council. Is a contract under seal necessary, or is a letter signed by the clerk, confirming my appointment, all that is necessary to make my position a legal one? I am informed that the law in the case of a rural council is not the same as with an urban council, and that a contract under seal is not necessary in the former case."

—No contract under seal is necessary in the circumstances you mention. See the article on page 698 of our issue for April 23, 1924. S. J. S.

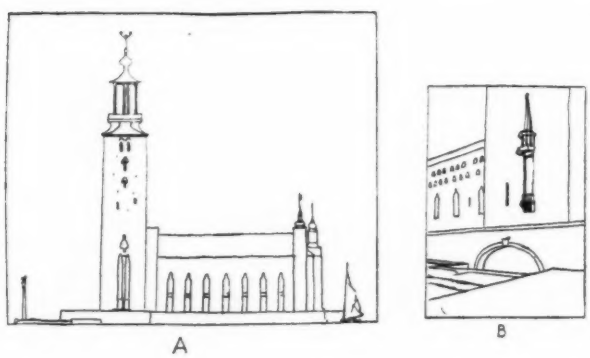
Correspondence

Architectural Style

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Your correspondent who, under the signature "Skaal," writes in the JOURNAL of July 29 to complain that the sketch of the Stockholm Town Hall, shown in Fig. XXV of my article on "Architectural Style" of the previous issue, has indeed convicted me of an error, inasmuch as the sketch in question, traced from the drawing of a model, omits to show the platform on which the building now rests. In the event of these illustrations being republished I shall gratefully take the opportunity of correcting the sketch so that it conforms with the Town Hall as actually erected. As it happens, however, the correction will be an immaterial one, because the platform, which, it seems to me, your correspondent describes wrongly in calling it a stone *plinth*, is not so intimately connected with the building that, in his words, it could form "a perfect articulation" between the sea and the tower.

The accompanying sketches are traced from plates 36 and 50 of the official volume "Stockholm's Stadshus," to be



A B

found in the library of the Architectural Association, and each of them shows that the platform has no organic relation to the tower. In Fig. A it has a projection which does correspond to the right-hand side of the tower, but it takes no cognizance of the left-hand side, while in Fig. B the "stone plinth" sweeps past the tower like an express train, and it can hardly be said to punctuate what it so contumeliously ignores. My contention was that the tower, having lines of such pronounced verticality, needed a visible base to stop these lines from impinging too fiercely upon the horizontal ground level; and althought he doorway itself is a kind of terminal feature it seems insufficient for the purpose. Your correspondent refers to the entasis as if this made everything right, and he complains that in my sketch this refinement was not in evidence. Perhaps the tracing A will satisfy him in this respect, though I am afraid that the entasis would need to be greatly exaggerated to be visible at this scale. But the entasis, though beautiful in itself, does nothing to establish a relationship between the tower and its lantern. The plain surface of the tower is not inflected to prepare us for its diminution. May I venture to invite your correspondent to glance at the spire of the church of St. Mary-le-Strand? He will there find that the lateral dimension of each stage of the spire is marked on the stage below, and the tower harmoniously develops to its climax. But the lantern of the Stockholm Town Hall has an indeterminate girth. One could make it thinner or fatter without the tower having knowledge of these important changes. In plate 40 of the "Stockholm Stadshus" the tower has been deprived altogether of its lantern, and yet seems perfectly happy. Is this stoicism, or merely a lack of sensibility?

A. TRYSTAN EDWARDS.

The Parging of Flues

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—A mixture of lime and cow-dung is more satisfactory than one of cement and sand, because it can be spread thinly (like lard), and does not crack. Therefore it is less likely to be displaced by the sweep's broom. Two barrow-loads usually suffice for the chimneys of a small house. The younger generation of bricklayers not unnaturally dislike using dung, and that is why cement rendering is becoming general. A craftsman informs me that a little cow-dung well mixed in distemper is very effective in killing the stains of a very dirty ceiling.

F. HERBERT MANSFORD.

Law Reports

Rights to Restrictive User by Grant

Liverpool Corporation and Townley's Contract.

Chancery Division. Before Mr. Justice Eve.

This case brought out an interesting point as to the rights of a trustee to insist on a limited user in a conveyance, and was raised by the Corporation of Liverpool in the case of a contract under which the Corporation conveyed certain land to the sisters of the convent of Notre Dame. A clause in the conveyance gave the Corporation a right to take in a strip of land not exceeding 15 ft. in width, for the purpose of providing a passage-way from Hope Street to the Masonic Hall, and the reservation of the right was made with a view to the widening of Hope Street, which would involve cutting off part of the front entrance to the Masonic Hall, to which some other means of access had to be provided.

Mr. Gover, K.C., appeared for the Corporation, and Mr. Roope Reeve, K.C., for the sisters of the convent.

Mr. Gover said the question here was as to whether the Corporation were entitled to more than a certain length of the strip, and it was agreed on the other side that the Corporation were only entitled to a sufficient length of strip which would enable some sort of entrance to the Masonic Hall to be made. The Corporation said they were entitled to a strip conterminous to the Masonic Hall land. The clause enabled the Corporation to exercise the option if they desired to acquire the strip for the purpose of a passage to the Hall, and the suggestion was made that in the conveyance of the strip the trustees of the convent were entitled to insert a restrictive covenant limiting the user of the strip to access to the passage.

Mr. Reeve argued in reply that the defendants' obligations were fulfilled when they had provided land for a passage-way to the Hall, and not to every part of the Hall itself.

His lordship said he came to the conclusion that the Corporation were in no way restricted to use the strip as suggested by the defendants as a passage-way only, and he made a declaration that the Corporation were not entitled to have any restrictions put on the strip in question.

Light and Air Dispute Settled

Hartmann v. *Austin Reed, Ltd.*

Chancery Division. Before Mr. Justice Tomlin.

This action raised a point as to light and air to a West End building, but was not fought out, the parties settling their differences.

It was brought by Mr. and Mrs. F. H. Hartmann, trading as Andrews & Co., in Red Lion Square, against the defendants, Austin Reed, Ltd., for an injunction to restrain them from erecting upon the rear part of 11 Red Lion Square any buildings so as to darken, injure, or obstruct the plaintiffs' ancient lights and to deprive them of access to the rear of their premises through a yard and door opening into the Yorkshire Grey yard, and thenceforth communicating with Eagle Street.

By their defence the defendants denied that their new buildings had diminished substantially, or at all, the access of light to plaintiffs' windows, and, in the alternative, said that the premises had still amply sufficient light. They further claimed that they had the right under their contract to close the alleged right of way.

For the plaintiffs, counsel said the defendants were now the plaintiffs' landlords, and the owners of adjoining premises to the south and east, and it was upon that property that defendants had erected the building of which the plaintiffs com-

plained. The obstruction of light divided itself into two heads. In the first place they were ancient lights, and in the second place it was an obstruction raised by plaintiffs' own landlords, and therefore fell within the well-known principle of derogation of grant even if they had not been ancient lights. With regard to the right of way it was no longer available for use, as the defendants had blocked up the exit. The plaintiffs were manufacturers of roller duplicators and kindred appliances, and the right of way afforded ready access for the delivery of heavy packages to the back of their premises. It was essential for their business that their premises, which consisted of the ground floor and basement, should be adequately lighted—he did not say they required a specially high degree of light—for the examination of their wax-coated stencils and the determination of the colours of the inks used in the machines for demonstration to probable customers.

Plaintiff, in evidence, said unless the obstruction to his light was removed he would have to find premises elsewhere. It was ridiculous to suggest that his premises were now as fit for his business as when he first went there.

Evidence was also given to prove the user for many years of the alleged right of way, and the necessity of using artificial light under the present conditions in the plaintiffs' premises, or working close up to the windows in midsummer time, whereas before defendants' buildings were erected there was ample daylight in almost every part of the rooms for the purposes of the business.

Mr. John Waldram, of Messrs. J. Waldram and Sons, of Buckingham Gate, said he had studied the lighting of the plaintiffs' premises, and he formed the opinion that, with the exception of small portions close to the windows, the plaintiffs' premises would, by reason of the defendants' new buildings, be wholly inadequately lighted even on a bright midsummer day. He would regard it as wholly unreasonable to expect any employee to do clerical work there without artificial light. The brightness reflected from a glazed brick wall as compared with the brightness of the sky was very low.

Mr. Westwood, of Messrs. Westwood and Embleton, architects, of Adam Street, Adelphi, Strand, gave evidence for the defence. He stated that his firm acted as architects for the defendants and prepared the plans. Negotiations between the parties having broken down, he modified the plans so as to substantially leave the plaintiffs the light they were enjoying.

His Lordship: Is it your opinion that the light to the windows, owing to the glazed bricks and other alterations you have made, has improved under these new conditions?—Yes.

You think it is a better light than before?—I do. They are new buildings in the place of dirty old buildings.

Witness stated that he had gone to plaintiffs' premises, and he was now able to read aloud perfectly easily a leaf from a time-table at the walls furthest away from the windows. He could see no difficulty whatever in clerical work being done at the tables in the centre of the rooms, as there was quite a reasonable light there. It was certainly equivalent to what it was before the defendants' new building was erected.

A settlement of the case was then arrived at, the defendants agreeing to pay the plaintiffs' taxed costs and a sum of money agreed between the parties on the surrender of the premises by the plaintiffs. Plaintiffs were also given leave to unpack cases in the disputed passage.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Mr. N. Chamberlain informed Mr. T. Thomson that on July 1 last the numbers of houses in course of construction under the Housing Act of 1923 were 11,214 by local authorities, and 31,593 by private enterprise. The corresponding figures under the Act of 1924 were 19,196 and 227 respectively. The numbers of houses completed under the Act of 1923 were 23,943 by local authorities, and 65,484 by private enterprise. The corresponding figures under the Act of 1924 were 6,246 and 36 respectively.

Replying to Mr. Lansbury, Mr. Chamberlain said that the numbers of houses completed since the armistice up to July 1 under the various subsidy schemes were as follows:

1. Housing, Town Planning, etc., Act, 1919, and Housing (Additional Powers) Act, 1919:	
(*a*) By local authorities and public utility societies	172,794
(*b*) By private builders	39,186
2. Housing, etc., Act, 1923:	
(*a*) By local authorities	23,943
(*b*) By private enterprise	65,484
3. Housing (Financial Provisions) Act, 1924:	
(*a*) By local authorities	6,246
(*b*) By private enterprise	36
Total	307,689

The numbers of houses completed under the Act of 1923 since the date of the passing of the Act of 1924 were as follows:

(*a*) Local authorities' schemes	16,380
(*b*) Private enterprise schemes	51,095
Total	67,475

Information was not available as to the rateable value of these houses. With regard to houses erected by private enterprise without subsidy returns were obtained half-yearly to March and September, and figures were only available for the past two and a half years. During that period the following houses had been entered on the rate books:

* Not exceeding £26 rateable value	117,587
* Exceeding £26, but not £52 rateable value	37,934
* Exceeding £52, but not £78 rateable value	5,045
Total	160,566

* Read £35, £35–£70, and £70–£105 for London.

List of Competitions Open

Date of Delivery.	COMPETITION.
Sept. 1	High bridge over Copenhagen Harbour. Three prizes to the value of Kroner 35,000. Apply City Engineer's Office, Town Hall, Copenhagen. Deposit of Kroner 100 (returnable).
Sept. 5	Proposed new out-patient and casualty department for the Board of Management of the Wolverhampton and Staffordshire Hospital. Assessor, Mr. T. R. Milburn, F.R.I.B.A. Premiums, £200, £150, and £100. Apply, with deposit of £1 1s., to Mr. W. H. Harper, House Governor and Secretary, Wolverhampton and Staffordshire Hospital.
Oct. 1	The Municipality of Drammen, in Norway, invites Norwegian and foreign architects and engineers to compete for the construction of a new bridge across the river of Drammen (Drammenselven) between the two neighbourhoods Bragernæs and Strömsö. Judging Committee: Professor Otto Linton, Stockholm, appointed by the Norwegian Engineers' Association; Mr. Arne Eide, architect, Oslo, appointed by the Norwegian Architects' Association; Mr. M. E. N. Saxegaard, district-chief, appointed by the Norwegian State Railways; Mr. Olaf Stang, engineer-in-chief, Oslo; Mr. U. Lied, chief physician, chairman, appointed by the Municipality of Drammen; Mr. Otto K. Römcke, wholesale merchant, Drammen; and Mr. A. Heitmann Arntsen, secretary, Drammen. Mr. Lied and Mr. Saxegaard are respectively president and vice-president of the committee. The following prizes are offered for the best designs: First prize, 10,000 Norwegian crowns; second prize, 8,000 Norwegian crowns; third prize, 6,000 Norwegian crowns. Apply Bureau of the Government Engineer (Statsingeniörkontoret) at Drammen. Deposit 40 Norwegian crowns.
Oct. 8	Proposed Fire and Police Station at Marlborough Crescent, Newcastle-upon-Tyne. Premiums: £500, £300, and £100. Assessor, Mr. Percy S. Worthington, D.Litt., M.A., F.R.I.B.A Apply, with deposit of £2 2s., to Mr. A. M. Oliver, Town Clerk, Town Hall, Newcastle-upon-Tyne, by July 4.
Dec. 31	The Argentine Government offer prizes of 10,000, 4,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.
Jan. 1, 1926	New buildings for Liverpool College on a site at Mossley Hill. Assessor, Sir Giles Gilbert Scott, R.A. Premiums, £500, £300, and £200. Conditions and plan of site can be obtained from Mr. J. H. Lintern, secretary, Liverpool College, Sefton Park Road, Liverpool, on and after September 1, on payment of a deposit of £2 2s.
June 30, 1926.	Competitive designs are invited by the Ministry of Wakfs for the rebuilding of the Mosque of Amrou. Prizes of £2,500, £1,000, and £500 are offered for approved projects. Those wishing to submit designs should apply before June 30, 1926, to H.E. the Under-Secretary of State to the Ministry of Wakfs, Cairo (cables "Wakfs Cairo"), who will forward details, conditions, etc. The final date for acceptance of proposals is January 1, 1927.
No Date.	H.M. Senior Trade Commissioner at Johannesburg has forwarded a copy of minutes received from the clerk to the Municipal Council of Pretoria concerning the erection of a new Town Hall in that city. It is stated in the minutes that competitive designs will be invited at a cost (first estimate) of about £200,000. British firms interested in this announcement can consult the minutes referred to on application to the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.
No Date	A new secondary school for girls on the Thames House site for the Worcester City Council, at an estimated cost of £32,000. The competition is limited to local architects. Premiums, fifty guineas and twenty-five guineas.

Two Houses at Newmarket

On pages 248 and 249 we illustrate two houses which have been erected at Newmarket from the designs of Mr. L. E. Cole, A.R.I.B.A. Pine Cottage was built last year for Mr. Cole's own occupation. The walls are 11-in. hollow above the 14-in. plinth, with brick facings, iron casements, and lead lights. The walls are roughcasted externally, and roofs are of hand-made, sandfaced tiles. Owing to the level of the drain the house had to be raised higher than was originally intended. The brick wall enclosing the drain can be seen on the drive side of the house. The dog-grate in the lounge and the W.I. knocker, etc., were all made to the architect's detail.

"Dringfield" was built for Mr. W. Thompson. The building has 11-in. hollow walls roughcast, and is roofed with Marseilles interlocking tiles.

The Week's News

100 More Houses for Skegby.

Plans for one hundred houses to be built at Teversal have been passed by the Skegby Rural District Council.

Another Housing Site for East Molesey.

A Beauchamp Road, East Molesey, housing site has been bought by the local Council.

Housing at Brighton.

The Brighton Corporation have prepared a scheme to build 382 houses, costing £250,000.

500 More Houses for Leicester.

Permission has been received from the Minister of Health by the Leicester Corporation to build 500 more brick houses.

London Housing Progress.

At the last meeting of the London County Council it was stated that this year 1,122 houses had been completed and let.

New Secondary School for Leyton.

At a cost of £2,950 additional land is to be acquired for the proposed new boys' secondary school in Leyton.

A New Pleasure Ground for Bristol.

The Bristol Corporation propose to buy Blaise Castle grounds at £18,500 for a pleasure ground.

Baths for Woolwich.

The Woolwich Borough Council are to build Turkish and Russian vapour baths at Plumstead.

More Houses for Darley Dale.

Plans for the erection of 58 houses by private enterprise have been passed by the North Darley Urban District Council.

New County Council Offices for Boston.

The Holland County Council have decided to apply to the Ministry of Health for consent to borrow £27,000 for the erection of new County Offices at Boston.

Housing at Newton Abbot.

The sanction of the Ministry of Health has been given to the purchase of the Broadlands Estate, as a site for 200 houses. The work will be commenced almost immediately.

Greasboro' Urban Housing.

The Ministry of Health have given permission to the Urban District Council to build 32 more new houses, bringing the total to 120 Council houses.

Swinton Housing Plans.

The Ministry of Health have sanctioned an application by the Swinton Urban District Council for permission to purchase Slade Fields for housing purposes.

Strand Widening.

The London County Council are endeavouring to obtain powers to acquire property on the south side of the Strand, the value of which is estimated at £400,000.

Housing at Westminster.

The Westminster City Council are acquiring a site at the rear of their dwellings in Regency Street for the development of their housing scheme.

Staffordshire School Scheme.

The Staffordshire County Council have approved an estimate of £17,925 for the erection of new boys' and girls' departments at Rushall Council Schools.

A New Sports Ground for Ramsgate.

Having already bought the site, Dame Janet Stancomb-Wills, an alderman of the borough, has given £6,000 for the lay-out of a new sports ground at Ramsgate.

Housing at Tiverton.

The Tiverton Rural District Council have approved a scheme for 104 houses for its area, allocated to parishes according to needs.

Houses for St. Asaph.

The St. Asaph Rural District Council have received the sanction of the Ministry of Health to the erection of seventy houses by the Council, also a scheme for subsidizing privately-built houses to the number of seventy.

Scheme for a New London Pier.

A proposal is being considered by the authorities concerned to build a pier near the Tower of London on the City side of the Thames for the accommodation of passenger steamer traffic.

A Bathing Pool for Hastings.

The Hastings Town Council have approved a scheme for the provision of a bathing pool at West Marina, at a cost of £25,000. The pool will be 200 feet long and 66 feet wide. There will be accommodation for seating 2,000 people.

Grants for Church Work.

At the last monthly meeting of the Incorporated Church Building Society, held in Westminster, grants were made towards church work in many parts of the country. The grants made were towards the erection of new churches, enlarging and repairing others, and towards the cost of churches completed.

Tilbury Docks.

The Port of London Authority have now decided in the matter of a new entrance lock at Tilbury Docks that it shall be constructed at a site about 1,200 feet above Tilbury Ness. The entrance is designed to be 1,000 ft. long, 110 ft. wide, with a depth on the sill of 45 ft. 6 in. below Trinity high-water mark, and the estimated cost is £1,680,000.

The Mersey Tunnel.

The Select Committee of the House of Commons, with Sir Park Goff as chairman, passed the Bill promoted by the Liverpool and Birkenhead Corporations for powers to construct a tunnel for general traffic under the river Mersey. The tunnel is expected to take five years to complete, at a cost of about £5,000,000, of which the Ministry of Transport is to contribute one-half from the Road Fund.

Bolton's Housing Progress.

Plans for a further batch of 125 houses of the £100 subsidy type have been passed by the Housing Committee of the Bolton Corporation. With this latest number the total of 1,050 houses allowed under the scheme has been reached, and another application is to be made to the Ministry of Health for an extension of the permitted number to 1,300. This is the fourth application of this kind, the original limit figure having been 500.

The Kitchener Memorial.

The Kitchener War Memorial Tower, which is being erected at Marwick Head, Birsay, Orkney, overlooking the spot where H.M.S. "Hampshire" was lost, is to be unveiled about the middle of September. The inscription will be as follows: "This tower was raised by the people of Orkney in memory of Field-Marshal Earl Kitchener of Khartoum, on that corner of his country which he served so faithfully nearest to the place where he died on duty."

Proposed Memorial Chapel for Westminster Abbey.

The Dean and Chapter of Westminster have decided to convert the enclosure at the south-west corner of the nave into a chapel in memory of all those, known and unknown, who gave their lives in the Great War. In this chapel will be placed a tablet or brass inscribed with the names of the old choristers and other members of the Abbey staff who fell in the war. A provisional design for its furnishing has been prepared by Mr. J. N. Comper.

A Deptford Slum Clearance Scheme.

Mr. H. A. Chadman, of the Ministry of Health, held a public inquiry at the Greenwich Town Hall regarding a petition presented by the L.C.C. for power to demolish the houses in a big slum area at Deptford. The district lies between Deptford High Street and the river. It has a population of 2,000 people, and is one of the most congested areas in South London. The intention of the L.C.C. is to build a large block of working-class flats on the site.

The Week's News—*continued.*

Motor Park for Cambridge.

The Cambridge Town Council have decided on a scheme for providing a motor park, for which a portion of Christ's Pieces, adjoining Drummer Street, will be acquired. The scheme necessitates the construction of a short length of loop road on the north-east side of Drummer Street between Emmanuel Street and Christ's Lane. The suggestion provides for a shelter, seating accommodation, and a convenient space for the public to load and unload. The site will conveniently accommodate twelve omnibuses, used for the country services only, and at least thirty-five cars.

Town-planning Schemes.

Figures given by the Ministry of Health show that no fewer than 129 local authorities have started town-planning schemes for areas with over 20,000 population; 163 local authorities are voluntarily preparing town-planning schemes. Among those local authorities who have voluntarily taken effective steps in the preparation of a scheme during the quarter ended June 30 last are the Newbury Town Council, the Urban District Councils of Knutsford, Lymm, Littleborough, Little Lever, Walton-upon-Thames, and Birkenshaw, and the Rural District Councils of Macclesfield, Chelmsford, Hitchin, Staines, and Barton-upon-Irwell.

Road Widening at Mitcham.

The Mitcham Urban District Council have decided on the widening of London Road, the main thoroughfare through the district. After consultation with the Ministry of Transport and the Surrey County Council, the local authority has adopted an 80 ft. building line, and, subject to the county council carrying out the widening at an early date, has intimated that it is prepared to do all in its power to forward the scheme by purchasing property. At the same time, so as not to burden the ratepayers unduly, the Mitcham Council has invited the county council to agree to repay the actual site value of land used.

"The Crown Journal."

In the summer number of "The Crown Journal," the house organ of Messrs. Higgs and Hill, Ltd., the first feature is a description, illustrated by plans and other illustrations, of the Second Church of Christ Scientist, which is now being erected by the firm at Palace Gardens, Kensington, from the designs of Sir John Burnet and Partners. The existing portion, which was built by Messrs. Albert Monk, of Edmonton, comprises the Sunday school, board and committee rooms, classrooms, superintendent's office, etc., and the portion now building will constitute the main structure—the church itself. In plan the church is octagonal, a feature which will render the rostrum visible from every part of the building. With the exception of reinforced concrete stairs, landings, and gallery—the latter of a uniform thickness of 3 in.—the structure is built brick on brick, there being no steel skeleton. The only constructional steelwork is that which carries the roof.

Another building upon which the firm are engaged is that for the Metropolitan Police on the site of an old distillery near the Lambeth Bridge end of Lambeth Road. The architect is Mr. G. Mackenzie Trench, A.R.I.B.A., F.S.I. The structure will be of five stories, and will embrace a large garage for the "Flying Squad," the Lost Property Office, and a large number of other departmental units. It is interesting to recall that before the distillery was built the site was occupied by Norfolk House, the residence of the first, second, and third Dukes of Norfolk. This house, to which was attached over thirty acres of land, was demolished in the seventeenth century.

Among the many other important building contracts now being carried out by the firm are: A large five-story steel and brick structure in Stamford Street, Blackfriars, for Messrs. Burn Bros. (Mr. H. T. Smith, architect); the rebuilding of parts of the Army and Navy Club (Mr. Claude W. Ferrie, F.R.I.B.A., architect); and the third section of Messrs. Peter Robinson's premises (Mr. T. P. Clarkson, architect).

"Down by the Thames," "The Venerable Brick," and "Building Operations in Montreal" are three other prominent literary features. "Down by the Thames" is an article of absorbing interest.

Trade and Craft

"The Hill," Hampstead.

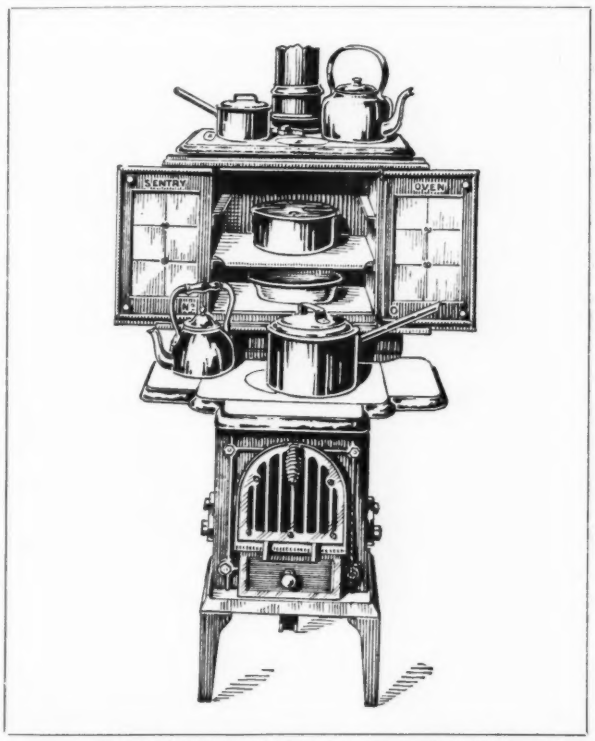
Messrs. J. Whitehead and Sons, Ltd., Imperial Works, 64 Kennington Oval, London, S.E.11, write: "In a recent advertisement of ours we regret we omitted the name of Messrs. T. H. Mawson and Sons, the joint architects for the above with Mr. Leslie Mansfield."

A Progressive British Industry.

In view of the rapidly-increasing adoption of gas for industrial processes requiring heat, the industrial experts of the whole industry are meeting at regular intervals in different parts of the country to discuss the various problems arising, with a view to ensuring that their individual experiences in the application of gas to industrial processes may be pooled for the benefit of all. That this plan is meeting with success can be judged to some extent by the quality of two of the papers read recently at one of these gatherings of specialists. These papers dealt with case-hardening and the heat-treatment of metal, and are reproduced in the current issue (No. 136) of "A Thousand and One Uses for Gas." Every manufacturer who is interested in the heat-treatment of metal should obtain a copy of this well-illustrated publication, as it contains a wealth of practical information coupled with the results of important tests carried out not only in the laboratory, but in the works of important firms in the metal industry. The publication is sent free of charge on application to the secretary, the British Commercial Gas Association, 28 Grosvenor Gardens, London, S.W.1.

A New Oven for the "Sentry" Boiler.

Messrs. Wood, Russell & Co., designers and manufacturers of the "Sentry" hot water boilers, have placed on the market an oven designed to work in conjunction with their smallest size "Sentry" boiler, namely, the "Sentry" Minor No. 0. The accompanying illustration shows the "Sentry" oven No. 0 fitted on top of a "Sentry" minor boiler. It is provided with extension hobs, which will fit on either side and in front of the boiler hot-plate, so as to give extra hot-plate accommodation. A large number of these boilers are being fitted daily in small country cottages and in bungalows. Where gas is available and a gas cooker is used principally for the oven cooking, this small oven could be found very useful as an adjunct to the gas cooker, and should very soon save its cost in the saving on gas bills. Where, however, gas is not available, this small "Sentry" oven offers exceptional means for cooking. With the combination illustrated it is claimed that



SENTRY OVEN FITTED ON A SENTRY BOILER.

it is possible for the small house to have an adequate and thoroughly efficient hot-water supply, and at the same time the fire is available for all the cooking requirements of a small household. The "Sentry" oven No. 0 and the "Sentry" minor boilers are stocked by all builders' merchants and ironmongers. They can also be seen at the showrooms of the manufacturers, Messrs. Wood, Russell & Co., 34 Oxford Street, London, W.1.

"Watproof."

Messrs. Edward Le Bas & Co., of Dock House, Billiter Street, London, E.C.3, who own the sole selling rights for Great Britain and the Colonies of "Watproof," have issued a booklet in which they describe its composition and properties, and explain the many uses to which it can be put. "Watproof" (Flexer's Patents) for rendering cement mortars and concrete impervious has been in general use on the continent of Europe for fifteen years. It has been adopted by Government departments, railway companies, municipal authorities, and consulting engineers and contractors, and it has, it is pointed out, yielded consistently good results. "Watproof" (ordinary) is used for mass concrete, lime or cement mortar or rendering; 1 gallon "Watproof" is added to 7 to 10 gallons of gauging water. A cubic yard requires 24 to 36 gallons of dilute solution, i.e. for a 1 : 7 solution 3 to 4½ gallons of "Watproof" is required per cubic yard. (In no case use a weaker solution than 1 : 10.) Where less water is used than usual, e.g. pre-cast concrete, a 1 : 4 or 1 : 5 solution is used. "Watproof" (refined) is used for surface impregnation only. It is diluted with an equal volume of water and warmed until quite fluid. It is then applied liberally with a brush, thoroughly soaking the surface to be treated. If the proofing has been properly carried out, it is stated that the surface will throw off water an hour after it has been used. "Watproof" has been used for reservoirs to contain water, crude oil, and other liquors, wells, canals, and septic tanks, basements, foundations, floors, and concrete roofs, damp courses, horizontal or vertical, tunnels, bridges, and lighthouses, preserving exterior mortar, for revetments and renderings, for pre-cast concrete; all kinds of artificial stone and marble, protection of buildings against damp and cold, and to counteract efflorescence from saltpetre, etc., in new construction. A selection from among many prominent users of these products is given in the booklet. For the present, supplies are drawn from the French or Belgian works, but Messrs. Edward Le Bas & Co. carry stocks in England to ensure prompt delivery.

New Inventions

Latest Patent Applications.

18690.—Billner, K. P.—Concrete material. July 2.
18455.—Charles, J. A.—Building-blocks. July 20.
18620.—Fraser, P. L. R.—Building construction. July 21.
18776.—Marsh, J. E.—Cleaning stone, metal, &c. July 23.
18877.—Rigby, T.—Manufacture of cement. July 24.

Specifications Published.

236714.—Nicoll, L. G.—Decorated or ornamental structural material.
236723.—Gough, F. W.—Damp-proof course for buildings.
236809.—Shaw, G. R.—Casement window frames.
236746.—Hume Pipe Co. (Australia), Ltd., and Hume, W. R.—Manufacture of concrete slabs and the like.

Abstract Published.

235006.—Eriksson, J. A., 8 Bragevagen, Stockholm.—Porous concrete; moulding.

The above particulars are specially prepared by Messrs. Rayner & Co., registered patent agents, of 5 Chancery Lane, London, W.C.2, from whom readers of the JOURNAL may obtain all information free on matters relating to patents, trade marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and abstract only, and forward on post free for the price of 1/6 each.

The Latest Trade Marks

The following marks have been "accepted" by H.M. Patent Office, and unless any objection is lodged the marks will be duly registered. They are, however, officially advertised for opposition, which must be lodged within one month from date quoted. All particulars and forms for opposition will be sent free by Messrs. Rayner & Co., of 5 Chancery Lane, London.

Harrustic.

459402.—Building bricks.—The Harrogate Red Brick Co., Ltd.—Stonefall, Harrogate, Yorkshire. July 29.

Harrotex.

459403.—Building bricks.—The Harrogate Red Brick Co., Ltd., Stonefall, Harrogate, Yorkshire. July 29.

Maxoid.

458065.—Plastic bituminous cements for roofing purposes.—R. Bowran & Co., Ltd., 4 St. Nicholas' Buildings, Newcastle-on-Tyne. July 29.

457305.—Illustration of man carrying a Globe of the World on his shoulders and bearing the words Marque L'Universe, for Portland and other calcareous cements.—Société Anonyme Des Ciments Portland Artificials, 8 Rue de Richelieu, Paris, France. July 29.