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THE ARCHITECTS' JOURNAL & Architectural Engineer

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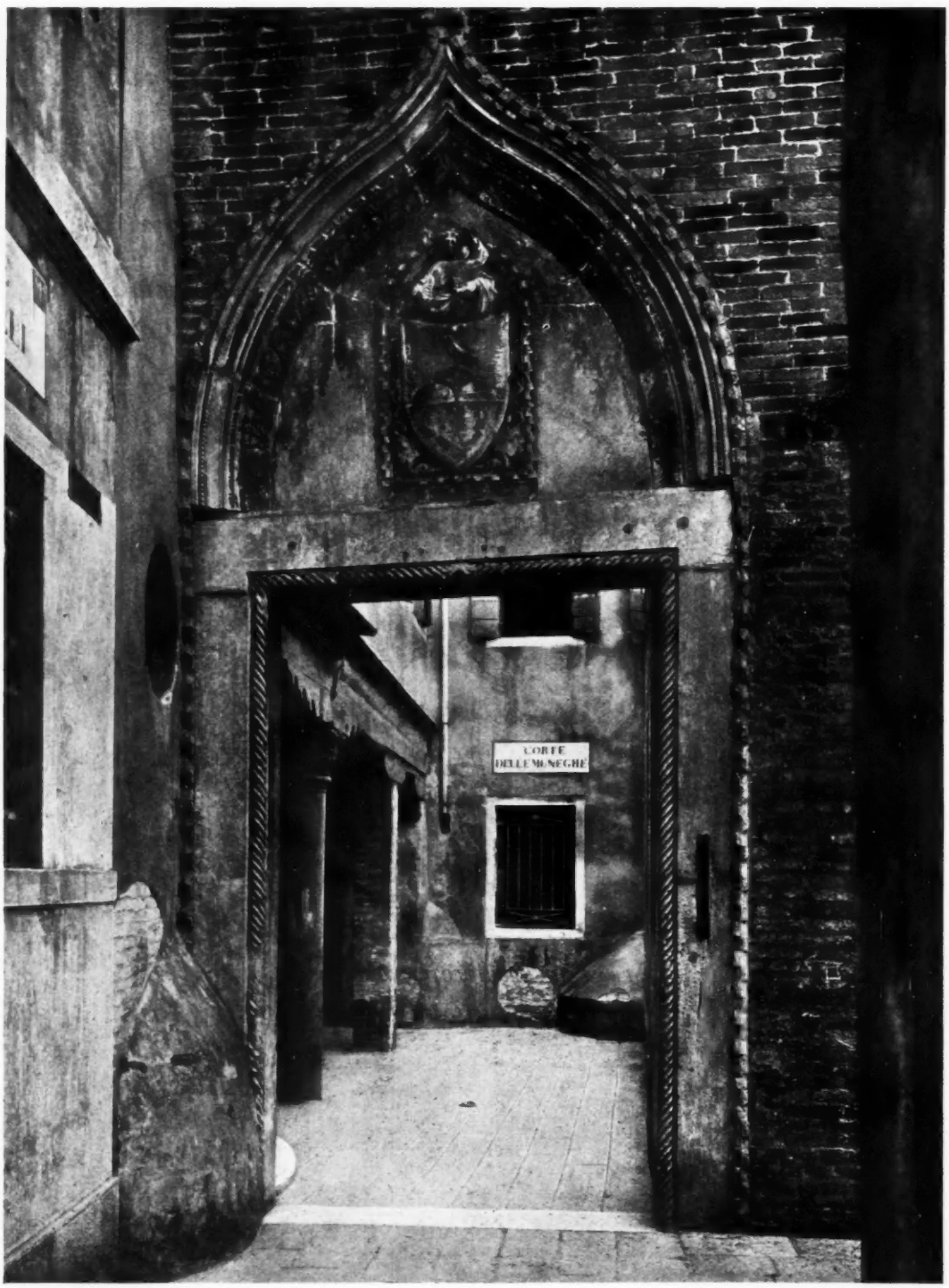
FROM AN ARCHITECT'S NOTEBOOK.

Life without industry is guilt, and industry without Art is brutality.

JOHN RUSKIN.

9 Queen Anne's Gate. Westminster.

Venice : Doorway of a Fourteenth-century Church



The ogival and enriched head over the trabeated opening ; the diversified mouldings and other decorative features ; the sculptured panel in the tympanum ; the oddly matched columns inside the *corte ;* and the age-worn brickwork, form together an arresting composition.

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The Last Days of Behemoth

FEW of the problems of London are less than a century old. A note in this issue reminds us that our street traffic already caused universal apprehension in the early part of the seventeenth century. The bridge problem, the problem of smoke pollution, the problem of town-planning control, all these had become familiar and well-worn topics before the outbreak of the Great Fire, which might have solved two-thirds of them, but which in the end merely turned Sir Christopher Wren into the world's greatest church architect, leaving London to shift for itself. That particular phase of the bridge question which requires a Charing Cross Bridge for its solution may (since it has puzzled the heads of Londoners for a mere hundred years or so) be looked upon as one of the most recent. Like a good many of the best things London has ever had bestowed upon it, the idea originated in the period of John Nash. There was no point in having a bridge at Charing Cross while the site of the National Gallery was occupied by the King's stables, and Trafalgar Square had not yet been thought of. Without Trafalgar Square it is doubtful whether we should ever have heard of the Charing Cross Bridge; but having once been encouraged by the first, the second did not take long, under the guise of Trafalgar Bridge (and coupled with a scheme for rebuilding the Houses of Parliament on each side of Northumberland Avenue) to follow on its heels. It followed the Square, however, as a shadow follows the substance: it never had the good fortune to become a reality, it has not, indeed, become so to this day. Some have gone so far as to maintain that it has ceased to exist even as a possibility, that the substance of Trafalgar Square, that is to say, has lost its shadow, and that among whatever bridges are thrown across the Thames during the next thousand years or so (and we are promised a good many), there will not be *this* one.

This not unnatural feeling was considerably reinforced when, some months ago, Sir Reginald Blomfield introduced a new alternative proposal with the cheering prophecy that the Charing Cross Bridge scheme was (I am merely recalling an impression) if not defunct, at least *in articulo mortis*. His announcement was all the more startling as barely a twelvemonth earlier the late Mr. Paul Waterhouse had, at the Royal Institute of British Architects, made a contrary assertion with some warmth. "I am prepared," he said, "to issue a certificate not of death but of vitality." At the same meeting, Captain G. S. C. Swinton expanded this statement by telling the audience that the amalgamation of the two railways which between them serve our southern counties must create an opportunity the like of which had not before been seen. Coming so soon after these favourable utterances, the more recent view could not but seem unduly pessimistic.

Now that we learn of the impending conference between the London County Council and the Southern Railway, this impression is strengthened. "As long as the present Charing Cross Bridge exists," Mr. Waterhouse said, "the Charing Cross Bridge question will never die." It has only faded away for a moment, and reappeared at a point which is, for once, within measurable distance of realization. On Friday last the Bridges Sub-Committee had a preliminary conference with Sir Herbert Walker, the general manager of the railway company. The good work has thus definitely begun.

The present Charing Cross Bridge was built sixty-six years ago, in the same year as that other architectural Caliban, Brunel's great bridge at Saltash. Brunel died a few months later, while Sir John Hawkshaw, the designer of Charing Cross Bridge, lived to contemplate his masterpiece till 1891: a somewhat harsh retribution if you bear in mind that either of these works was the product of an age rather than of an individual. Between 1859 and 1905 the scheme for a great road bridge at this point survived only in the bosoms of one or two faithful believers, not to mention, of course, the newspaper files. In the latter year the fall of the station roof infused into the scheme a new vitality, which seems to have been successful in maintaining it till the present auspicious moment. Not only the station but the bridge itself was now seen to be hopelessly inadequate as well as inexpressibly hideous. It was described by Mr. John Burns as a "red oxide behemoth," one of the most descriptive epithets ever coined, since a behemoth is popularly supposed to be a hippopotamus, which, as everybody knows, is a pachydermatous quadruped inhabiting rivers. Moreover, his bones, according to the Book of Job, "are like bars of iron." They are. The Charing Cross Bridge had, when the station roof fell in, apparently inhabited its river too long, for the next year it was stated to possess much less than the requisite margin of safety. In 1916, ten years later, the company, with exemplary promptness, put forward a scheme for its strengthening. Evidence of the most authoritative kind was presented in opposition by a group of people among whom that great friend of architecture, the late Viscount Leverhulme, took a conspicuous place. The evidence all tended to prove that a railway station on the Charing Cross site was wrong from nearly all imaginable points of view, that the bridge was a scandalous disfigurement, and that its strengthening would but perpetuate a blunder of immense magnitude.

If the arguments against the bridge are mainly æsthetic, those against the station are rather utilitarian in scope, and since the station is the root and bottom of the whole affair, these arguments should command the closest attention. There is a good deal to be said for the pleasant experience of stepping out of one's railway compartment into the heart of the metropolis. The visitor to London must find the proximity of the Nelson Column as inspiring as the ready access to the Strand is restful and convenient. The view of London from the carriage window is itself a memorable thing, or the views, rather, for there are two (one on each side), between which it would be

difficult to choose. But on reflection it will be found that these arguments are of little significance beside those by which the station stands condemned. How many of the travellers who disentrain at Charing Cross are bound for a point within walking distance of the station?

The moment it is admitted that it is necessary to proceed by vehicle to some other place the centrality of the terminus loses its magic appeal. It does not, after all, bring people where they want to be taken. It represents, just like any other of our London termini, merely a break in the journey to office or house, hotel or theatre. Unlike these other termini it is hemmed in on a site that would hardly contain a cinematograph theatre, let alone what should, by its eminent pride of position, be London's chief railway efflux. If the bridge offends the eye by its uncouth bulk, the station offends the reason by its toy-like dimensions. Its place is in the Science Museum at South Kensington, or beside that primeval locomotive, beloved of all children, which adorns the public concourse of Waterloo Station. It is a relic of another age, amusing, but certainly not indispensable. Is there any legitimate reason why this graceless pigmy should be allowed to plant itself at the very heart of our city, when full-grown stations like Euston, King's Cross, St. Pancras, Victoria, Waterloo and Paddington have each to keep a respectful distance from that august and enviable spot?

But there is another and, perhaps, graver count in the indictment against Charing Cross Station, namely, that it is so often mistaken for a work of Sir Charles Barry's as to have inflicted serious damage upon the reputation of that admirable man. That a misdeed of the son should thus be cast back on the father must be quite intolerable to all right-thinking architects, and if Charing Cross Station had done nothing worse to deserve our censure, most of us would be inclined to deal pretty harshly with it for this reason alone. As harshly, in fact, as we would with the bridge; "hide them," says the same chapter of Job, "in the dust together," and, indeed, we might very well do worse.

CHRISTIAN BARMAN.

Superfluous Railings—and Some Others

There is a certain amount of justification for Mr. Harold Cox's recent onslaught upon "superfluous iron railings." In any part of London or any other English town it is possible to find great numbers of railings that, beyond marking a boundary, serve no useful purpose whatsoever. Much of this ironwork, too, has the further demerit of being extremely ugly. Yet we are not certain that it would be a wise thing to abolish the iron railing completely. Mr. Cox seems to object to every kind of railing except that which serves a strictly utilitarian purpose—as, for example, preventing people from falling down open basements. He would even abolish those which are found in the London squares, though in most cases they are of an excellent and unobtrusive design and serve a useful purpose in enclosing and preserving private property. Suppose that the railings around these garden squares were removed; what would be the consequence? Would not these green and pleasant oases speedily become like a typical L.C.C. park, overrun by mischievous children, the grass borders trodden bare and ugly? By all means abolish railings that are superfluous, but spare them when they preserve in our crowded cities a bower of greenery from desecration.

Mr. Epstein

"I do not work for the approval of others," observed Mr. Epstein when asked for his views on the critical reception of his panel on the Hudson Memorial. A very stout sentiment, this, that seems to crystallize in a phrase Mr. Epstein's whole philosophy of art. Of course, if the artist does not please himself he is not likely to please anybody. Mr. Epstein's experience is, however, very singular, inasmuch as in pleasing himself he seems to annoy everybody else. The approval of the masses is not, of course, any index to the quality of an artist's work, else would the highest form of art expression be something akin to the pretty picture that one finds on the New Year's almanac. On the other hand, it is doubtful whether almost universal disapproval of an artist's work is a sure guarantee of its superlative merit. Art history records cases of men who, at the end of a life of strenuous and purposeful eccentricity, have gained neither the precious appreciation of the few nor the unthinking applause of the many. It records also many cases of men of genius whose work has first offended but ultimately captured public taste. What will be the fate of Mr. Epstein? At the present moment he is very much an acquired taste; he "does not work for the approval of others." But popularity sometimes comes to those who least woo it. Is his "Rima," by constant contact with the public, destined to become a popular work of art—a sort of sculptural "best-seller"? Who shall say? We have a suspicion that Mr. Epstein would be seriously annoyed if it did.

Coach and Sedan

The latest addition to that admirable series of reprints, the Haslewood Books, is a pamphlet with the above title and originally published in 1636, when the London traffic problem was as complicated, if not as extensive, as it is to-day. "The most eminent places for stoppage," we are told in this delightful work, "are Paul's Gate into Cheapside, Ludgate and Ludgate Hill, especially when the play is done at the Friars, then Holborn Conduit and Holborn Bridge is villainously pestered with them, Hosier Lane, Smithfield, and Cow Lane sending all about their new or mended coaches; then about the Stocks and Poultry, Temple Bar, Fetter Lane, and Shoe Lane, next to Fleet Street." The description might almost be contemporary. At the Lord Mayor's Show, or a Masque in Whitehall, we learn, the coaches stood so close together, "like mutton pies in a cook's oven, that hardly you can thrust a pole between." The advice given by the brewer's dray, which acts as moderator in the dispute between coach and sedan, is most often of a humorous kind, but the first recommendation may perhaps be found to hold out some promise. "First," the litigants are told, "you both shall reverence and ever give way to Beer (or Brewer's) cart, wheresoever you shall meet him, either in city or country, as your ancient and elder brother." But it was probably more important to "leave in any case that ill custom ye have of running over people in a dark night, and then bid them stand up." The second half of the custom must have been especially obnoxious. The tract, it will be seen, is as humorous as it is informative; it makes excellent reading.

The Revival of Building

The Academy always provides something of a guide to the material health of the architectural profession as well as the æsthetic. Who cannot remember years when vague catalogue inscriptions have indicated works that would never get beyond the paper stage? "A House in the Country"; "Design for New Business Premises in the City"; "Projected Block of Flats in the West End"—these and similarly indefinite titles must always tell their tale of the dream that is not at all likely to materialize into the business. On the other hand, there is a reassuring suggestion of reality about the title that says definitely, "New Premises for the Midas Bank, 500–600 Leadenhall Street," and this year's Academy seems to be full of works bearing such encouraging descriptions. Beyond doubt, the building industry, and with it the architectural profession, is entering upon a period of great activity, and, may we hope, prosperity. Scarcely a day goes by but what some new building scheme, involving hundreds of thousands of pounds, is recorded in the public Press. One day it is the Bank, the next a new Lloyds; a Devonshire House scheme; a giant store, or the rebuilding of a whole street. Let us hope that all this activity portends not only national prosperity, but a revival of architecture, without which, though the pocket bulge, the spiritual gain is as naught.

Architectural Travel

Edited by F. R. Yerbury, Hon. A.R.I.B.A., Secretary of the Architectural Association

Denmark

By L. MARNUS, Architect, Copenhagen

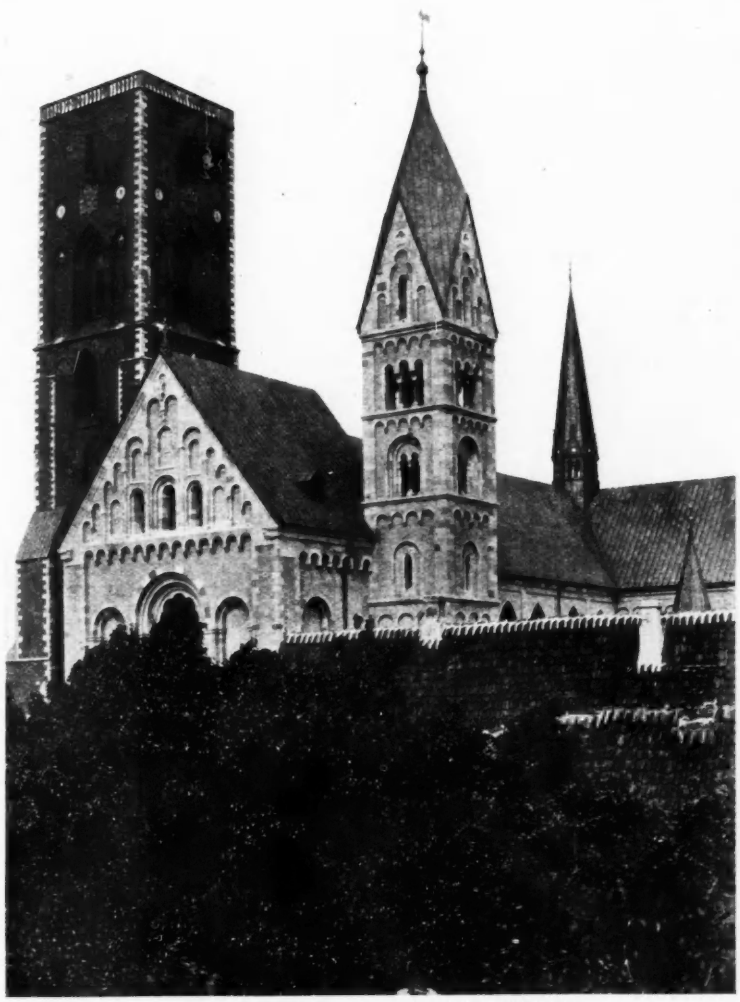
THE time of the year in which to visit Denmark is of the greatest importance. Go during the summer months—that is, from about the middle of June till the middle of September, when the climate will be found very similar to that of the North of England.

Train service in Denmark is good and frequent; but the motor-'bus service covers the country, and is often preferable as saving both time and money by taking short cuts, and sometimes taking you, moreover, through far prettier landscapes, while leading more directly to the place of interest sought. I would here emphasize the advantage of carrying as little luggage as possible. Experienced tourists know the futility of hampering oneself with more things than can be contained in one suitcase.

The objects of interest I am about to recommend for inspection do not exhaust the sights worth seeing in the country; they could very easily be multiplied; but when, for instance, I mention some interesting building as an objective, the visitor will, on his way to it, meet with others that command attention; but to avoid diffuseness, I must confine myself to a few that I deem to be the best. For the others, the traveller is free to make his own choice; this observation applying also to noteworthy country houses and to natural scenery. I shall name only some of the most important buildings that are passed by conveyance on the main roads. Of course, the visitor is at liberty to alight where he pleases, but I am assuming that his time will be more or less limited and that he will not care to spend much of it on a number of places that vary but little in character.

In drawing up a programme to suit the time at the visitor's disposal I really ought to know its duration; but assuming it to be that of an ordinary vacation, I propose one programme for a visit of from seven to ten days, and another to suit a sojourn of two to three weeks.

The route for the shorter period should be: Esbjerg—Ribe—Odense—Copenhagen, with direct return to Esbjerg, while the longer route would be: Esbjerg—Ribe—Tönder—Sönderborg — Faaborg — Svendborg — Odense — Nyborg — Korsör — Skelskör — Næstved — Vordingborg — Præstö — Kjöge — Copenhagen — Aarhus — Randers — Viborg — Silkeborg — Vejle — Kolding — Esbjerg.



RIBE CATHEDRAL: TWO OF THE TOWERS.

Ribe

Having arrived at Esbjerg from Harwich, which is the shortest and most convenient route between England and Denmark, the visitor should waste no time on Esbjerg, but take the overland express for Copenhagen; or take the first available conveyance to Ribe. If going by train, change at Bramminge.

The Ribe Domkirke (cathedral) is Denmark's oldest and finest Romanesque church. It was begun about 1125. In its earliest days it was several times ruined by fires and other agencies of destruction, and the large tower fell to ruins on Christmas morning, 1283. Besides its several rebuildings, the church has undergone a number of unfortunate restorations, and priceless parts have disappeared altogether. The last general restoration, by Amberg, has brought the edifice back, as nearly as possible, to its original state. The interior of the church has been preserved fairly well. The pulpit and the font are wonderful examples from the mediæval period.

St. Katharine's Church and Hospital are also important buildings dating from the middle of the thirteenth century. The town itself is full of good old architecture, mostly sixteenth-century half-timber houses, richly carved and decorated. A good example is Weis's Skeenkestue (Weis's taproom) in the market place. The seventeenth century also is abundantly represented. Of mediæval buildings are Raadhuset (the town hall), with its several large, effectively decorated halls, and Taarnborg, which was formerly the bishop's residence, but is now the property of the State. Porsborg is of 1580, and Greisen's Hotel, and

a brick house in the market place, are of the seventeenth century.

After having seen Ribe during the morning following the evening of arrival from Esbjerg, let us go in the afternoon to Tönder. On the way we will call in at Lögumkloster, where the cloister and church are of great interest. Visitors for the shorter trip should go back to Bramminge, and take an eastbound train for Odense, via Fredericia.

Tönder.

Is pleasantly situated on sparkling streams amidst green and mellow meadows. From an architectural point of view it is North Slesvig's prettiest town. Its gabled houses, with bays and dormers, are delightful, and the old patrician houses still show Baroque or Rococo portals of great beauty.

About a mile from Tönder is Mögeltönder, with Schackenborg Palace. The palace street consists of charming thatched Baroque houses, shaded by majestic old limes. Palace and park, and the little town, make together a lovely oasis in the Danish west country.

Tönder should be left at an early hour for Graasten, a quiet and pretty little place, brought into being as a consequence of the palace, which is a mixture of Renaissance and Baroque from about 1700, of which the palace chapel is the most striking example. The palace is the property of the State.

Given a fine day I should suggest going for a short autodrive and taking lunch at Kollund, which is a summer resort with a number of large hotels. From here there is a grand view over Flensborg Fjord and the pretty country around it.

Sönderborg

should be reached in the early afternoon. Beyond the old castle, with the historical museum and a few old houses, the town offers nothing much of architectural interest; but it is a great resort for tourists, partly owing to its wonderful surroundings, and partly to the sacred soil of Dyböl, which is drenched with the blood of many a brave fighter. A number of large redoubts and ramparts, as well as many scattered graves, are kept as national memorials. This place is just outside Sönderborg, and can be seen in the early evening, while it is recommended to spend the afternoon in a visit to the large palace and the town of Augustenborg, which offers a variety of Baroque and Rococo details. The road to Augustenborg passes several charming villages.

There is a choice of two routes from Sönderborg to Faaborg. One can either go by boat all the way, or take the train to Mommark, and then the ferry. The trip over Lille Belt, crossing between a number of little islands, is of the greatest charm.

Faaborg

is a fair and pleasant little town of 4–5,000 inhabitants. The fifteenth-century clock-tower, an old city gate (newly restored), several good old houses, and the town museum, which is a good modern building by Carl Petersen, are about all the sights within the city; but its vicinity is a garland of beauty and a fund of architectural interest. Of the numerous sights are to be mentioned Hvedholm, an old Renaissance hall, lying on the road to Horne Kirke, which is one of Denmark's best preserved round churches. Several good additions have been built to the mediæval round edifice, but, unfortunately, the interior has, during the eighteenth century, been turned into "New Classicism." The font is by Thorvaldsen.

Stensgaard is a half-timber hall of old date, enlarged about 1500, and restored in 1752. It is surrounded by an old moat, and has a beautiful garden. Brahetrolleborg, a castle about six miles from Faaborg, should not be missed. It was originally a cloister of thirteenth-century date, of which the magnificent conventual church is the only remnant. The castle was built partly during the sixteenth and seventeenth centuries. It is situated in a most fascinating country, and surrounded by a pretty garden and a large park, which are open to the public. Between Faaborg and Svendborg are several gentlemen's houses, of which Nakkebölle dates from 1550. A great curiosity is the four-hundred-year-old Kaleko Mölle (mill), which has been turned into a museum showing a characteristic local home of that period.

Svendborg

is one of the largest tourist resorts of the country, and is a town on which Nature has lavished her charms. Go out in the evening, take dinner at the "Christiansminde," and behold from thence the dreamy waters of the Sound, or go across the Sound to Troense, which is the loveliest place in Denmark when the apple trees are in bloom—a sea of blossoms spotted with isles of cosy thatched, charming cottages.

Svendborg's two churches, Vor Frue and Nicholai's, are both of the thirteenth century. Among a large number of old houses is the museum, of about 1550. The places of greatest architectural interest, however, are outside the town, and should be seen on the way to Odense.

Hesselagergaard and Rygaard are two of Denmark's oldest castles (thirteenth century), but both rebuilt at the beginning of the sixteenth, when Renaissance began to modify Gothic. Hesselager Church, of mediæval origin, was enlarged about 1550. On the road to Hesselager, a hall, called "Broholm," dates from the seventeenth century, and is much inferior to the two others. An interesting curiosity, however, is a museum containing old objects which have been found on the estate. A timber house has been built with old tools in order to try their fitness for use. Egeskow, of the middle of the sixteenth century, is one of the most remarkable old castles in Denmark.

Odense,

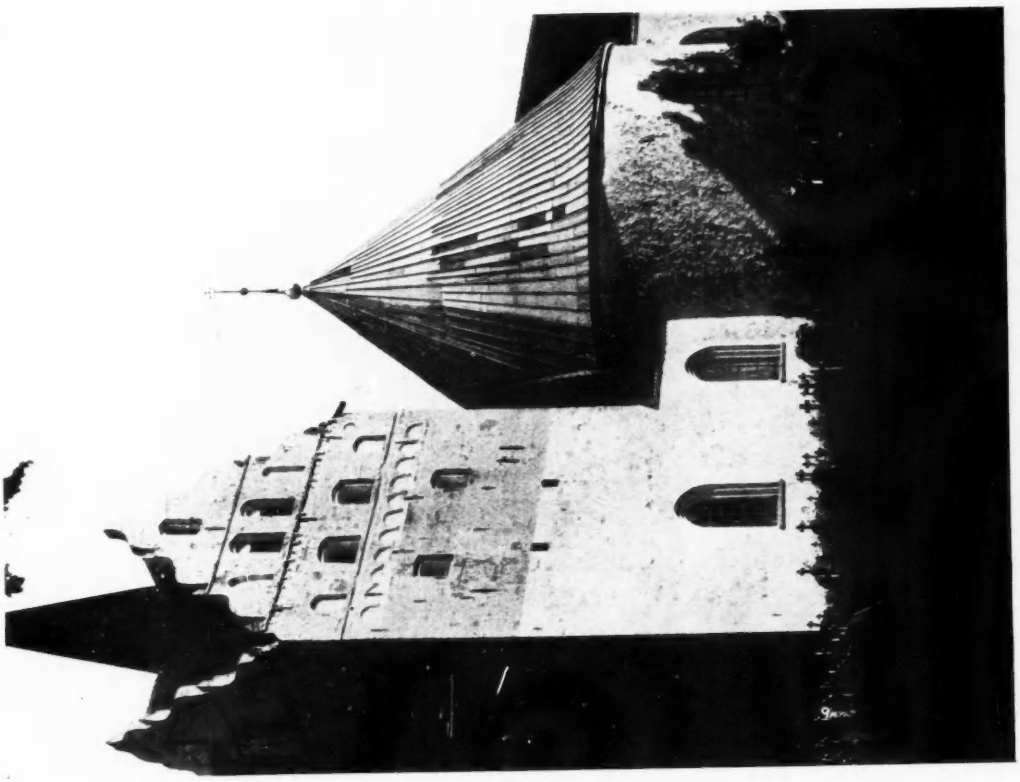
the third largest town in Denmark, is situated in beautiful surroundings, with an idyllic stream passing through the city. Odense, it will be recalled, is the birthplace of Hans Christian Andersen, and the house in which he was born is now a museum. The Royal Palace, built 1720, lies in a large garden called Kongens' Have. Odense Cathedral (St. Knud's or St. Alban's) was originally built during the reign of William the Conqueror over the relics of the English St. Alban. The building of the church was commenced by a king named Knud (Canute); but as that king was murdered during its erection, and later was made a saint himself by the Pope, the church was dedicated to both the saints (1093). This church was burnt down in 1247, and the present church was built during the latter part of the thirteenth century. It is now usually called St. Knud's, to distinguish it from a new Catholic church called St. Alban's. Under the cathedral is a large crypt, and next to it is the old cloister. St. Hans' Kirke is of the fourteenth century, and is the only church in Denmark having exterior pulpits. Next to the church is the vicarage. Graabrödre Hospital was originally a cloister of the thirteenth century. Odense Adelige Frökenkloster (a foundation for unmarried ladies of nobility) is of 1715. Fyns Folkemuseum, in Eiler Rönnows Gaard, 62 Nörregade, is a fine half-timber house of the Gothic period. Besides these buildings there are many good old houses from the sixteenth, seventeenth, and eighteenth centuries; especially in the streets named Nörregade and Paaskestræde. A modern church of some individuality has been built recently by P. V. Jensen-Klint.

The journey from Odense to Næstved can be made in a day. Visitors for the shorter trip should leave Odense by through train to Copenhagen. Fast trains reach the capital in less than five hours.

Arrived, by the ferry, at Korsör, where the only attraction is an old fort of the early mediæval period, take the Korsör—Skelskör—Næstved omnibus and alight at Skelskör. From here a visit should be paid to Borreby, which is one of the most notable old castles in the country, about two miles from Skelskör. The buildings, which are of the mediæval period, were partly rebuilt in the sixteenth century, and have since undergone ungainly restorations, but the old chapel retains much original detail, both inside and out. The castle contains one of the best private art

Old Houses in Ribe

"The town itself is full of good old architecture, mostly sixteenth-century half-timber houses, richly carved and decorated."



HORNE KIRKE, NEAR FAABORG

EGESKOW CASTLE, SVENDBORG.

collections in the country. Most of the mansions mentioned in this itinerary contain large art collections of priceless worth. On the road to Næstved is Holsteinborg Hall, from whose beautiful garden there is an expansive view over Vordingborg Bay.

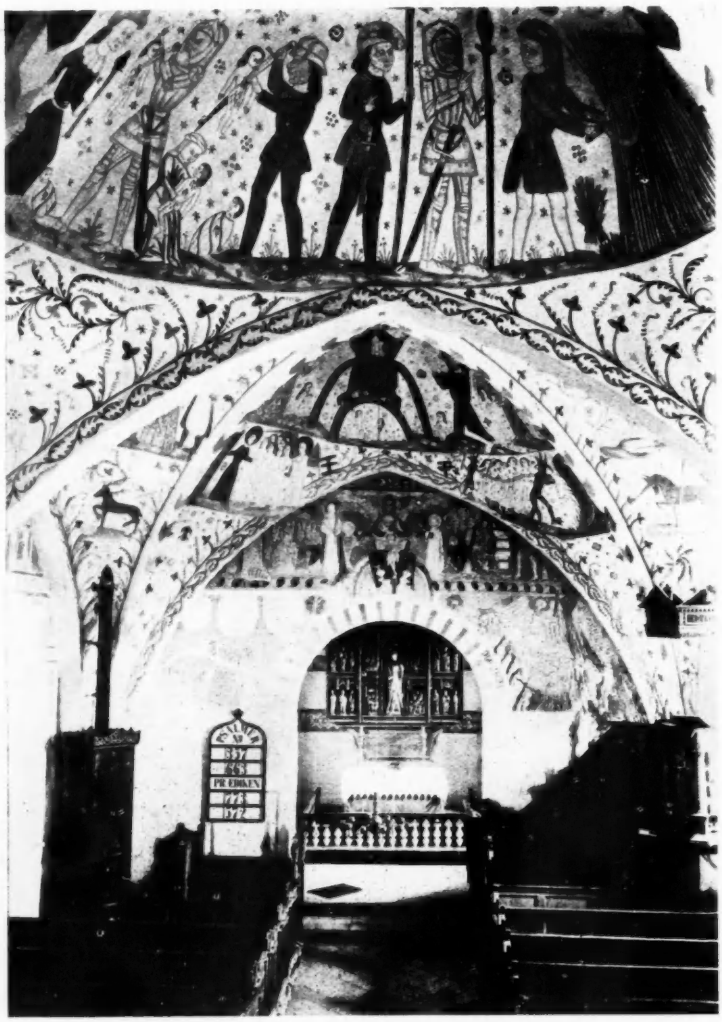
Næstved.

St. Peder's Kirke is one of Denmark's handsomest Gothic churches. It contains a great number of memorial tablets and several old fresco paintings. Of other buildings of mediæval date are St. Marten's Church, Helligaandshuset, and the Gamle Raadhus (old town hall), which is now used as a museum. Apostelgaarden is of the seventeenth century, and there are several good half-timber houses from the seventeenth and eighteenth centuries. Just outside the town is the memorable Herlufholm Palace, of which some parts are of the twelfth century; it was formerly a cloister. It is now used as a college. Gavnö Palace, about two miles from Næstved, was also an old cloister; but its present exterior dates from 1750. The palace contains a wonderful collection of paintings, and it is situated on an island in a very large and beautiful garden.

The south of Zeeland is a region of great natural beauty, especially if one goes by the route Vordingborg—Kallehave—Præstö, and the trip by omnibus will never be regretted.

Vordingborg is only a little town, but is rich in historical memories. Its once lustrous palace is now a ruin, except for a round tower with a golden goose on its spire (about 1360).

If, Kallehave having been reached, the day be dry and sunny, I should recommend a trip to Möen's Klint (cliff), one of the great natural sights of Denmark. The chalkstone cliff stands 3–400 ft. high over the waves of the Baltic. The way to its famous cliff leads through the old town of Stege, whose mediæval church has been restored by H. B. Storck. Two miles from Stege is Kjelby Church (Romanesque). It contains some of the best-preserved old fresco paintings to be seen in the country. On the northern wall of the choir is a most remarkable memorial stone of 1323. Not far from the cliff is a house named "Liselund." In its garden is a summer-house which is an architectural gem. The house, which dates from 1792, has a thatched roof, and its deep overhanging eaves are supported by columns.



KJELBY CHURCH, MÖEN: FRESCO PAINTINGS.

Præstö is one of those places where time seems to stand still. Its mediæval and rather handsome church has been restored by Storck. Just outside the town is Nysö Hall, a classic building of 1673. Here Thorvaldsen spent his last years, and the atelier of the great sculptor stands in the pretty garden. Gisselfeld Castle and Bregentved Palace, respectively of the sixteenth and the seventeenth centuries, are on the road to Kjöge, and both are of considerable importance. Haslev station is near to Bregentved, and trains can be taken here for Copenhagen via Kjöge. The latter town and Vallö Palace will be described later. At Karise there is a pretty thirteenth-century church.

(To be continued.)

The Architectural Development of American Cities*

Mr. G. Topham Forrest at the R.I.B.A.

IN considering the cities of the United States of America and their development from an architectural point of view, it is important to remember that we are considering cities which are distinctly modern. They were laid out in comparatively recent times, and although the great increase of traffic due to the coming of the motor-vehicle was not foreseen, the lay-out in every case was made with the knowledge and experience of the requirements of city development gained in the much older cities of Europe. The designers of the American cities planned for wide and straight streets; and not only so, their plans have been carried out, since there was no insuperable difficulty to prevent the development of the cities on the lines which they desired. But how different the case of London! (And it seems to me rather important at the outset that we should realize this essential difference between the conditions appertaining to London and those that apply to New York and other relatively new cities of the United States of America.) In London we have a city whose history can be traced more or less through a period of two thousand years. Even if we only go back to the Elizabethan period we know that the site of London was confined within definitely restricted limits. Its streets were narrow and tortuous, and its areas very densely built over. It is true, of course, that when the Great Fire swept away practically the whole of the City an opportunity presented itself of re-developing the old town along lines which would have made London what Wren desired to make it, namely, the "most magnificent as well as commodious for health and trade." Had he been permitted to have his way the City of London as regards the widths of its thoroughfares and general lay-out would have compared favourably with any city in America. But the difficulties with which Wren was confronted in the matter of property-ownership, the establishment of churches and public buildings on particular sites, and the very natural tendency of all concerned in individual plots of ground not to forfeit their rights, made it impossible for him to effect any really radical change or improvement in the lay-out. Wren's plan for town-planning London could not be put into execution, and if improvements were not effected at that time, may it not be thought that there is even less chance of modernizing it to-day by widening its streets and increasing its open spaces? But its vast working and residential population, its tremendous commercial interests, its importance as the capital of a great Empire, its traffic problems, and the constantly arising necessity for increasing the accommodation capacity for buildings in its more important business, Governmental, and residential centres or areas, are constantly bringing home to all of us the absolute necessity for widened roads and more open spaces and higher buildings. And would it not be possible to learn something definite in respect of these necessities from the ampler provisions made in respect of them in the essentially modern towns of the United States? I think we can learn a great deal.

London is changing, and London must continue to change. Everything points in that direction. Her building problems, because of these changes, are becoming more and more pressing, and it was this fact which led the London County Council to send me on a visit to America so that I might report on the construction and control of buildings, as well as on other matters related to the development of urban areas in that country. The Council, I venture to think, very rightly recognized that for its regulations and requirements with regard to the construction of buildings suited to the needs of a progressive commercial city, the carrying out of improvements and the increasing of the amenities of the great town for which it is responsible, the best information possible bearing on those subjects should be obtained—hence the choice of America.

The object of my visit had primarily to do with the construction and control of buildings, but I took advantage of the opportunity afforded by my visit to make a study of Town-Planning and Zoning and Housing, as well as of other matters that might possibly prove of assistance to the Council in connection with the work which falls to its Architect's Department. In other words I have been studying the architectural development of the cities which I visited, more especially of those to which I shall now refer in some detail, namely:—1. The city of Washington; 2. The city of Chicago; 3. The city of New York.

WASHINGTON.

All my architectural friends will no doubt be acquainted with the lay-out and arrangement of the city of Washington, and with that I do not propose to deal at any length. Although Washington is the Capital, it is not a commercial city like London, and for that reason its development has been, on the whole, quite different from the development of New York, for example. Washington was originally laid out in 1682 on rectangular lines, in accordance with a plan prepared under the direction of its founder William Penn. Upon this rectangular plan was superimposed a plan prepared in 1791 by the French engineer Major L'Enfant, under the personal supervision of President Washington. The object of that plan was to ensure that the development of the city might be appropriate to that of a capital city. The L'Enfant plan, however, was not rigidly adhered to, and the question of the future development of the city was reviewed in 1901 by a special Commission appointed by Congress.

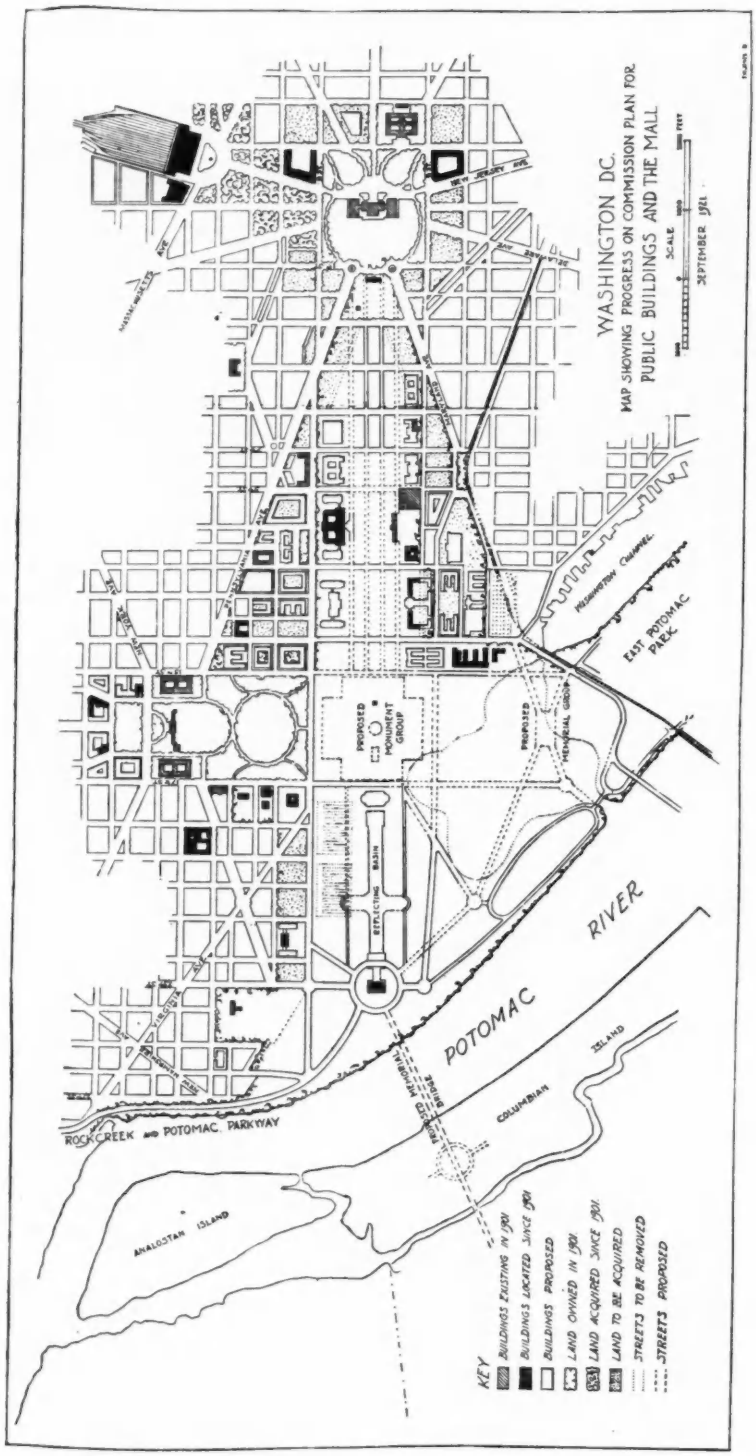
The Commission prepared a new plan, but in doing so they reasserted the authority of the L'Enfant plan and extended it to meet twentieth century conditions. During the past twenty years the essential features of the plan have been established, and the future will be largely a filling in of outlines. [The position in 1921 was indicated on the screen.] The result is a really beautiful city. The central feature known as The Mall is, as you know, a parkway over two miles in length. [See page 810.]

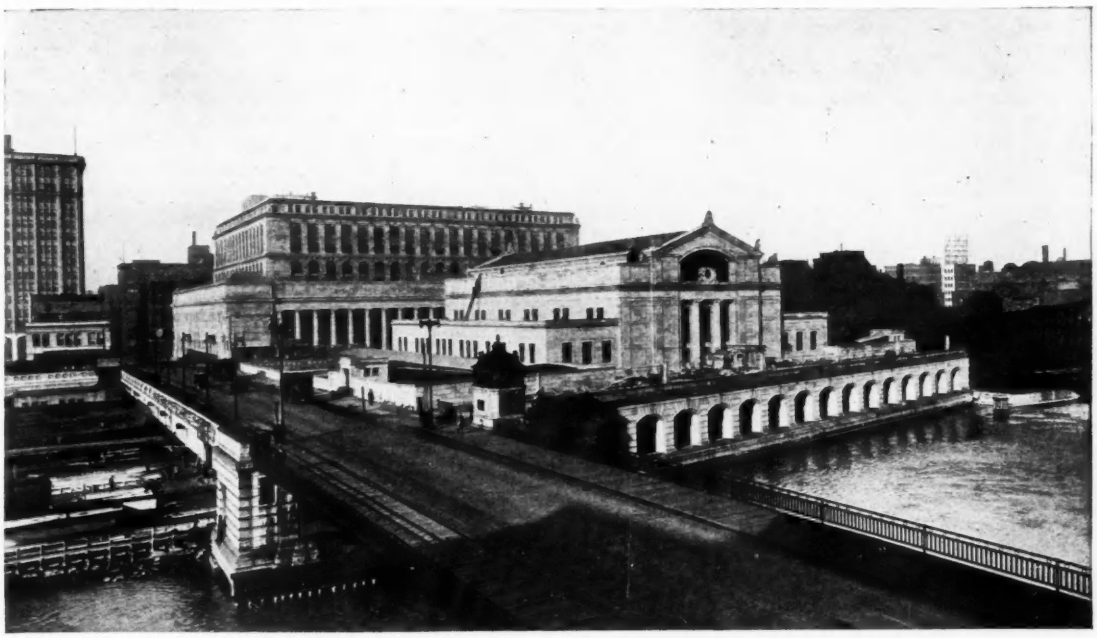
Washington would have been a still more beautiful city if L'Enfant's intention that all the Government buildings should be grouped along the Mall had been rigidly carried out. The Commission appointed in 1901 have recommended that in future this feature of the original plan be adhered to.

I am sure we are all agreed that the Government buildings of London should be grouped in some such way, but so long as London has no plan to follow, the arrangement of our monumental buildings will be largely of an accidental character.

There is one item of the development to which I would like to draw your special attention. I refer to the Lincoln Memorial, the position of which is indicated towards the left of the Mall. Everything connected with the development of the site has been most carefully considered. As illustrating the large view taken of such matters in America, it is shown by the Washington Art Commission's Report

* Excerpts from a paper read before a meeting of the R.I.B.A. on Monday, May 17.


WASHINGTON D.C.
MAP SHOWING PROGRESS ON COMMISSION PLAN FOR PUBLIC BUILDINGS AND THE MALL
SCALE
SEPTEMBER 1925
WASHINGTON CHANNEL
EAST POTOMAC PARK
PROPOSED MONUMENT GROUP
PROPOSED MEMORIAL GROUP
RESERVOIR
POTOMAC
RIVER
ROCK CREEK AND POTOMAC PARKWAY
ANACOSTAN ISLAND
KEY
BUILDINGS EXISTING IN 1901
BUILDINGS LOCATED SINCE 1901
BUILDINGS PROPOSED
LAND OWNED IN 1901
LAND ACQUIRED SINCE 1901
LAND TO BE ACQUIRED
STREETS TO BE REMOVED
STREETS PROPOSED



UNION STATION, CHICAGO. ERNEST GRAHAM, ARCHITECT.

that the scheme of this memorial, involving the Mall system and Potomac Park, embraces a composition that "greater in extent than the Tuileries to the Arch of Triumph; greater even than the London composition from Buckingham Palace to St. Paul's Cathedral, is susceptible of a development at once distinctive and magnificent."

The plan prepared by the Commission appointed in 1901 included not only the City of Washington, but the environs, that is, the whole district of Columbia. Large tracts of land are reserved as parklands, and without doubt the authorities mean to make the district of Columbia one of the most beautiful urban districts in the world. This reservation of parklands should appeal to those who are particularly concerned in the future development of London. The time has come when steps should be taken to preserve large tracts of parkland all round the existing built-up portions. Are we to go on building without making a definite break in the line of buildings? Surely it would be folly to do so. Some body, such as this Institute, should take action to ensure a great belt of parkland all round Greater London.

As regards the treatment of the central portion of Washington, it should be remembered that whereas London is a great commercial and manufacturing centre, Washington is primarily a seat of government. It was for this reason that I made a much closer study of the architectural development of Chicago and New York; these are commercial cities, and problems with which they have had to contend, and are contending, are similar to the problems which confront us here.

CHICAGO.

As regards Chicago, although it is a commercial city, yet the attempts which have been made to bring about improvement from an artistic point of view, show that the Chicago authorities are fully alive to the fact that a commercial city may also be a beautiful city.

Formerly there was no limit as regards the height of buildings in Chicago, but now, under the zoning laws, the height is restricted, and 264 ft. is the maximum. Many of those qualified to speak on the subject are not at all satisfied that it is safe to allow buildings of a height of 264 ft. The chief engineer of the Chicago Board of Fire Underwriters argues for a limitation of 125 ft., and those who have made a special study of traffic conditions and the effect of high buildings on traffic congestion, also favour much lower buildings than at present allowed. Chicago, as regards its central district, is certainly over-built, and the streets and transit facilities are so badly overtaxed that business is being forced from that district.

The high architectural standard of railway stations in America shows that the companies are fully alive to the necessity of an imposing gateway to a city, and they realize that it is their duty and privilege to provide such a gateway.

But all classes in Chicago are evidently bent on improving their city. Progress seems to be the watchword everywhere. In addition to the widening of Michigan Avenue, two outer boulevards have been built on the newly made Lake Park, and twenty-four million dollars have been set apart for the purpose of constructing a double-deck street, 135 ft. wide on its lower level, to carry heavy traffic. This double-deck street will be open on the river side. Moreover, that congested part of the city well known as the "Loop" is being opened out by means of widened boulevards into a rectangle which will measure three miles by two.

The improvement of Michigan Avenue has cost the taxpayers sixteen million dollars, but it has added one hundred million dollars in value to the taxable properties, besides causing already the investment of another one hundred million in profitable building. The American is known the world over as a wide-awake business man, and these improvements, quite apart from their contribution to the beauty of the city, constitute a first-class financial investment. If Washington has something to teach us in regard to the treatment of the environs of our city, Chicago has also a great deal to say to us about the value of improvements within the city's borders.

NEW YORK.

The third city is the city which is of all the American cities most like London, in respect of the general character of its commercial interests. I refer, of course, to New York.

The first sight of New York from the steamer, the inpression which one obtains at first glance, is that this part of New York is built on a hill, whereas it is built on an absolutely flat piece of land, but the buildings mount up into the form of a rough pyramid.

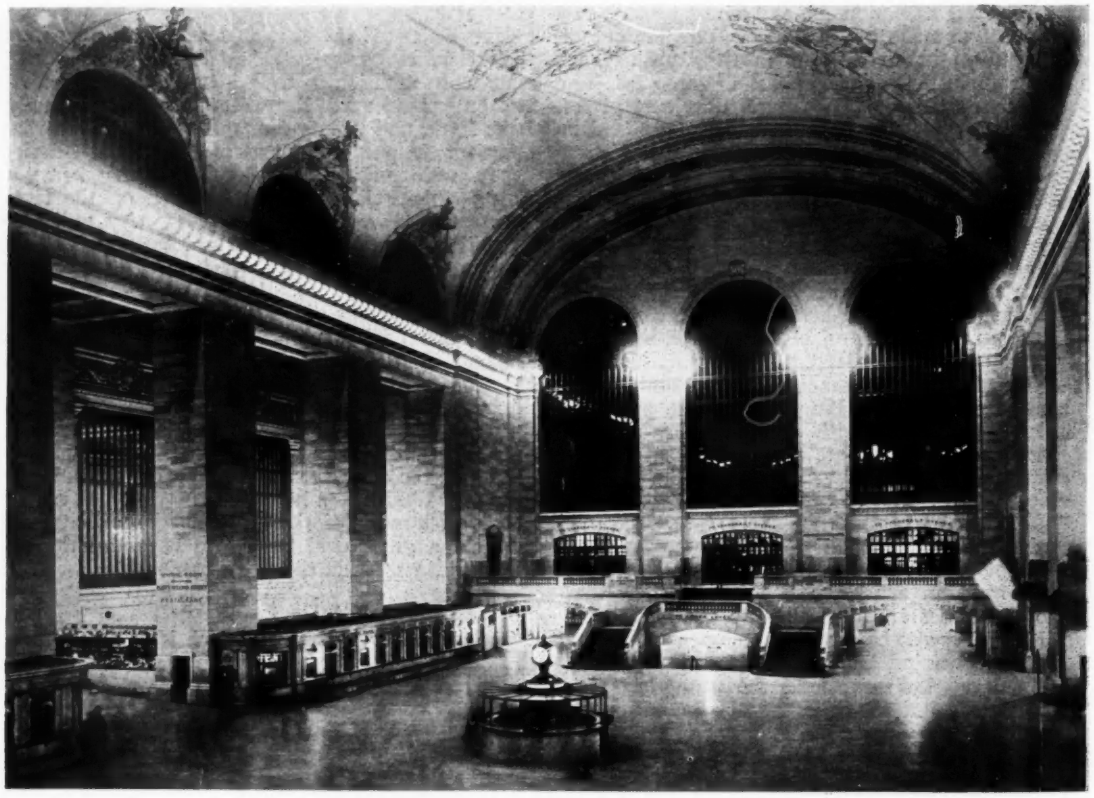
I think that this "first sight" of New York offers a clue to the very distinctive lines on which, as a city, it has been developed.

When one comes to consider the site of the city of New York, it would seem the physical conditions were bound to suggest, that in order to obtain the greatest advantage of the available areas, buildings must be extended vertically in the manner which is now so obviously a characteristic of New York. Moreover, it would seem that this was bound to lead in its turn to the system of regulation and control which are connected by the term "Zoning." We shall appreciate better the conditions applying to Central New York if we imagine the commercial districts of London, instead of being limited on the south side only by the River Thames, bounded by water both north and south, and for that matter both east and west also. It obviously induced a condition of a very serious kind, and soon involved the preparation of a very comprehensive transport scheme for dealing with the transit to and fro of the concentrated day population.

Let me say right away that buildings of the height of those in New York could not be contemplated for London. But there is a vast difference between skyscrapers and buildings slightly higher than those at present permitted in London and properly considered in relation to general distribution. Perhaps it has not always been realized that our problem is not so much one of higher buildings, as of streets on which to put them. Traffic conditions demand wider streets. I was rather interested a few evenings ago to notice the remarks of the Commissioner for Public Works of New York, who is now on a visit to this country. He referred to the various suggestions which had been made in New York for the alleviation of their traffic congestion, and pointed out that high-level roads, overhead bridges, and underground passages had been considered, and the restriction of vehicles decided upon. Notwithstanding all these proposals, his conclusion was: "There is only one way to deal with increasing traffic, that is to widen the streets. Any other scheme can be merely a palliative and not a cure."

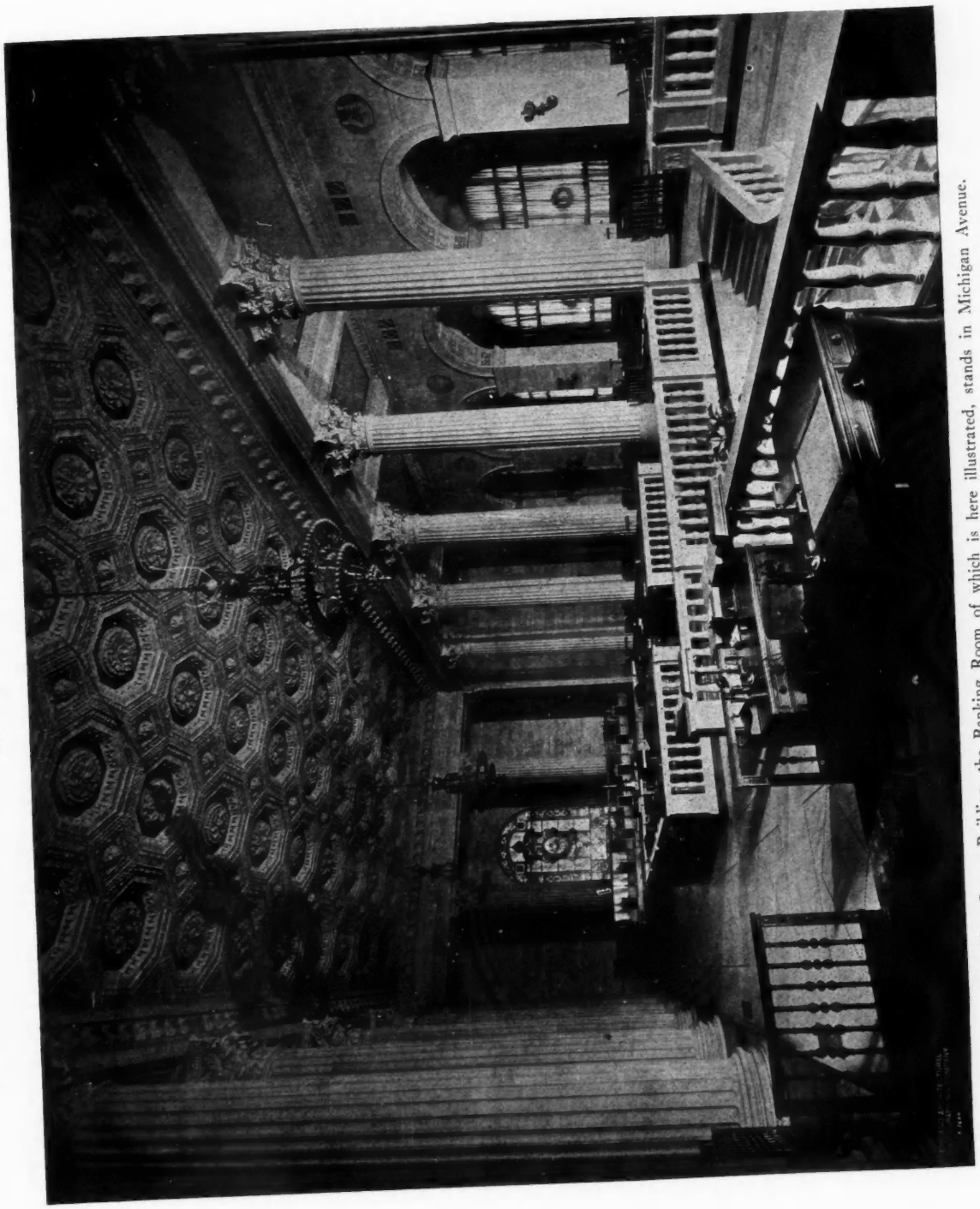
Now, as to obtaining widened streets in London; it seems to me that if owners are prepared to give up part of their frontage so as to contribute to the provision of wider streets, then they should be compensated in the way of being allowed to build higher—in the most advantageous conditions up to 120 ft., but 120 ft. should be the absolute maximum. The width of London streets generally would compel us, I think, to fix that as the absolute maximum.

I may refer incidentally, as a matter of general interest, to the provision of housing and educational buildings in the cities of the United States. The shortage of housing accommodation, and the unsatisfactory condition of some of the existing housing, is apparently just as real as in England, and similar reasons are put forward to explain that shortage —high cost of materials, decreased output, profiteering, and so on. But the steps taken to meet the shortage and to remedy existing conditions are different from those taken in this country since the war. There, it would be unconstitutional for the Government to take action similar to that taken by the British Government, although in some cases assistance is given out of the public funds by exempting owners from payment of tax in respect of new buildings. Again, during the war, the Government had to take special action to provide houses for war-workers, but that was done apparently as part and parcel of the war activities of the country. It may be said, therefore, that on the whole housing in the States is being provided entirely by private enterprise. In this respect we find that conditions are similar to those prevailing in London. The private builder, as a rule, cannot for financial reasons build to let, he can only build to sell. But occupier-ownership has for many years been a noticeable feature of American housing conditions, and year by year the number of occupiers who own their houses is rapidly increasing. The latest figures show that in 1920, in some of the States, the proportion of



GRAND CENTRAL STATION, NEW YORK.

Modern American Architecture. 43.—Banking Room of the New Straus Building, Chicago
Ernest Graham, Architect



Modern American Architecture. 43.—Banking Room of the New Straus Building, Chicago

Ernest Graham, Architect

The New Straus Building, the Banking Room of which is here illustrated, stands in Michigan Avenue.

Air Views. II.—New York

This air view is of the business centre of New York. Central Park is seen towards the right.

Air Views. 12.—New York

This air view shows the same area of Manhattan Island, but from a different angle. The Woolworth Building, rising above all the others, is conspicuous.

families owning their houses was no less than 50 per cent. to 56 per cent. The Government encourage house ownership, and in a recent official publication it was stated that "the present large proportion of families that own their houses is both the foundation of a sound economic and social system and a guarantee that our society will continue to develop rationally as changing conditions demand." The latest types of houses, and the latest ideas as to what constitutes an acceptable type of small house, may be seen from a study of the houses erected by the Government during the war. Concrete is now being very largely employed in the London County Council housing schemes, and, following the example of America, I am experimenting with coloured concretes, so as to obtain greater variety in the appearance of houses of this kind. Coloured concretes are employed on many housing estates in America.

In conclusion, I can only make the briefest reference to the State and City Art Commissions that are being appointed to an increasing extent in the States. More than twenty of the largest cities have such Commissions, and their aim is to ensure a proper regard for amenities in the towns and cities, and what may be called æsthetic consistency in their treatment.

Pavilion and Band Enclosure, Worthing

ADSHEAD and RAMSEY, FF.R.I.B.A., Architects

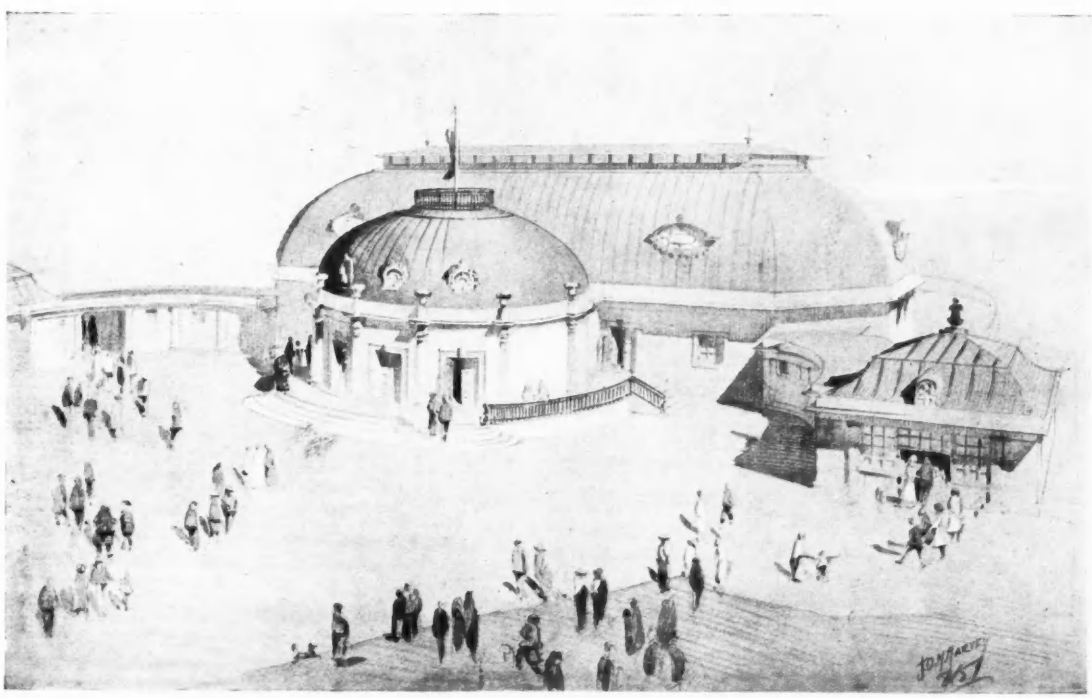
THE pavilion is being built at the land end of the pier, and when finished will accommodate about 700 persons. It is designed for entertainments by concert parties and theatrical companies with movable scenery. There is an interior promenade round three sides of the building, raised 18 in. above the floor of the auditorium, and connected with kitchens for the service of light refreshments. The sloping floor of the auditorium is movable, and under it is another flat floor for dancing.

The superstructure is a steel-framed building with thin concrete curtain walls, and a boarded roof covered with zinc. Externally the walls are to be finished in cement, which will be coloured a light cream. The whole of the superstructure on the sea side of the retaining wall is carried on a foundation of steel piles screwed into position by electricity. Provision has been made for central heating, so that the building can be adapted for winter as well as summer use.

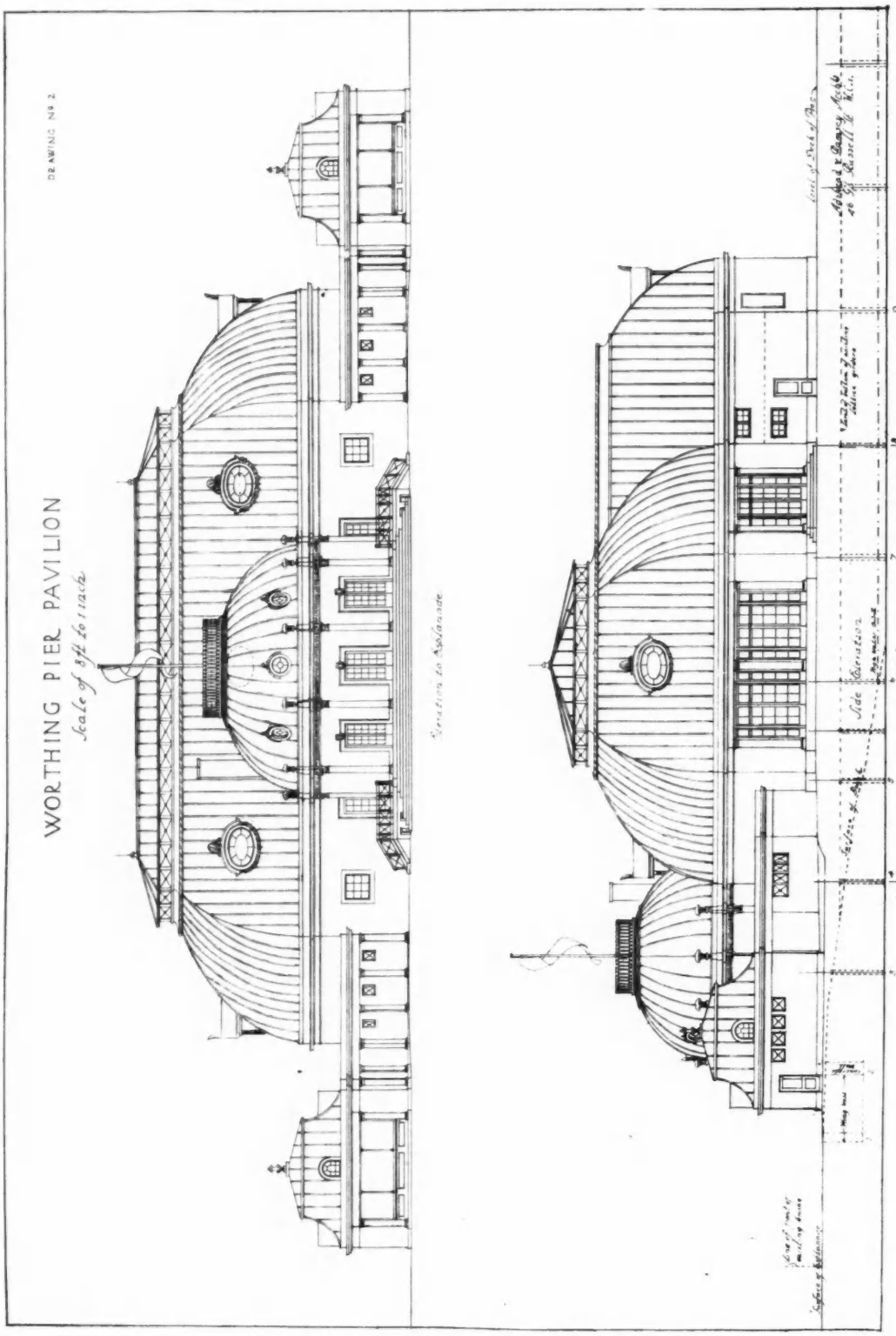
The Band Enclosure.

Several hundred feet to the east of the new pavilion the Worthing Corporation, who are responsible for the pavilion, are also building a new band enclosure. This enclosure consists of a large reinforced concrete deck on a level with the promenade, and carried on a series of steel piles in the same manner as the pavilion. The stage is on the sea side of this decking, and is of the modern shell variety, with retiring rooms for artists and bandsmen in the rear. To the east and west are large covered shelters enclosed with glazed screens as protection from the prevailing winds. Round these screens is an encircling promenade some 10 ft. wide. The enclosure will afford a seating area for an audience of 2,250, a large proportion of whom will be accommodated with deck chairs.

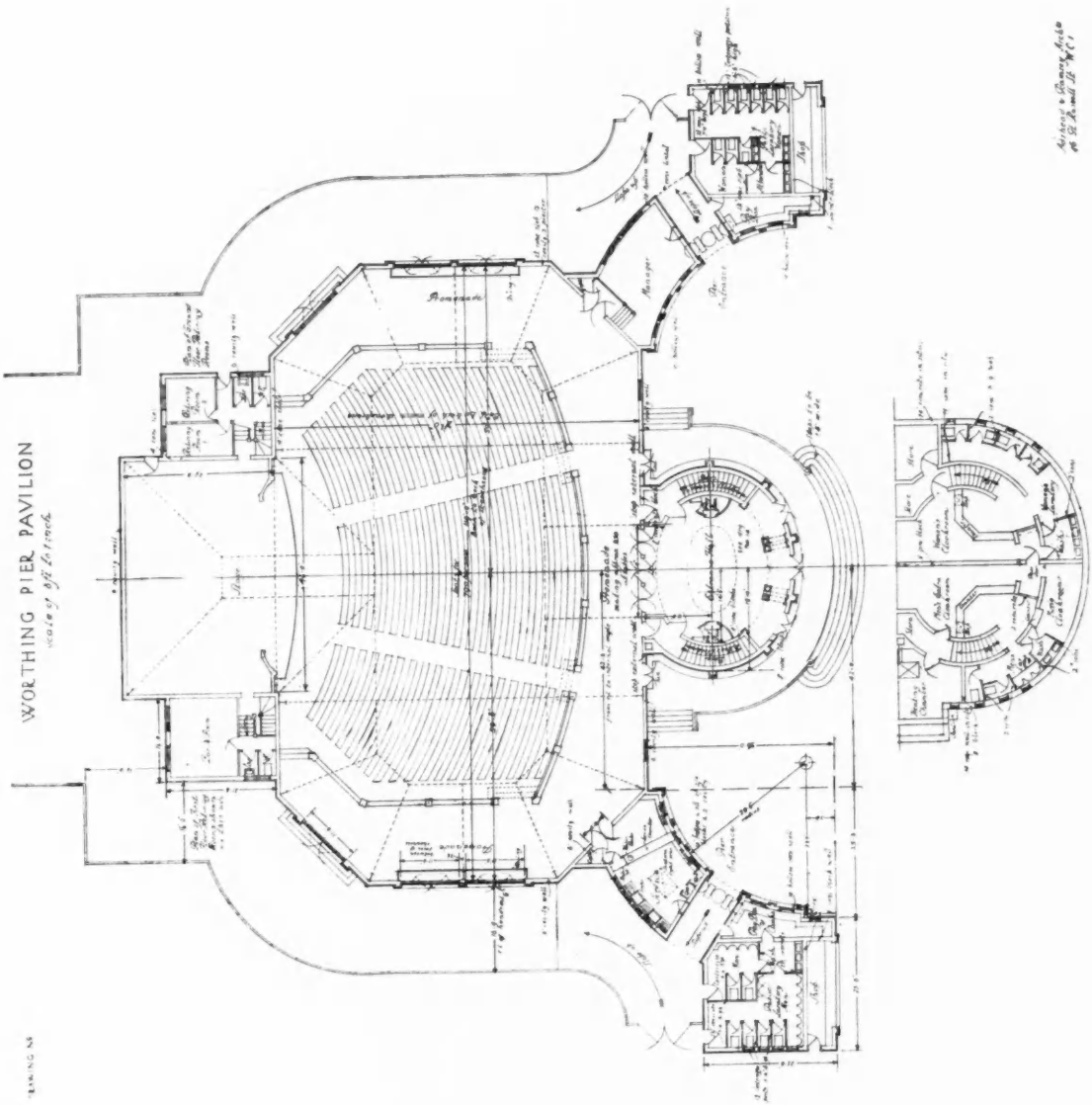
The architects are Messrs. Adshead and Ramsey, in conjunction with Mr. Burnard Geen, consulting engineer. The general contractors are Messrs. Spandell and Sons, of Worthing, and the piling and steel construction are being carried out by Messrs. Braithwaite.



A PERSPECTIVE VIEW OF THE PIER PAVILION.



WORTHING PIER PAVILION. ADSHEAD AND RAMSEY, FF.R.I.B.A., ARCHITECTS.



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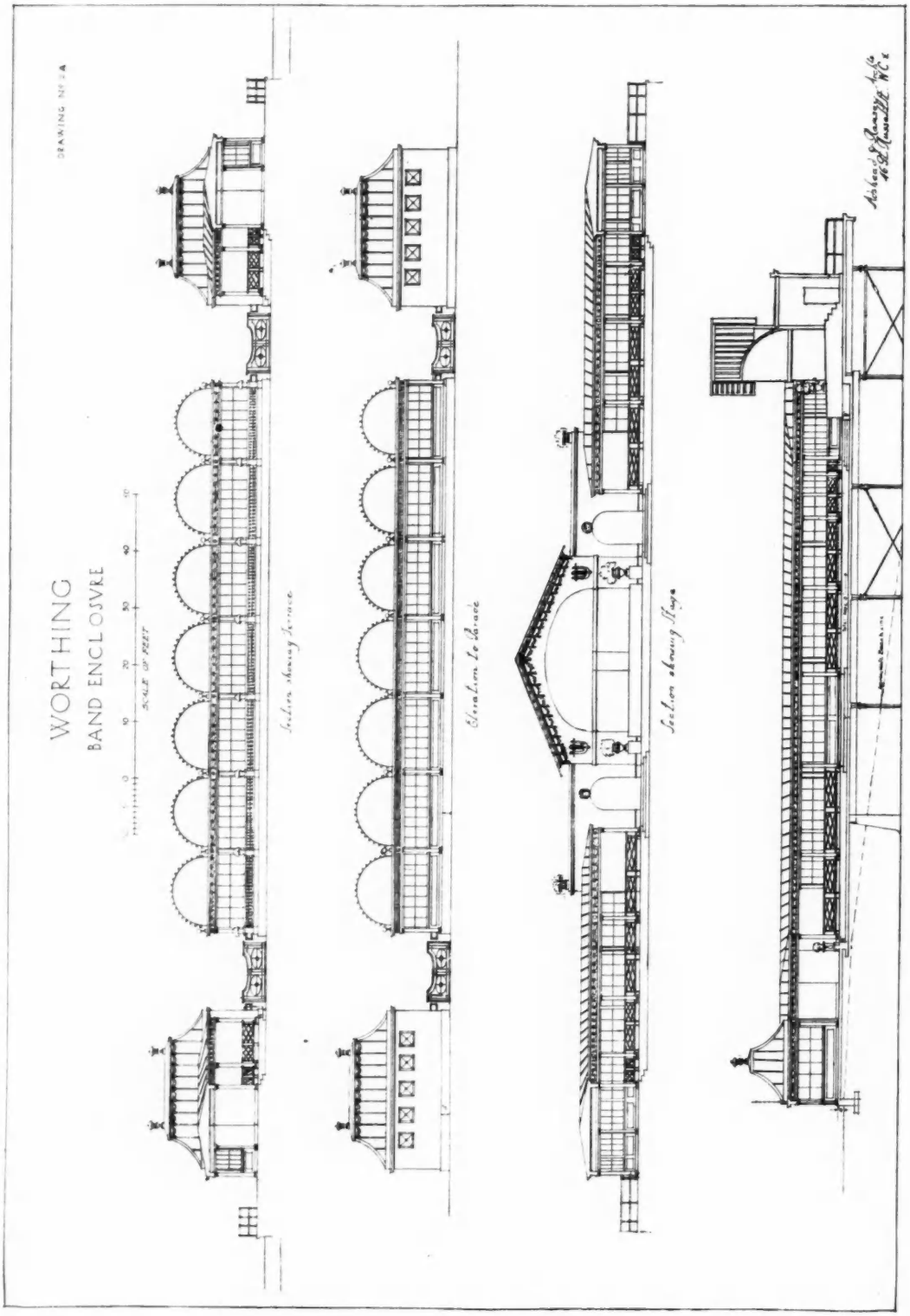
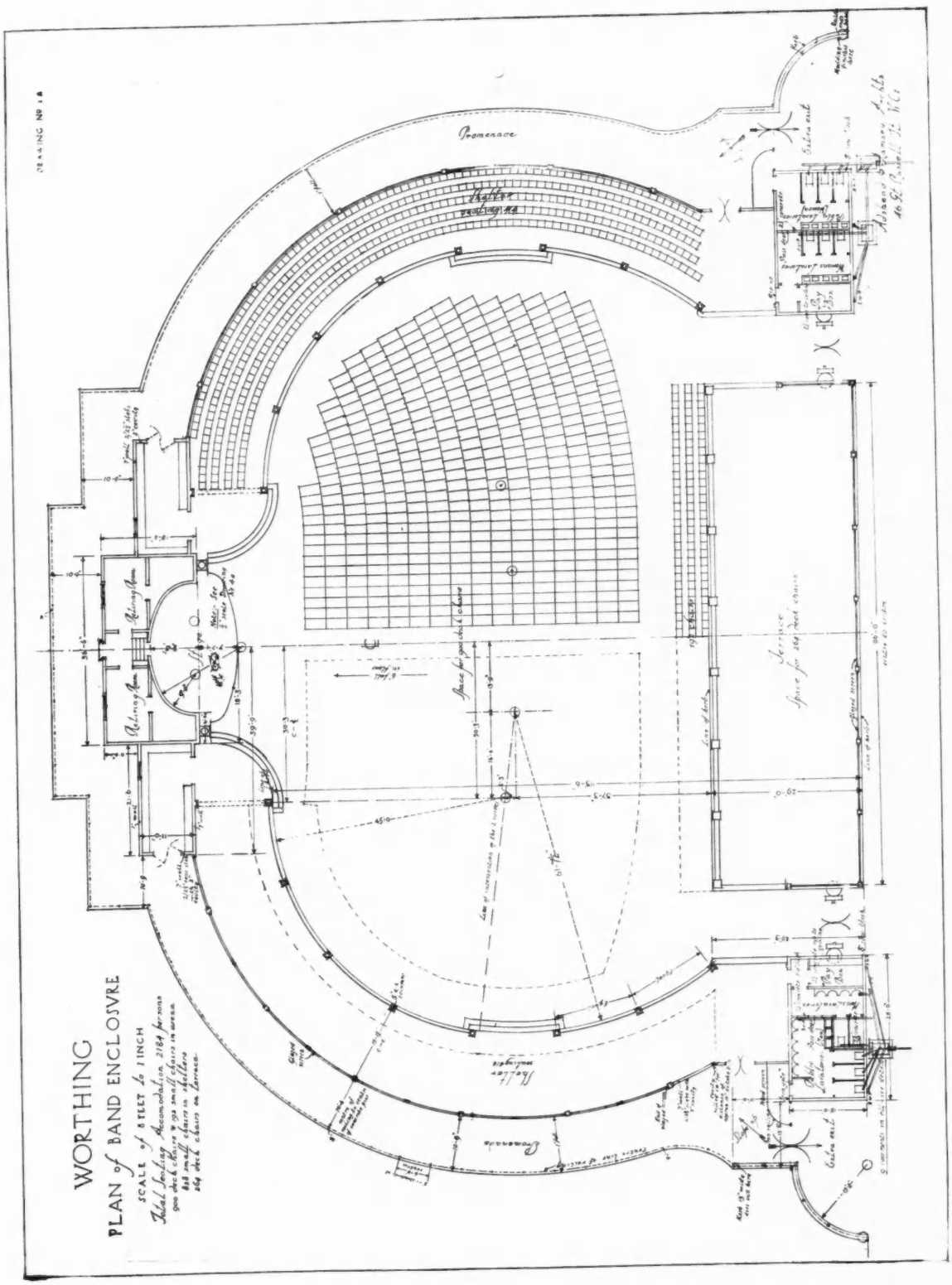


WORTHING BAND ENCLOSURE. ADSHEAD AND RAMSEY, FF.R.I.B.A., ARCHITECTS.



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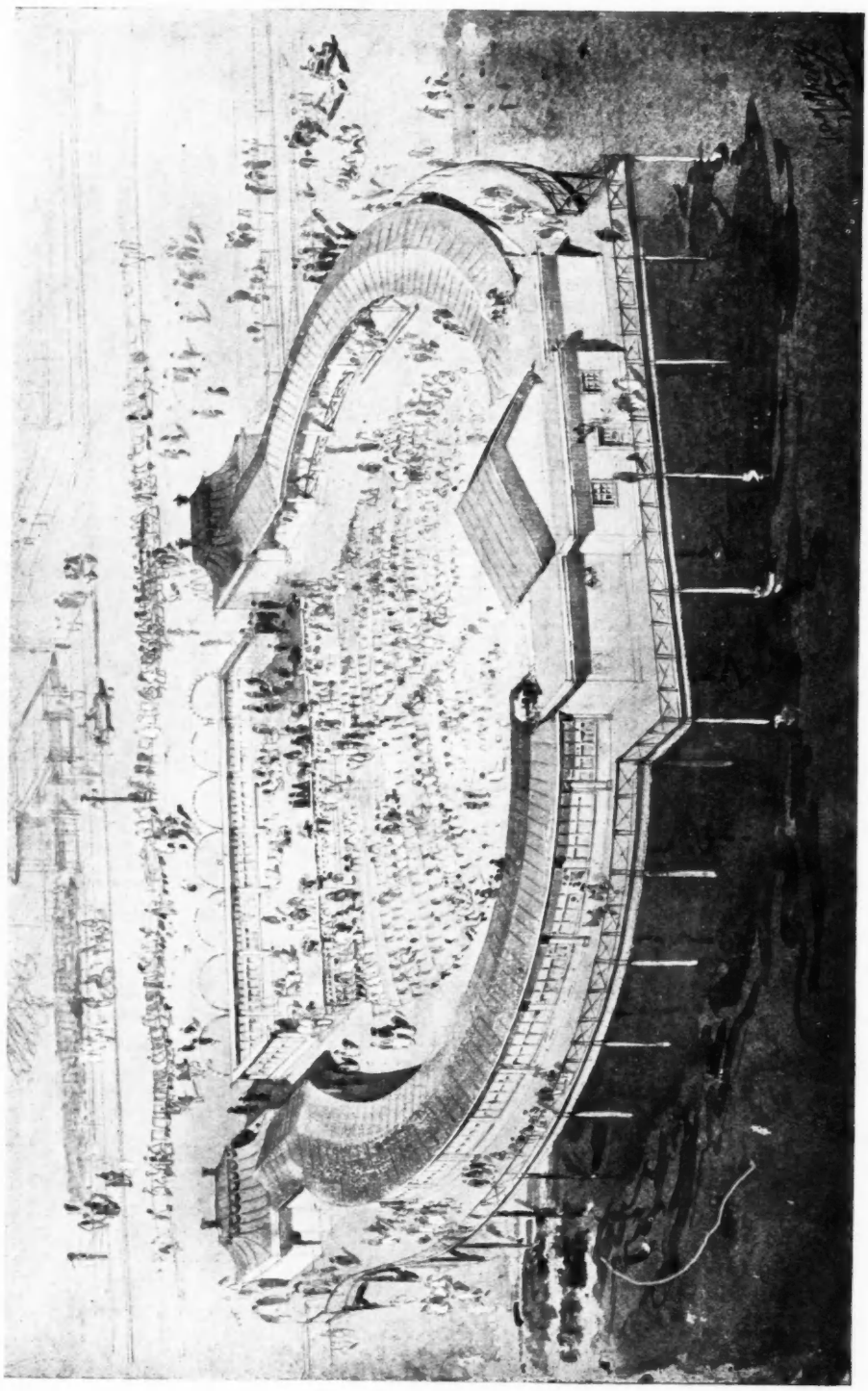


WORTHING BAND ENCLOSURE: A PERSPECTIVE VIEW. ADSHEAD AND RAMSEY, FF.R.I.B.A., ARCHITECTS.

Croydon Town Planning Schemes

Mr. G. F. Carter, M.Inst.C.E., M.T.P.I., in reading a paper before the Town Planning Institute, said: The County Borough of Croydon has an area of 9,012 acres. The borough has an extreme length north and south of six miles, and east and west of four miles. The population (1924) was approximately 200,000. Since the war, building development has rapidly taken place within the borough, and the following houses have been completed: 1921, 971; 1922, 407; 1923, 963; 1924, 1,527. Of these, the Corporation completed 772 houses, and are still proceeding. Practically the whole of the privately-built houses have been for sale or erected by owner-occupiers.

The Corporation have prepared three town-planning schemes—the Croydon (North) Town-planning Scheme; the Croydon (South) and Beddington (South) Town-planning Scheme; and the Croydon (East) and Addington Town-planning Scheme, the following being the particulars:

Croydon (North) Town-planning Scheme.

Map No. 1 was submitted to and approved by the Local Government Board in August, 1915. It dealt with an area of 812 acres. The principal object, was to deal with a large area adjoining London, which, it was felt, would come into early development. Work in this scheme was held up during the war.

The area has been zoned at 4, 6, 8, and 12 to the acre, with a permissible factory area on the site of a brickfield between Green Lane and Virginia and Ingram Roads. Nevertheless, no advantage has been taken of this allocation for the purposes of erecting factories, but on the contrary plans have been submitted and approved by the Council for a lay-out of this area as a purely residential site, and building operations have already commenced.

Generally the area presented many difficulties for a well-considered scheme of town planning, in that it was already partly laid out with roads to suit individual ownership only, such roads having been constructed for over thirty years, with scarcely a house built thereon until the town-planning scheme came along. In fact, due to owners' lay-out, this area had developed least of any part of the borough.

The wooded areas, known as Convent Wood, Biggin Wood, and the Lawns estate have been scheduled for preservation under the scheme.

Croydon (South) and Beddington (South) Town-planning Scheme.

This is a joint scheme with the Beddington and Wallington Urban District, and was first made by resolution of the Croydon Town Council on October 28, 1918, under the description of the Croydon (South) and Beddington and Wallington joint town-planning scheme, Map No. 1 being approved by the Local Government Board on June 10, 1919, and afterwards, under the description of the Croydon (South) and Beddington (South) town-planning scheme, received the final approval of the Minister of Health on November 27, 1924.

It comprises an area of 840 acres within the Borough of Croydon, and 320 acres in the Urban District of Beddington and Wallington, the site of 230 acres occupied by the Croydon terminal aerodrome and the aircraft factory, belonging to the Air Ministry, is excluded from the operation of the scheme.

The object of this joint town-planning scheme was to deal with the large undeveloped area in the south of the borough between Waddon and Purley, lying to the west of the Brighton Road, and for controlling building development and road communication with the adjoining Urban District of Beddington and Wallington, westwards to Plough Lane.

Some progress was made with preliminary plans of the area during the war, but the incident which materially affected the normal progress and character of the western portion of the town-planning area, both for buildings and arterial road communication, was the commandeering by the Government of 230 acres of land for the Waddon Aircraft Factory and Aerodrome. Communicating roads east and west which were tentatively laid down on plan from the neighbourhood of Haling Park towards Wallington had to be abandoned or otherwise diverted, and the proposed zoning reconsidered and amended.

The Air Ministry, in whom the site is now vested, has also taken over and will ultimately stop up about three-quarters of a mile of Plough Lane in Beddington and Wellington area, and has further arranged with the Beddington and Wallington Council for an alternative route for a new road to the west of Plough Lane, linking up with Sandy Lane North in Wallington.

The area contains the Duppas Hill recreation ground of 35 acres, belonging to the Corporation, but no additional area has been scheduled in the scheme as an open space.

The area has been zoned at 3, 4, 6, 8, and 12 to the acre, with a factory site in the neighbourhood of Stafford Road, opposite the aircraft factory. Shopping sites are provided also in Stafford Road, and along a portion of the Brighton Road frontage.

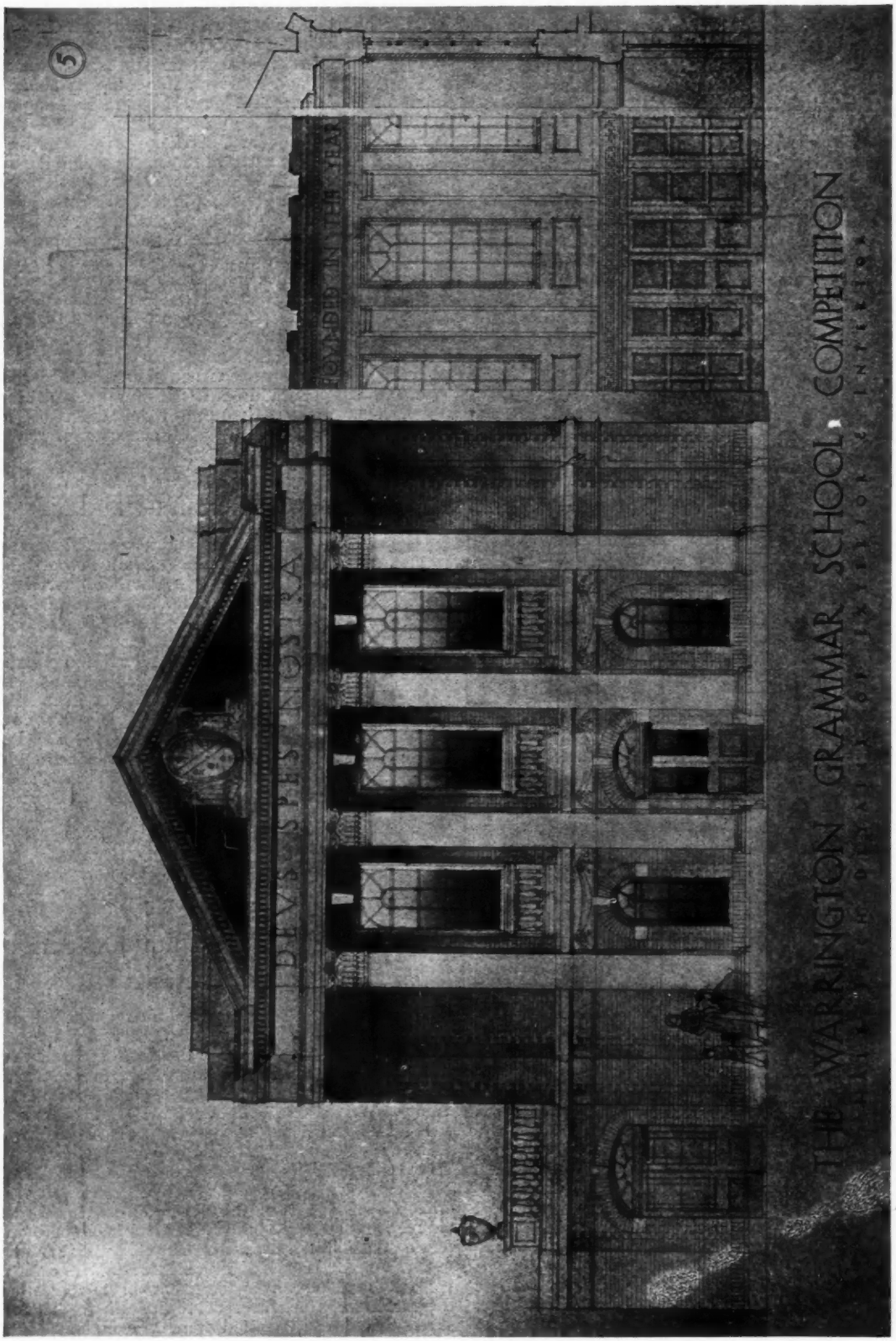
In connection with the housing scheme of the Corporation, 71 acres were purchased in 1920 in the neighbourhood of Waddon, and plans and particulars were prepared for over 600 houses, but at the request of the Ministry of Health this scheme was until recently left in abeyance.

Epsom Grand-stand

On page 828 we illustrate the new grand-stand to be erected at Epsom. The work includes a new grand-stand for members of the Epsom Club, the headquarters of the Jockey Club, and the royal suite. The royal suite will consist of dining-rooms, retiring-rooms, and rooms for the ladies-in-waiting. Accommodation for the jockey's headquarters will consist of dressing-rooms and weighing-in rooms, and will be on the most modern lines, and entirely change the whole character of the accommodation at present existing at Epsom, which is very old-fashioned. The new grand-stand will be entirely modern, and a number of new boxes arranged along the front with luncheon rooms. The new stand will accommodate 5,000 people, and is to be erected on the cantilever principle at the eastern end of the existing stand. The whole of the grand-stand will be of steel and reinforced concrete. It will be carried on stanchions spaced very widely apart so as to obstruct the view as little as possible.

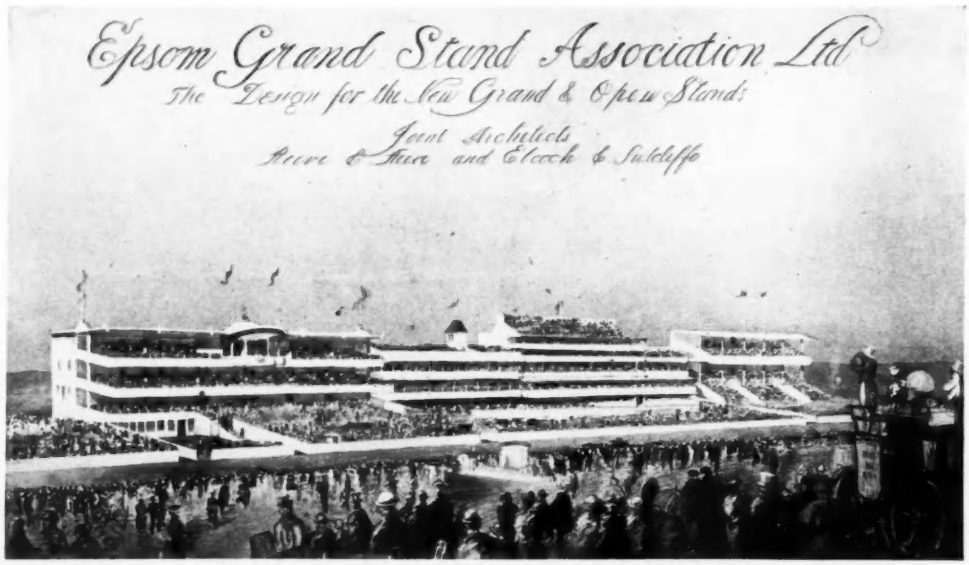
The Warrington Grammar School Competition Result

The governors of the Warrington Grammar School have adopted the award of Professor C. H. Reilly, the assessor in the limited competition for designs for the new school. The winners are Messrs. S. P. Silcock and Son. Mr. Silcock, senior, is a Fellow of the R.I.B.A., and an architect practising in Warrington. The son, Mr. H. S. Silcock, B.Arch., A.R.I.B.A., completed his five-year course at the Liverpool University School of Architecture last June with a first-class honours degree. He competed in the final round of the Rome Scholarship, and won most of the school prizes while he was at Liverpool. During his fourth year he had six months in Messrs. Carrère and Hastings's office in New York. When he left the school last year he went as assistant to Mr. Vincent Harris, and recently returned north, where he has obtained an appointment in the architectural department of the Liverpool Corporation. There were seven competitors, selected from Warrington, Liverpool, Manchester, and Chester. The new buildings are to cost £40,000, and to accommodate 300 boys. Extensions, however, were to be shown for 400 boys. The winning design is illustrated on pages 826, 827.



THE WARRINGTON GRAMMAR SCHOOL COMPETITION: WINNING DESIGN S. P. SILCOCK AND SON, F AND A.R.I.B.A., ARCHITECTS.

THE WARRINGTON GRAMMAR SCHOOL COMPETITION: WINNING DESIGN. S. P SILCOCK AND SON, F. AND A.R.I.B.A., ARCHITECTS



A PERSPECTIVE VIEW.

THE INTERIOR OF THE ROYAL DRAWING-ROOM.

THE PROPOSED GRAND AND OPEN STANDS, EPSOM.
REEVE AND REEVE AND ELCOCK AND SUTCLIFFE, JOINT ARCHITECTS

(*For description see page* 825.)

Contemporary Art

French Painting.

A much more truthful view of modern French art can be gained from the few masterpieces at the Independent Gallery than from the fuller, but less fruitful, shows that have been seen in London lately. Here there are no negligible nor stupid attempts at modernity, but, so far as is possible in an exhibition including but fourteen artists and but twenty-eight paintings, a really representative set of examples. The range is from Ingres to Cézanne; a wide view, but useful as recalling the phases through which French painting has passed in the period. The beautiful little Ingres head emphasizes the fact that this great particularist in pigmentary draughtsmanship was at least as naturalistic as classical. The modern movement may well date from him. He died in 1867, when great things had happened and he had helped. Corot was his contemporary, and so was Delacroix, and of both there are small examples. But the show includes one living painter almost as great as these, and as an innovator, greater—Claude Monet; so that as dates go, 150 years is the span of this important exhibition. It is interesting to study Monet's "Les Péniches," with its cottages by the side of the river, and then to turn to Van Gogh's "La Haie." There is a similarity of subject and of sentiment, but a method of presentation which is quite evidently developmental. Van Gogh's application of colour in adjacent spots is the natural growth of the impressionist treatment in Monet's picture. Another comparison is possible here between the magnificent "Nature Morte avec Paon," of Gustave Courbet, with its superb quality and its naturalism nicely balanced by decorative feeling, and Van Gogh's Gladiolus study, no less true to Nature, but conceived and executed in simpler and more direct terms, unaffected by any ostensible strain either in the direction of quality or decoration. Gauguin's two Tahitian nudes are not in his best manner; Monet's clean, simple palette is in evidence in "L'Enfant aux Fleurs"; Camille Pissarro, Alfred Sisley, and Georges Seurat are adequately represented; Renoir's four works still further prove a waning interest, and the three by Cézanne provide additional evidence of the powers of this really ardent searcher for graphic truth.

THE PILLAR OF SALT.
GEORGE WILLIAM SALVESEN, SCULPTOR.
(*Royal Scottish Academy.*)

MARABOUT STORK (MODELLED GLAZED POTTERY).
BY STELLA CROFTS.
(*Redfern Gallery.*)

French Wood-engravings.

The fact that the art of wood-engraving in France owed its renaissance to certain English masters who settled and taught and worked in Paris in the middle years of last century did not emerge in the exhibition at the St. George's Gallery, now so closely and honourably associated with the engraving arts. All the work was not only contemporary, but modernist, and little attention was paid to the contention of the great English masters that wood-engraving is *par excellence* the art of the white line. Here there were many examples of silhouette and black line (André Derain), and attempts at tone (H. Lespinasse). New uses were apparent in the application of colour to wood-block printing in the case of at least half a dozen practitioners, and altogether the exhibition was most attractive and instructive.

The Far East.

The artist's outlook is almost as various as the objects he looks upon, and this is well exemplified in the works of Roland Strasser, the Austrian, at Paterson's Gallery, and those of Elfrida Tharle-Hughes at the Redfern Gallery. I have already and recently spoken of Strasser's astonishing attack on his material when his studies of Siam, Ceylon, Bali, Gobi, and Mongolia were exhibited at the Austrian Legation. The present show is less portentous, but equally striking, for its virility and verisimilitude. The thirty-three water-colour drawings of similar scenes by Elfrida Tharle-Hughes are conceived in less vivacious mood; they are more topographical, and although largely concerned with humanity in the Far East, are less directly human. But they are taking and true, and, within their range, accomplished. The architectural subjects are full of interest, and "The Hill of the Precious Stone and Needle Pagoda, Hangchow," is a delightful landscape, possessing some of the charm which Charles Ginner always manages to impart to his compressed landscape and architectural presentations.

Pottery and Sculpture.

At the Redfern Gallery there are displayed various examples of the accomplished ceramic work of Stella Crofts, who has made remarkable progress from the excellent start made some two or three years ago, when I first noticed her work at the exhibition of the Central School of Arts and Crafts. She specializes in animals, and she models and fires the pieces herself. They are after Nature, and often wild Nature, but they are distinctively ornamental and well fitted for domestic decoration.

At the Royal Scottish Academy the beautiful sculpture exhibition hall is having its effect on the pieces shown therein from year to year. Edinburgh and Glasgow are rapidly advancing in the plastic arts, and this year the exceptional work of G. W. Salvesen is a feature of the Academy show in Edinburgh, as are the two fine busts of Mr. Hugh Walpole and Mr. James McBey by Benno Schotz, of Glasgow, in the Royal Academy, London. Neither of these young artists is wholly British: Schotz comes from the Baltic, and Salvesen was born at Helsingfors, his father being a Norwegian of Scottish descent, his mother a Scotswoman. KINETON PARKES.

The Problem of the Window

By RALPH KNOTT, F.R.I.B.A.

THE criticism that the lay mind makes of architects is that too often they do things "as a matter of course." Little problems, of which experience has taught a certain solution, are worked out just as they have been before. Yet often circumstances have changed. The solution of yesterday is not correct for to-day's problems. One of the things which may sometimes prompt such a criticism is the design of windows. Costs are now so high that nearly everything but the barest necessities must be left out. For instance, it is well for the architect to consider the advantages and disadvantages of certain types of windows.

The house is most probably a small one and the windows would be modest. It would seem extravagant to divide them up into a number of relatively small panes; yet, ordinarily, this is the usual course. Now a large number of glazing bars not only entail additional expense originally, but afterwards make glazing more costly. It is therefore worth considering whether this extra expense is advisable or if they can be dispensed with.

It is well known that housewives strongly object to leaded lights or a number of bars because of the difficulty of keeping the window clean. Each additional bar adds to the trouble, and an intersection of two bars shelters four pockets which positively cannot be cleaned.

Leaded windows may be admired from the outside, but a window is intended primarily for those inside the house. From this last point of view they are not very beautiful. In fact they often cause annoyance by obstructing the vision. In addition to this they diminish the light in the room to quite a perceptible extent. The two functions of a window are to give light within and vision without, and in both these respects leaded windows are inferior. There seems so little to recommend the arrangement of small panes that it is a wonder it still continues. The usual reason advanced for this accepted sub-division of windows is that it gives "scale" to the house, and is also something to relate the windows to one another. The panes of various dimensions in general use are really copies from old examples made when glass-making was still developing. Larger sheets could not be obtained, at least in quantities sufficient for building.

A curious fact is that the examples usually chosen for reproduction vary considerably in character, and the very small panes are set in lead cames. Then at other times a more recent period is copied, when manufacturers were able to produce glass for panes from four to eight times as large. Although at different periods in history the available glass varied largely, builders never seemed to have experienced much difficulty. They always managed to treat their windows effectively with the size of panes at their disposal.

In these days their work is admired so much that their limitations are adopted in a misguided endeavour to get a like effect. The whole trouble arises at this point. It is entirely wrong to imitate their success with small panes. The great thing to study is their ability and willingness to utilize to the fullest extent the means at hand.

There is no reason now why, with care and thought, better effects should not be obtained by using the larger sheets of glass available. The omission of the small dimensions would throw the responsibility for effect on to the main proportion of the opening. Already this is a great factor, because the window is recessed from the general wall face and made of a different material. But if the designer were less preoccupied with these small-dimensioned panes the proportion of the whole opening would generally receive far more attention than is usually the case.

In some elevations of a house, windows are frequently of considerable difference in size, and the usual solution is so to sub-divide them that the size of the individual pane is common to all—the only difference between the windows being in the number of panes employed. Conversely a small window may be taken as a "unit," and the larger opening designed by using several of them together.

It will be seen that though by keeping to one size pane it can be used to fill a large variety of openings, there is certainly no guarantee that they will be proportionate to one another. It is, however, clear that, given a large unit for the panes, with the fewer arrangements possible the windows are more likely to be in harmonious relation than otherwise. In other words, dividing a window into small panes is so far from being a help to an elevation that the exact contrary is the case. If all the attention be given to their being as simple as possible and the openings and their surrounds are carefully considered, a most pleasing result should be obtained. The appearance of the work would be essentially modern in the highest sense, and the feeling of "scale" produced without recourse to period detailing.

It is curious that an effort in this direction has not been made by architects from the schools and ateliers. They are young, highly trained, not hidebound by tradition, and are the very ones to develop a type of domestic window which does not rely entirely on the past.

Book Reviews

L.C.C. Report on U.S. Buildings

IN July last, the London County Council commissioned their superintending architect, Mr. G. Topham Forrest, F.R.I.B.A., F.R.S.E., F.G.S., to visit a number of the principal cities in the United States of America in order to report upon the construction and control of buildings in that country. Accordingly he left England on September 20, arrived back in London on November 26. In the meanwhile he had visited the cities of Washington, New York, Chicago, Philadelphia, Pittsburgh, Boston, and Buffalo.

Mr. Topham Forrest's report on his tour has just been issued, price 5s., by the London County Council, and is to be purchased, either direct or through a bookseller, from Messrs. P. S. King and Son, Ltd., 2 and 4 Great Smith Street, Westminster, S.W.1. It comprises 110 pages, and is illustrated with more than thirty plates, some of them printed in colours.

In setting out his report, Mr. Forrest very usefully proceeds on the comparative method. That is to say, to each description of American practice, he appends a paragraph, printed in smaller type, and otherwise made distinct from the text, in which the relative London practice is briefly recorded, and any recommendation which the architect makes on the subject is indicated by a reference to the later page on which the recommendation is made.

The report deals with (1) general building regulations; (2) building control as regards means of escape in case of fire; (3) concrete, reinforced concrete, and steel-frame construction; (4) town-planning and zoning; (5) State and city art commissions; (6) housing; (7) educational buildings. An eighth heading is, "Summary and Conclusion."

In comparing or contrasting the respective building operations of New York and London, one of the most important of Mr. Forrest's conclusions is that there is greater flexibility in the New York administration; the whole law in regard to buildings in New York being subject to periodical revision, and it is not necessary to obtain legislative authority for changes. Arrangements for the supervision of building work are not unlike those in London; but one important exception is that their building code prescribes definitely the adequate provision for foundations of tall buildings. On this point Mr. Forrest's observations in New York have led him to two specific conclusions, namely, (1) That there must be a definite relation in the height of buildings in London to the streets which they front; and (2) That where streets have been laid out to a generous width, it should be permissible to allow greater height, and when, in addition, the owners of sites surrender land for additional widenings, a still greater height might be permitted to compensate them for their sacrifice. His general conclusion on this matter is that the building regulations of London do not compare unfavourably with those of New York, and that with a few amendments, such as some he suggests, the London code would compare favourably with the code in force in New York, or in the other cities he visited.

Following are the recommendations which Mr. Topham Forrest appends to his report:

Building Regulations.

That appropriate relaxation of building regulations may be permitted in zoned areas.

That the Council should publish a comprehensive volume of acts, regulations, etc., relating to building work.

That building restrictions should be framed as far as possible as by-laws.

That the Council should seek general powers to prescribe building lines.

That decisions should as far as practicable be in the form of a general statement applicable to similar cases.

That on sufficiently wide streets buildings should be permitted to a maximum overall height of 120 ft., and that this permission should also apply to excess-of-cube buildings subject to provision of suitable safeguards.

That the requirements as to foundations of walls and the schedules of wall thicknesses should be reviewed.

That prohibition of intermittent lighting of signs should be reconsidered.

That preliminary surveys of structures alleged to be dangerous should be made by my department, and that owners should have an opportunity of remedying the defective work before formal proceedings are instituted.

That powers be sought to secure an adequate separation of the fire risk in respect of garages built within the walls of dwelling houses.

That the schedule of fees payable to district surveyors in respect of new buildings, etc., should be remodelled.

That office, workrooms, trade kitchens, refreshment rooms for the use of the public, should be provided with adequate means of natural lighting and ventilation.

That accommodation ways be permitted to backs of houses.

That when new buildings are erected, land within the "prescribed distance" shall become part of the public way.

That the requirement to set back new buildings to the "prescribed distance" shall apply in the case of all means of approach.

That the proportionate length of architectural features permitted above the stipulated height of buildings, and the height of storeys in the roof should be prescribed; that walls surrounding courts surrounded by one building, may be permitted to a height of 100 ft.

That constructional steelwork of all buildings should be protected against the action of fire.

That party parapets may be omitted in certain buildings.

That means be prescribed to prevent spread of fire through openings in adjacent walls of buildings.

That rules for chimneys be formulated in respect of (*a*) close fires, (*b*) ordinary fires, and (*c*) gas fires.

That with suitable modifications of the acts relative thereto, the approval of drawings for the construction of electricity buildings should be left, in the main, to the district surveyors.

Means of Escape.

That powers should be sought to require adequate means of escape from all shops, etc., where large numbers of the public attend.

Concrete, Reinforced Concrete and Steel Frame Construction.

That in concrete specifications it should not be required that the fine aggregate should be measured separately and then added to the coarse aggregate.

That the cement required for concrete should be specified in terms of bags of cement per cubic yard of aggregate.

That the regulations as to concrete should be revised.

That power of waiver should be obtained in respect of reinforced concrete buildings.

That suitable conditions should be imposed in respect of floors partly composed of hollow burnt clay blocks.

That the Council should, in the exercise of its power of waiver, allow a maximum flexural stress on steel beams of 8 tons per sq. in.

That powers should be obtained to permit the appropriate use of improved steel and other materials.

That the detailed requirements as to steel frame buildings should be enacted by regulations.

That regulations should be made in respect of steel and concrete and other similar floors in all classes of buildings.

That regulations should be made in regard to the construction and use of cranes and scaffolds.

That annual reports should be made as to the cause of crane accidents.

Zoning.

My conclusions on this subject are conditional upon the adoption of a Zoning Scheme for London, and are in consequence at present submitted in the form of suggestions.

As to permitting increased height of buildings in suitable cases.

As to relating building heights to widths of streets.

That in residential areas all buildings should conform to the requirements of space about residential buildings.

That as regards space about buildings, the differentiation in favour of pre-1894 buildings shall cease to operate.

That the Council shall be empowered to lay down frontage lines.

That the Council should have general powers to effect street improvements.

Housing.

That a scheme be formulated immediately for the erection of standardized wooden houses on some of the Council's estates.

That schemes be formulated for the erection of nine-storey tenement buildings on suitable sites in central areas.

In concluding his admirably arranged report, Mr. Topham Forrest thanks the London County Council for an opportunity which enabled him not only to make investigations as to the construction and control of buildings and the control of urban areas in the United States, but also to ascertain to what extent and in what direction American practice in these respects might be adopted to the benefit of the people of London.

The plates include, besides a frontispiece showing buildings in the London County Council Ossulston Street area, St. Pancras, and diagrams illustrating Mr. Forrest's recommendations, a large number of plans and diagrams relating either to United States building areas or to London County Council schemes for town-planning and building. Needless to say, the illustrations relating to London are not by any means the least important in the volume, whether they be regarded independently or as a means of comparison with the American plates. Mr. Forrest is to be heartily congratulated on the able fulfilment of his strenuous mission, and on the production of a report that will take standard rank among publications of the kind.

Excerpts from Mr. Forrest's R.I.B.A. paper on his American visit appear on page 809.

The Domestic Grate

A report of an experimental investigation of the relation between the design of a domestic grate and the heat radiated into a room, conducted by Dr. Margaret White Fishenden, D.Sc., F.Inst.P., has just been issued by the Department of Scientific and Industrial Research. It deals with the design of grates for ordinary domestic heating, and indicates the developments that have taken place since coal became the normal fuel for domestic heating. More especially it describes determinations of the radiant efficiency, under different conditions, of an experimental grate so designed that its constructional details could be varied one at a time and the effect of each variation noted. The work was carried out by Dr. Fishenden, in the laboratories of the Manchester College of Technology, under the auspices of the Manchester Air Pollution Advisory Board. Briefly summarized, the following are important factors in the efficient utilization of open fires for warming purposes: (1) the use of correctly designed grates, properly fitted, in order that the maximum possible proportion of the radiation emitted by the incandescent fuel may be directed into the room; (2) the provision of adequate draught control so that not only may the fire be rapidly adjusted to meet varying requirements, but also the air flow through the room may be reduced to the minimum consistent with the demands of hygiene and comfort; and (3) efficient insulation of the room, so that the temperature rise effected by a given energy input may be as great as possible. Dr. Fishenden states that it is doubtful whether the radiation efficiency of open coal fires against a wall can easily be increased beyond some 30 per cent. or 35 per cent. of the theoretical energy of combustion. Péclet (*Traité de la Chaleur*, 4th Edition, 1, 16) obtained a value of 50 per cent. for the total radiation from coal fires burning in a round wire basket. And there remains the problem of finding means of utilizing a part of the large remaining proportion of energy, much of which is accounted for by flue losses.

The report can be obtained, price 9d. net, from His Majesty's Stationery Office.

Correspondence

Qualified Architects

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—In reply to "Student's" letter, in your issue for May 13, and his question, I suggest that a "qualified" architect is a "Chartered Architect" who has passed an examination in design or submitted to a jury of eminent architects evidence that he possesses some knowledge of the elements of scale and proportion.

"Student" says: "the Surveyor may be, and often is, an Associate of the R.I.B.A." Where do such surveyors exist? I cannot trace 1 per cent. of surveyors to local authorities as being members of the R.I.B.A.

Some engineers, in the past, may have proved themselves skilled designers, but many others have erected structures which are a constant eyesore to succeeding generations. Even in their own line—engineering—they often fail dismally in presentable design.

A majority verdict is usually a sane one, so it is pleasing to read that I express "the views of a large number of men."

C. F. OVERY, L.R.I.B.A., Chartered Architect.

Liverpool Cathedral

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—In July last your columns afforded eloquent testimony to the interest aroused by the consecration of the first part of the Liverpool Cathedral. Since then the constant stream of visitors, from home and abroad, has shown that this interest is neither ephemeral nor confined to the Diocese of Liverpool.

Generous gifts received from different parts of England and from overseas assure us that the completion of the next part of the cathedral is regarded as a matter of national as well as of local concern. We therefore ask your permission to say that the Liverpool Cathedral Committee propose to commence operations on the great central space and western transept in July next, but that towards the cost of these there remains to be collected during the seven years which will be employed on the building a sum of about £230,000, in addition to the funds already in hand.

An association called "Cathedral Builders" has been formed to promote public interest in the work, members of which are asked to subscribe not less than £1 1s. per annum (there is no maximum subscription), all of which will go to the Building Fund. They will receive special facilities for visiting the works, and a quarterly illustrated bulletin showing the progress of the building, thus ensuring their continued interest in its progress, and enabling them to enlist the support of others. (Fuller particulars may be obtained on application to "Cathedral Builders," the Cathedral, Liverpool.)

It is hoped that by joining "Cathedral Builders," and by gifts to the hon. treasurers at the Church House, Liverpool, many of your readers may contribute to a building which has been generally accepted as expressing the spiritual aspiration and artistic achievement of our generation in a way not unworthy to rank with the noblest work of previous ages.

ALBERT LIVERPOOL.
DERBY, President Liverpool Cathedral Committee.
FREDERICK M. RADCLIFFE, Chairman Liverpool Cathedral Executive Committee.

Law Reports

Housing Scheme—Position of Sub-Contractors

Harland Engineering Co. v. *Corporation of Swansea.*

Court of Appeal. Before Lords Justices Bankes, Scrutton, and Atkin.

This was an appeal by the plaintiff company, of Manchester, against a judgment of Mr. Justice Talbot, who tried the action at the Manchester assizes and decided against the plaintiffs.

Mr. Artemas Jones, K.C., stated that the action was brought by the appellants, who claimed to be paid £900 for electrical work carried out by them in connection with the housing scheme undertaken by the Corporation in 1922. The Corporation refused to pay the money because the head contractors, Messrs. Alban Richards, Limited, who employed the plaintiffs, had gone into liquidation and assigned all money due to them to their debenture holders. Mr. Justice Talbot decided that the Corporation were right in this contention, and gave judgment for the Corporation, and from that result the plaintiffs now appealed. Counsel said the scheme was a State-aided one which the Corporation carried out in 1922–3. When the head contractors went into liquidation, the appellants found that the Corporation had £3,000 retention money in their hands, and therefore they asked the Corporation to pay them the £900 due under the sub-contract, as the Corporation had been authorized to do by Messrs. Richards. The Corporation denied liability to pay, on the ground that there was no priority of contract between them and the plaintiffs, and Mr. Justice Talbot upheld that view. The learned counsel contended that the retention money never belonged to the contractors and they could not assign it.

The court dismissed the appeal.

Lord Justice Bankes said that if the plaintiffs had taken advantage of the terms of their own contract they would have saved themselves any difficulty. The building contract was a specific form introduced by the Minister of Health for protecting sub-contractors, but plaintiffs took no advantage of the protection provided. It was plain that they had no right of action against the Corporation, and the appeal failed and would be dismissed with costs.

Lords Justices Scrutton and Atkin agreed.

Architect's Claim for Fees

Griffiths v. *Harman.*

King's Bench Division. Before Mr. Justice Rowlatt.

This was an action by Mr. Harold Griffiths, an architect, of Lancaster Road, South Norwood Park, to recover from Mr. C. Harman, of Sunnyside, Nightingale Road, Rickmansworth, the sum of £165, fees alleged to be due for work done as an architect for the defendant.

Mr. Pitman, K.C., and Mr. H. W. Wilson appeared for the plaintiff, and Mr. Croom Johnson represented the defendant.

Mr. Pitman said the claim was for fees for work done in connection with plans for a house, which scheme was abandoned as being too costly; plans, etc., for an entirely new scheme, which was abandoned on account of the site not maturing; and for other work. The charges were all recognized scale charges.

Defendant, by his defence, alleged that there had been a breach of contract on the part of the plaintiff, in that he was employed to make plans for a house that was not to exceed £1,300 to build. The plans drawn represented a house, defendant said, that would cost over £2,000 to build. Defendant also said that plaintiff was instructed to make plans for a cheaper house, but before the house was completed the plaintiff retired from the work and repudiated the agreement. Defendant entered other formal denials, and counterclaimed for negligence in regard to a staircase.

His lordship: Was any house built?

Mr. Croom Johnson replied that ultimately a house was built under the superintendence of a builder. Plaintiff declined to act, and the builder built the house largely to plans he had got out.

Mr. Pitman said the plaintiff had built some houses which attracted the attention of the defendant, and they had an interview. Plaintiff said he would undertake work from the defendant on the Institute fees. Defendant said he wanted a house at about £1,500, and requested plaintiff to get out plans and sketches. The price of the house was very considerably increased by the suggestions of the defendant. Plaintiff denied any negligence in regard to the staircase.

Plaintiff gave evidence, and said he was an architect and surveyor, and had had considerable experience. Defendant instructed him from rough drawing to make scale plans, and he did the work. Plaintiff also prepared the specifications, which were sent to builders for them to tender upon. He made two sets of specifications. As the defendant ultimately refused to accept his advice, plaintiff was bound as an architect to retire from the work. With regard to the staircase the usual procedure was followed.

Cross-examined: Defendant never told plaintiff that he did not wish to spend more than about £1,300 on his house after buying the land. His charges were justified by the scale set out in the Institute scale in clause 5b. He never told the defendant the price of the house would be £1,100 or £1,200.

Mr. Geo. L. Elkington, architect and surveyor, of Messrs. Elkington and Sons, said the fees charged were correct.

For the defence, Mr. J. W. S. Burmister, F.R.I.B.A., of Queen Anne's Gate, Westminster, gave evidence, and said he could see no duty on the plaintiff under the circumstances of this case to retire from the job. He did not think that the plaintiff had arrived at the point in his work when he could say he was entitled to two-thirds of his remuneration on the ground of abandonment.

Mr. Elphick, of Neale Road, builder, stated that in his opinion the specification, as drawn, gave no protection to the building owner.

Defendant also gave evidence in support of his case.

His lordship, in giving judgment, said he was sorry for both parties here. If an architect was employed to do a specific thing, he was not entitled to be paid anything for doing something else. It was always difficult to find out what a man was employed to do, but if he were employed to do a thing and stopped in the middle, and said he would go no further, then he was not entitled to be paid. In this case there was a great deal of talk. The real trouble here was that the architect produced a plan, which upon being put to builders to tender upon, brought in tenders higher than the defendant wanted to go. Those plans were modified, and fresh tenders were invited, but nothing came of that, defendant refusing to accept the lowest tender. Upon that the plaintiff retired, and his lordship thought under the circumstances, he was entitled to do that, but plaintiff might have explained it a little more to defendant. His lordship did not think the plaintiff was entitled to the full scale, as, after all, the specification was sketchy. Under all the circumstances he awarded the plaintiff £80. Dealing with the counterclaim as to the staircase, his lordship awarded the defendant £20.

Judgment accordingly, for the plaintiff £80, and for the defendant £20, each with costs.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Mr. Betterton, Parliamentary Secretary to the Ministry of Labour, informed Lt.-Col. Horlick that the average number of persons in the building trades registered at employment exchanges in Great Britain as unemployed in the first quarter of 1925 was 79,500, of whom 975 were bricklayers and 337 plasterers. The total amount of unemployment benefit drawn by these workpeople in the three months was estimated to be in the neighbourhood of £800,000.

The Rent and Mortgage Interest (Restrictions Continuation) Bill, which prolongs the period of control for another two and a half years, has passed all its stages in the House of Commons.

Mr. Wells asked the Under Secretary of State for the Home Department, as representing the First Commissioner of Works, if the cracks in the walls and arches of the members' entrance to the House of Commons were of recent origin; and whether these cracks had been caused or rendered more dangerous by the heavy additional weight used in strengthening the Westminster Hall roof?

Mr. Locker-Lampson said that the cracks in question were now over twenty years old, and had been in no way affected by the repairs to Westminster Hall roof. They were probably due to the expansion and contraction of the cast-iron awning which was anchored to the wall, and though they were not regarded as serious, they were kept under observation.

Mr. Thurtle, a Labour member, has introduced in the House of Commons a Bill to make provision with respect to the acquisition by municipal authorities of unoccupied houses for the purpose of relieving overcrowding.

Sir K. Wood informed Lt.-Commander Kenworthy that the

position with regard to housing on April 1 last, the latest date for which complete figures were available, was as follows: The total numbers of houses authorized at that date were 193,421 under the Housing Act of 1923, and 45,933 under the Act of 1924. Of these, 70,421 and 2,486 respectively had been completed; 43,314 and 10,817 were under construction; 31,317 and 12,643 were in contracts or definitely arranged for, but not started; and 48,369 and 19,987 had not been contracted or arranged for on April 1.

The Labour party's Building Material (Charges and Supply) Bill, which is the same as that introduced by Mr. Wheatley when Minister of Health last session, was rejected in the House of Commons by 232 votes to 113.

During the debate on the measure, Mr. N. Chamberlain, the Minister of Health, said that the Government had pledged themselves to a great increase in the production of houses. The existence of the Government depended on their being able to bring about a considerable increase in the production of houses, and that increase was inevitably bound up with the cost, because the rising cost of houses wrecked the Addison scheme, and put back the whole production of houses in this country for a considerable time. Therefore, no one had a greater interest than he had in seeing that prices did not go up. The Bill was of a very drastic character. The Minister of Health was empowered to make representations to the Board of Trade that the prices of certain building materials were unreasonable, and the President of the Board of Trade might then make an investigation, call for books and examine witnesses, and any recalcitrant person was liable to a fine of £100, or three months' imprisonment, or both. Those were heavy penalties, and, in addition, in certain circumstances, the Minister of Health was empowered to commandeer a business and run it as a State concern, without any compensation being given to the owner for loss of profit. Such a drastic proposal required very special justification. In the present case there was no justification for such treatment. The Bill would not lead to confidence on the part of investors, and it was taking control out of the hands of the industry and putting it in the hands of the bureaucracy. The policy of the Government was that the housing situation should not be exploited by any section of the community to the disadvantage of the whole. In 1923 the Unionist Government appointed a committee to watch prices and to publish them, with extraordinarily successful effect. Prices remained steady, and it was only when the Labour Government came into office that they began to rise. The price rose from £386 per parlour-house to £451, which was the "peak." It had been for the last three months £439, and there had been an extraordinary steadiness in price, due to the confidence felt in the present Government. If the Government found it necessary, they would come to Parliament and ask for powers to deal with any exploitation, but the present Bill was perfectly hopeless, and would probably increase the price of the materials which it sought to control.

During the debate on the second reading of the Rent and Mortgage Interest (Restrictions Continuance) Bill in the House of Lords, the Lord Chancellor said he was informed that the shortage of houses had passed its worst phase. There was a time when the increase of population needing houses was greater than the increase of house accommodation available for them, but that, he was told, was no longer the case. The building of houses had commenced to exceed the rate of increase of population needing houses to overtake the arrears. Since the war some 450,000 new houses had been built, and the rate of building to-day was now something over 100,000 in every year, a figure that exceeded that which obtained before the war. It was hoped, if the progress continued, and especially if the new methods of construction which were now being so carefully considered were put into operation, that the rate of building would be still further accelerated, and that the Government would be able fully to overtake the arrears. That process was not yet complete. It was quite plain that the shortage must continue, and that a reversion to normal conditions must be postponed for some time to come. The Government held the view that the Rent Restrictions Act should be extended for a short time so that the matter might be reconsidered should conditions improve.

The second reading of the Bill, which prolongs control until 1927, was agreed to.

Sir D. Newton has introduced a Bill to provide for the prescription of building lines along public highways.

Mr. N. Chamberlain informed Mr. Paling that of the £50,000 voted for the purpose of special grants for demonstration houses, £34,000 had already been allocated, covering houses to be erected by fifty-six local authorities. According to the latest information the work of construction had been started in the case of ten local authorities; four of the houses had actually been completed.

Sir Burton Chadwick informed Sir H. Brittain that the British Government pavilion at the Paris Exhibition was designed by Messrs. Easton and Robertson. These gentlemen were selected by means of a competition carried out with the assistance of an assessor recommended by the President of the Royal Institute of British Architects and of the Royal Fine Art Commission. The Commission concurred with the assessor in recommending Messrs. Easton and Robertson's design.

Societies and Institutions

The A.A. Annual Excursion.

An alteration has been made in the dates during which the annual excursion of the Architectural Association will be made to Denmark and Sweden. The excursion will now take place from June 6 to 20. The party will leave London on the evening of June 6, and upon arrival at Esbjerg will be met by representatives of the Danish architects. There will be three days' motoring through the old towns and villages of Denmark, and some days will be spent in Copenhagen visiting the old and new buildings, after which the party will proceed to Stockholm.

The Architects' and Surveyors' Approved Society.

At the annual general meeting of the above Society held at the Surveyors' Institution, Mr. A. Goddard, C.B.E., the secretary of that Institution, was elected chairman of the Committee of Management of the Society.

An Exhibition of Arts and Crafts at Marylebone.

An exhibition of Arts and Crafts will be held on May 30–31, and June 1, at Marylebone Hall, Hotel Great Central, Marylebone Road, N.W., by the International Fellowship in Arts and Crafts. The exhibition will be opened by Dr. J. H. Cousins, the Principal of the Theosophical University, Adyar, Madras, India, at 6.15 p.m. on May 30. On the succeeding days it will be open from 10 a.m. to 7 p.m. The aim of the Fellowship is to co-operate, through work for beauty, with work for Brotherhood, and to investigate the hidden forces which lie behind artistic expression.

The Trades Training Schools.

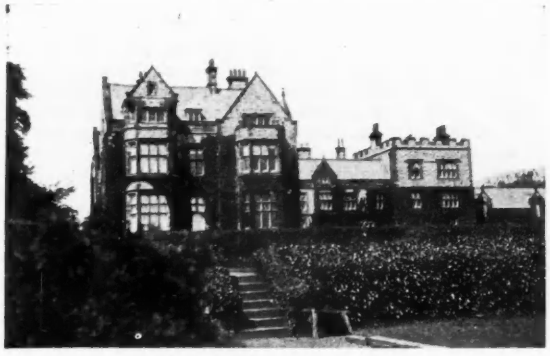
The work carried out by the students of Trades Training Schools, 153 Great Titchfield Street, W.1, during the past session (1924–25) was judged at the school. The judges included Sir Brumwell Thomas, F.R.I.B.A., Prof. R. Elsey Smith, F.R.I.B.A., Messrs. E. Guy Dawber, V-P.R.I.B.A., F. T.W.Goldsmith, F.R.I.B.A., H. D. Searles-Wood, F.R.I.B.A., and F. Adams-Smith, F.R.I.B.A., Sir W. Goscombe John, R.A., and Mr. S. G. Castle Russell, M.I.E.E. The Worshipful Company of Carpenters, which maintains the school, was represented by the master (Mr. J. Harris Browne), who presided, the chairman of the school (Mr. Frederick Sutton, J.P.), Mr. E. T. Pullein, and Mr. J. Hutton Freeman, while the other City Companies associated in the conduct of the school also appointed judges to represent the different crafts. The instruction given at the school varies widely, from the work of the bricklayer and stonemason to the internal and decorative crafts, and finally to figure modelling, and is applied to very diverse materials—brick, stone, wood, and clay; plaster, glass, and pigments for the more detailed adornment of a building; lead, iron, copper, and brass, and, lastly, that invisible entity, electricity. The judges, during the inspection of the work of the various crafts, remarked on the careful and thorough nature of the training given, and the excellent quality of the work submitted. The director of the schools is Sir Banister Fletcher, F.R.I.B.A.

Jointless Flooring for a Picture House

"R. H." writes: "With regard to the enquiry by 'Architect,' published in your issue for May 20, page 795, for a jointless flooring for a picture house, might I add 'Stantonite' to the materials suggested by your expert. It is manufactured by the Stanton Ironworks Co., Ltd., near Nottingham, and would, I think, answer the requirements of your querist."

Wiring Interiors for Electric Light

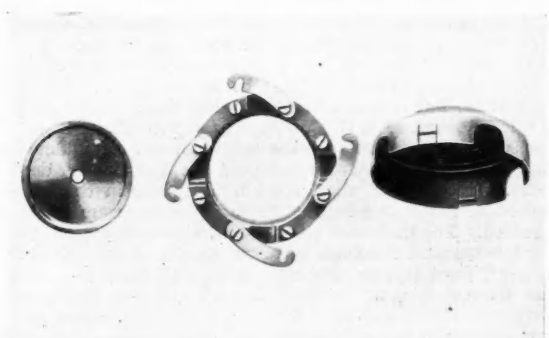
It is apparent that much of the artistic effect of carefully chosen electric globes in a tastefully decorated interior may be lost if the wiring system adopted involves the use of unsightly casings, tubes, distributing boxes and switches. In the erection of new buildings, it is possible, though not always entirely desirable, to arrange for the wiring of the various circuits so that all unsightly casings, etc., are eliminated. But in considering the problem of installing electric light in



WITHERSLACK HALL.

existing buildings, particularly in old historic buildings such as churches and country mansions, where it is undesirable to disturb the beautiful interior decorations, it is obvious that great care must be exercised in the choice of a system of wiring.

In order to avoid the many disadvantages of the earlier system, of wiring, many surface wiring systems have been evolved the use of which enables a substantial reduction to be made in the cost of wiring and at the same time to present a neat and unobtrusive appearance. Among these improved systems is the "Helsby Twin Wiring System," which was introduced some three years ago by British Insulated and Helsby Cables, Ltd., of Helsby, Cheshire. In this system, single, twin, or three-core rubber insulated metallic sheathed wires and cables are employed, together with the necessary accessories, such as junction boxes, etc. The single wires are of circular section, the twin and three-core being flat, and the bulk of the work is done with the flat twin wire. The wires are sheathed in a metallic alloy possessing stiffness combined with sufficient ductility to allow of their being bent to any required radius. The wiring is laid on the surface of walls and ceilings, being carried over cornices, and following the exact contour of the surface on which it is laid, and held in position by a few small clips. The dimensions of the cable have been reduced to a minimum, so that it is practically unnoticeable, particularly if painted or otherwise treated to match the surrounding decorations. The sheathing of the wires is made of the same alloy as that used for the base of the junction boxes, and thus not only is the risk of electrolysis by leakage currents avoided, but perfect bonding, and therefore earthing, is obtained. Thus the system is perfectly safe. The junction box, the component parts of which are shown in the accompanying illustration, consists of a flat alloy ring or bonding clamp, a tinned brass back-plate, which fixes the box by means of one wood screw on the centre, and a tinned brass clip-on cover. The sheathing of the cable is clamped under tinned brass links, each of which is slotted at one end so that it can be slipped out from under one of the binding screws without removing the latter. Brass nuts are cast in solid with the base, so that there is no risk of the threads stripping. This method obviates the risk of loose clamps and consequent discontinuity in the earth circuit.



COMPONENTS OF THE HELSBY JUNCTION BOX.

It is of interest to note that the "Helsby Twin Wiring System" was employed for the installation of electric light recently carried out at Witherslack Hall, the property of Lord Derby. Witherslack Hall, a photograph of which is reproduced herewith, contains much beautiful interior decoration and it is a striking testimony to the merits of this system of wiring that it should have been chosen for so important an installation. Obviously the surface-wiring system offers valuable advantages, particularly to the architect arranging for the electric lighting of existing buildings with artistic interior decoration.

List of Competitions Open

Date of Delivery.	COMPETITION.
May 31	The best and most economical system of shuttering or equivalent suitable for use in connection with poured or *in situ* cottages. First prize £250; £250 may be awarded in additional prizes. Methods which are already in use or for which patent rights had been applied for before January 1 will not be considered. Apply Mr. H. H. George, Ministry of Health, Whitehall, S.W.1, not later than May 24.
June 4	Branch Library to be erected for the Belfast Corporation. The Competition is limited to architects in practice in Northern Ireland or their assistants. Assessor, Mr. James Cumming Wynnes, M.B.E., F.R.I.B.A. Apply, with deposit of £1 1s., to the Secretary.
June 11	National Commemorative War Monument, to cost one hundred thousand dollars, for the Government of Canada. Apply Office of the Secretary, Department of Public Works, Hunter Buildings, Ottawa. A few copies of the conditions, together with declaration forms, can be obtained from the R.I.B.A.
*June 30	Lay-out of open spaces and fortifications between Valletta and Floriana and those encircling Floriana. Premiums £1,000 and £500. An indemnity of £100 will be awarded to three other designs showing conspicuous merit. Assessors, Mr. E. P. Warren, F.S.A., and Professor Patrick Abercrombie, A.R.I.B.A.
July 1	An extension building adjacent to the Shirehouse, Norwich, for the Norfolk County Council. Premiums £150, £100, and £50. Assessor, Mr. Godfrey Pinkerton, F.R.I.B.A., on the whole of the designs submitted, and to make the award. Apply Mr. H. C. Davies, Clerk of the Council, The Shirehouse, Norwich.
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).
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.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 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.
No date	Rebuilding of Bethel Baptist Church, Pontlottyn. Premium £5. Apply Mr. J. R. Mathias, Rose Villa, Pontlottyn.
No date	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.

* Date of application passed.

Coming Events

Thursday, May 28.

Institution of Structural Engineers, 296 Vauxhall Bridge Road, S.W.1.—Special General Meeting, 7.30 p.m. Annual General Meeting, 7.45 p.m. "Acoustics," by Mr. A. G. Huntley, 8 p.m.

Society of Architects.—An Extraordinary General Meeting of Fellows and Members will be held at 28 Bedford Square, London, W.C.1, at 4 p.m., when resolutions for the voluntary winding up of the Society on amalgamation with the R.I.B.A. will be submitted. Should these resolutions be passed, whether with or without modification, by the requisite majority, they will be submitted for confirmation as special resolutions at a further Extraordinary General Meeting of the Society to be held on Thursday, June 18, at 4 p.m.

The Week's News

Manor Park Bridge Widening Scheme.

The East Ham Council propose spending £36,000 on the widening of Manor Park station bridge.

Fifty More Houses for Surbiton.

Fifty houses are to be erected at Tolworth by the Surbiton Urban District Council on Monday.

A New Pleasure Ground for London.

The London County Council are to spend £9,000 in laying out a pleasure garden on the Tabard slum area.

Over Six Hundred Flats for Croydon.

Six hundred and twenty flats are to be built in Croydon by a private firm.

Great Yarmouth's Housing Scheme.

The Great Yarmouth Corporation have accepted tenders for the erection of 100 houses at a cost of over £40,000.

East Sussex Road Schemes.

The East Sussex County Council have decided to reconstruct the main roads of the county at a cost of about £2,000,000.

The Peers' War Memorial.

The Peers' War Memorial is to be placed in the alcove in the Royal Gallery of the House of Lords. The other suggested site was in the Prince's Chamber.

Wesleyan Mission Halls for Yorkshire Mining Villages.

Four Wesleyan laymen have given £30,000 towards the erection of Wesleyan mission halls and places of worship in mining villages in South Yorkshire.

The Llangollen to Holyhead Main Road.

The Ministry of Transport are to spend £100,000 on a road to Holyhead from Llangollen through Denbighshire and Carnarvonshire.

Rugby Rural Housing Schemes.

The Rugby Rural District Council have decided to erect houses in the villages of Ryton-on-Dunsmore, Stretton-on-Dunsmore, and Brinklow.

Forty More Houses for Wellingborough.

The Wellingborough Urban District Council have decided to apply to the Ministry of Health for approval of a scheme for the erection of forty-four more houses.

Eighty-eight Houses for Bridlington.

The Ministry of Health have approved the decision of the Bridlington Corporation to erect an additional eighty-eight houses, on the Postill estate.

Housing in the Chesterfield Rural District.

The Chesterfield Rural District Council have purchased a site for thirty houses at Grassmoor, and selected a site for 100 houses at Killamarsh.

The L.C.C.'s New Housing Loan.

The London County Council have sanctioned the raising of a loan of £6,000,000, £2,000,000 of which will be applied in respect of housing schemes.

Additions to the National Nautical School, Portishead.

The National Nautical School, Portishead, have received a gift of £7,000 from Miss Violet E. Wills, to defray the cost of building a house for the Chaplain and houses for the teaching staff.

The Proposed Extension of Streatham Common.

The trustees of the City Parochial Charities Foundation have promised to contribute the last £1,000 of the £16,000 required for the purchase of the 30 acres of Streatham Grove as an extension of Streatham Common.

More Houses for Bradford.

At the last meeting of the Street Improvements and Buildings Committee of the Bradford City Council plans were passed for seventy houses to be built by private enterprise. The committee also decided to pay a visit to Wibsey to inspect land upon which eighty houses are to be built.

Church Building and Repairs.

At the monthly meeting of the Incorporated Church Building Society, held in Westminster, grants were made towards building new churches and towards enlarging or repairing others in various parts of the country. From the Mission Buildings Fund grants were made towards the erection of two mission churches. Grants were also made for church works completed.

More Houses for Barnsley.

The Ministry of Health have approved the proposal of the Barnsley Corporation to erect 600 more houses under the Housing (Financial Provisions) Act of last year, and have also approved the immediate erection of 140 dwellings in Pontefract Road. The Corporation are building 1,245 houses in all, and the Ministry of Health have congratulated them upon the progress they are making.

The Suggested Bridge at Charing Cross.

At the last meeting of the London County Council Mr. E. L. Meinertzhagen, chairman of the Improvements Committee, said they still had under consideration the provision of a new bridge over the Thames at Charing Cross, and a sub-committee had been appointed to deal with various further suggestions. The committee were taking steps to approach the parties interested with the view of ascertaining whether their co-operation could be secured in a scheme for a road bridge at that point over the river.

The New Chenil Galleries.

The inaugural exhibition at the New Chenil Galleries will be of the works of present-day British artists, and will be organized by the following Committee elected by the Members of the Chelsea Arts Club:—Sir William Orpen, K.B.E., R.A.; Augustus John, A.R.A.; Ambrose McEvoy, A.R.A.; Henry Poole, A.R.A.; Alfred Turner, A.R.A.; Terrick Williams, A.R.A., V.P.R.I.; T. C. Dugdale, R.O.I., Graham Petrie, R.O.I.; Sydney Tushingham, R.E.; W. E. Webster, R.O.I.; Alfred Hayward; Alexander Jamieson. The exhibition will open early in June. The Rt. Hon. Augustine Birrell, P.C., K.C., will preside at the opening ceremony and will deliver a short address. Many other exhibitions of National and International importance are being organised.

Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to April 30, 1925:

	Completed.	Under Construction.
1919 Act	24,153	1,331
Private subsidy schemes ..	2,324	—
Slum clearance schemes ..	1,191	2,488
1923 Act	2,202	5,936
1924 Act (Local Authority Scheme)	20	1,159
	29,890	10,914

Of the total number of houses completed and under construction under the 1923 Act, 2,519 are by the local authorities, and 5,619 by private enterprise.

Town-planning at Stoke-on-Trent.

A Ministry of Health inquiry was held at Stoke-on-Trent into an application by the Town Clerk for approval of a preliminary statement of proposals for development in connection with a town-planning scheme in the west of the Potteries. There was objection to the scheme, which comprises 2,605 acres, by the L.M. and S. Railway Co., and by an auctioneer, but it was announced that these would be heard at a later stage. Mr. G. C. V. Cant (Deputy Town Clerk) said the scheme contained a very large amount of undeveloped land, and the area was a residential one and ripe for development. It contained the largest housing site in the borough, and some important roads. More big roads were to be constructed. The inspector (Mr. Bensall Greenall) suggested that the scheme had not made generous provision for open spaces, but Mr. Cant pointed out that Trentham Park and Gardens was the real lung of the Potteries. It did not belong to the Potteries, but it was open to the public, and the Corporation had an option to purchase if ever the property were placed in the market.

Trade and Craft

Hongkong and Shanghai Bank.

We are informed that Messrs. Robert Adams, of St. Ann's Chambers, 1-2 Orchard Street, Victoria Street, S.W.1, supplied "Victor" patent door springs for use in the Hongkong and Shanghai Bank, Shanghai, illustrated in our issue for May 13. The door springs were specified by the architects, Messrs. Palmer and Turner, of Shanghai and Hongkong.

The Gaze Exhibit at Chelsea.

Gazes, the garden craftsmen of Kingston-on-Thames and "The Gazeway," Surbiton, are again exhibiting at the Chelsea Flower Show. The exhibit consists of a garden with a simple summer-house set amidst a plantation, with a broad, paved terrace in front. The retaining walls are of rock formation in Cheddar stone, with a water cascade and rill. There are also a small sunken garden and other adornments. The principal object of the exhibit is to show the simplicity and natural formation that can be acquired by careful thought and originality in design. The firm are also showing a large display of garden ornaments. Their hard court and sports ground department are showing a model of their "All-Weather" hard tennis court.

"Pul-syn-etic" Clocks for Marine Use.

The new Cunard liner, the *Ascania*, which recently successfully completed its trial trip, has been fitted throughout with "Pul-syn-etic" clocks. The special feature of the clocks is that they are all linked together by a wire running behind the panelling, and are electrically driven and controlled by a master clock from the ship's lighting supply. The "Pul-syn-etic" master clock is fitted with a chronometer escapement, in place of a pendulum, as for land use, and also with an automatic advance and retard mechanism, which is a Leicester invention. With the patent advance and retard mechanism it is only necessary to set a pointer on a dial within the master clock to the required number of minutes and press the advance lever, when all the clocks are automatically advanced, and with a similar operation, and by pressing the retard lever, the clocks are all retarded. This "Pul-syn-etic" marine system is manufactured by Messrs. Gent & Co., Ltd., Faraday Works, Leicester. The sister ships—the *Aurania*, the *Ausonia*, and the *Alaunia*—are also fitted with the "Pul-syn-etic" clock system, as well as twenty other Cunard vessels, including the *Aquitania*.

"Tekamatte" Flat Oil Wall Finish.

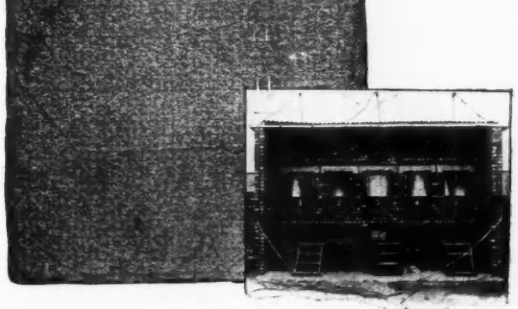
We have received from Messrs. Thornley and Knight, Ltd., a colour book illustrating the range of new Standard shades in which "Tekamatte" (Regd.) flat oil wall finish can be obtained. General instructions for the application of the material and a suggested specification for the decorator's information are included in the book. The subtle velvety bloom and superior finish of the material are clearly shown in the colours illustrated, which have not been stippled, but simply applied in accordance with the printed instructions. Among the colours are William and Mary greens, a Georgian blue, Wedgwood lilacs, and a pleasing selection of cool and warm greys, blues, creams. The material, it is claimed, will stand scrubbing with soap and water, without showing the least sign of deterioration. Following are some of the public buildings on which the material has recently been used: The Students' Union (Liverpool University), the School of Hygiene, Liverpool, Fazackerley Sanatorium, various public libraries in Liverpool, and banks, hotels, clubs, hospitals, etc., throughout the country. The sole manufacturers of "Tekamatte" are Messrs. Thornley and Knight, Ltd., of Bordesley Green Road, Birmingham, and 18 Percy Street, London, W.1, who will be pleased to give a free demonstration of the use of this material and to forward colour book and instructions on application.

The Roads of India.

Major T. Salkield, M.Inst.C.E., in an article on "The Roads of India" in the current issue of "The Roadmaker," says: The Central and Provincial Governments ought to regard road construction as one of the most pressing of the many economic problems with which they are confronted. Improvements of the through communication roads are needed; new feeder roads for the railways are essential; and greater efforts ought to be made by the larger municipalities to make the roads of their cities more suitable for the rapidly increasing and changing character of the traffic. Modern transport methods will revolutionize India, whose people, having tasted the delights of travel, are enthusiastic for more of it. When the energies of political partizans can be turned into channels of practical utility the great potential wealth of the country will become actual riches; and, in the conversion, many of the problems of India which are of economic origin will be solved. But bold, far-reaching road schemes, laid down with a true sense of perspective, will do more than anything else to engender this much-to-be-desired state of affairs. Among the other articles are "The Road in Art," "The Amphibious Road," by Robert M. Alexander, and "Storm-resisting Seaside Roads." Illustrations are also given of roads in the West Riding, Lanarkshire, and promenades and esplanades at Rhyl, Colwyn Bay, Portsmouth, Exmouth, in the construction of which B.R.C. Fabric has been used. "The Roadmaker" is issued on behalf of The British Reinforced Concrete Engineering Co., Ltd., from 41 Bedford Square, London, W.C.1.

A New Type of Wired Glass.

A report has just been published by the National Fire Brigades Association on a test recently conducted at St. Helens to demonstrate the fire-resisting qualities of a new type of wired glass. It is manufactured by Messrs. Pilkington Brothers, Ltd., and the tests were carried out before professors of architecture, fire brigade chiefs, representatives of insurance companies, and of H.M. Office of Works. The glass is known as "Georgian Wired." It is ¼ in. thick, and has embedded in it in the course of manufacture a netting of a new and original design. This is of rectangular form, and is welded at all the joints. From this method of construction it acquires its fire-resisting qualities. The test was conducted in the following manner:—Two huts were specially built of brick, equipped on one side with five "Two-foot" windows. In one hut these windows were glazed with the Georgian wired glass, with cement in a 1B brick rebate. In the other hut one of the windows was filled with Georgian wired glass, one with the older type of "Diamond Mesh" wired glass, and in the third was placed a pane of ordinary plate-glass, in order to compare its behaviour under test with the fire-resisting types. A number of 4 in. gas burners were lighted in the huts, and the temperature was steadily increased until 1,550 degrees Fahrenheit was reached. This temperature was maintained for ten minutes. By this time the interior of each hut was a roaring furnace. None the less the sheets of glass, though cracked, did not fall out. They resisted the flames, and stood as a complete barrier to the conflagration. Firemen advanced with their hose pipes and took up a position at the rear of the huts. At a given signal they directed simultaneous streams of water, at a pressure of 40 lb. per square inch, through holes in the back wall of the huts direct on the white-hot windows, the nozzles of the fire hoses being only 3 ft. from the glass. Like a flash the pane of ordinary plate-glass disappeared. But not a drop of



A PIECE OF THE WIRED GLASS, AND THE HUT IN WHICH THE GLASS WAS TESTED.

water passed the panes of wired glass. These put up as impassable a barrier to the water as they had done a moment back to the gutting flames. As soon as the glass had been cooled to a bearable temperature, the party of spectators advanced to examine the effects of fire and water. It was then found that the glass was everywhere covered with very fine hair-like cracks, but every pane was held firmly together by the inside reinforcement of wire. The cold water test was then made to prove that despite the ordeal by fire the Georgian glass was still impermeable to water. The panes were shown to be dry, and not a drop of water was able to find its way through the glass.

Ciment Fondu.

This is the subject of a new illustrated booklet which has just been issued by the Lafarge Aluminous Cement Co., Ltd. As a foreword a brief indication is given of the qualities of ciment fondu, the fullest details of which appear in subsequent pages of the booklet. Among the facts given concerning the various uses to which the material has been put are the following : piles (20 in. by 20 in. hollow, 37 ft. long) have been driven when 32½ hours old ; suspended reinforced concrete floors have been stripped and carried their designed load when 24 hours old ; road foundations have been laid and the road re-opened to traffic in 24 hours. It is also stated that ciment fondu concrete has been mixed and laid in severe frost without protection and without being affected. The object of the booklet is to give as comprehensive data as possible concerning its discovery, its qualities, and to give some indication of the cases where much time may be saved and reduction in costs effected by its use. In addition, the firm wish that the pamphlet shall serve as a book of reference for the architect, engineer, and contractor, and they have spared no pains to make the records set out as accurate and useful as possible. A carefully compiled index at the end of this book gives immediate reference to any query which may arise, and it is stated that the test reports, references, etc., which are given, may be examined at the office of the firm at any time. Among the large number of users of ciment fondu are the Admiralty, the War Office, the Crown Agents for the Colonies, Thames Conservancy, G.P.O. Services, H.M. Office of Works, the Port of London Authority, the Port of Bristol, the London County Council, and many of the foremost municipal authorities, engineers, and contractors in the country. A copy of the booklet can be obtained from the Lafarge Aluminous Cement Co., Ltd., at Lincoln House, 296-302 High Holborn, London, W.C.1.

New York's Great Carillon of Fifty-three Bells.

Representatives of the Press paid a visit to Messrs. Gillett and Johnston's bell foundry, Croydon, to inspect and hear the carillon for Park Avenue Baptist Church, New York. After the carillon, frame-work, and clavier (console) had been inspected, a recital was given by M. le Chevalier Jef. Denyn, Carillonneur of Malines, and principal of the Belgian National School of Carillonneurs. The carillon is said to be the largest and most complete in the world. By comparison :

Name.	No. of Bells.	Weight of Largest or Bass Bell.
New York	53	9½ tons.
Malines	45	7½ ,,
Ghent	52	5½ ,,
Bruges	47	5½ ,,
Antwerp	47	5½ ,,

The largest or bass (Bourdon) bell corresponds with low "E." The extent is 4½ chromatic octaves up to high "A," weighing 15 lb. The total weight of the bells is approximately 50 tons, that of the frame and fittings another 50 tons ; so that 100 tons of metal is the total weight of the consignment. Forty-five of the bells are fixed in three frames, to go one above the other, inside the Gothic tower, which has been designed by Mr. H. C. Pelton, the American architect. The eight largest bells are to be hung in a separate massive frame in a campanile built specially for the purpose, at the level of the existing tower. This structure is supported by the extension of the columns now supporting the roof of the church. The console (clavier) has been evolved after careful study of all the principal ones on the Continent, and has many novel features—the outcome of ideas originated by Mr. Mayer and M. Brees, in collaboration with the firm ; America thereby facilitating the work of carillonneurs visiting a strange tower to give a special recital.