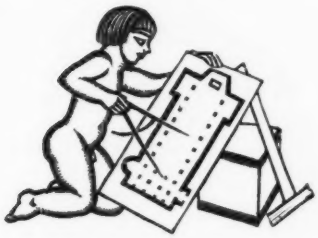
THE ARCHITECTS' JOURNAL



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CHRISTIAN BARMAN, *Editor*

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

WEDNESDAY, January 11, 1928. NUMBER 1721: VOLUME 67

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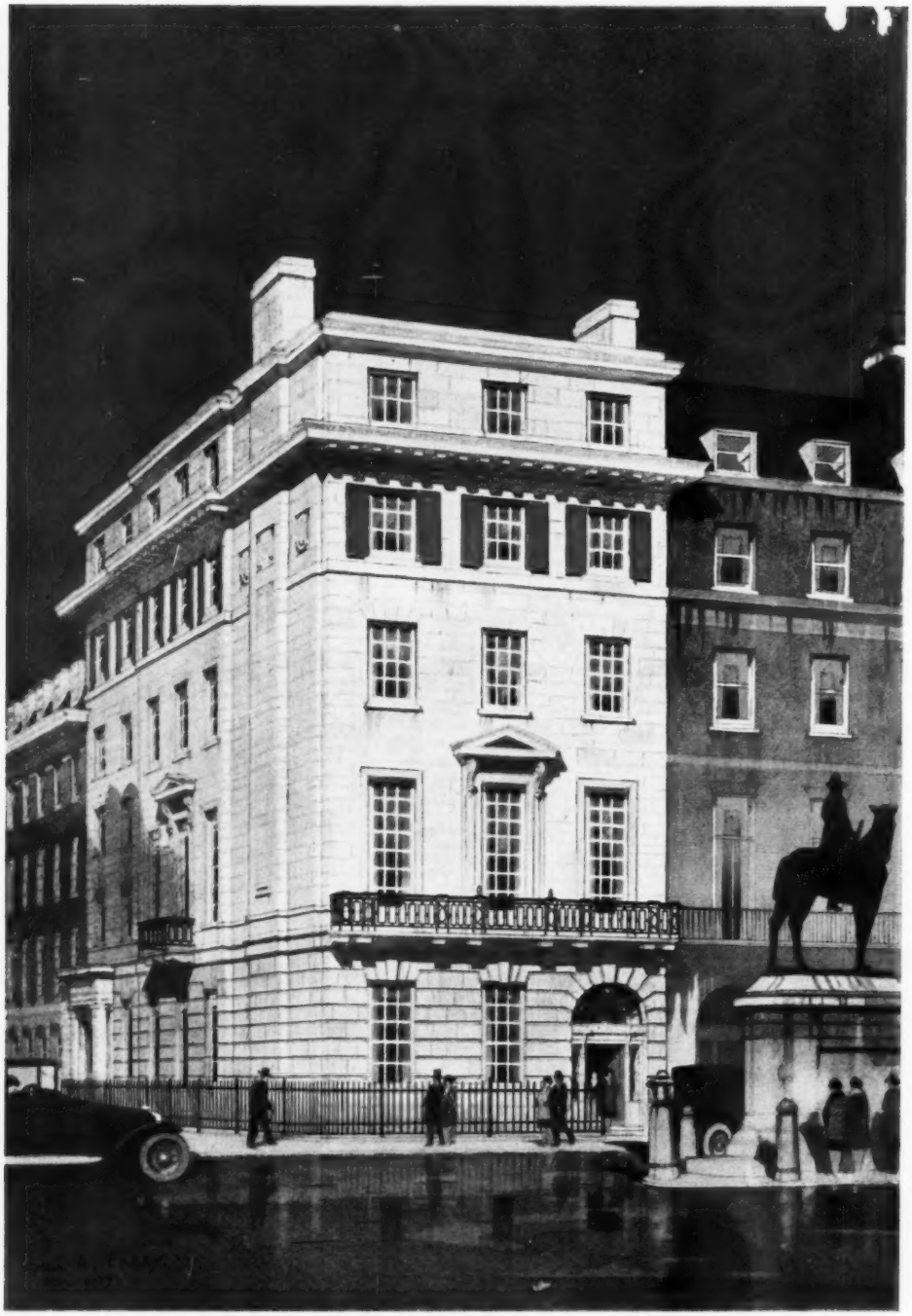
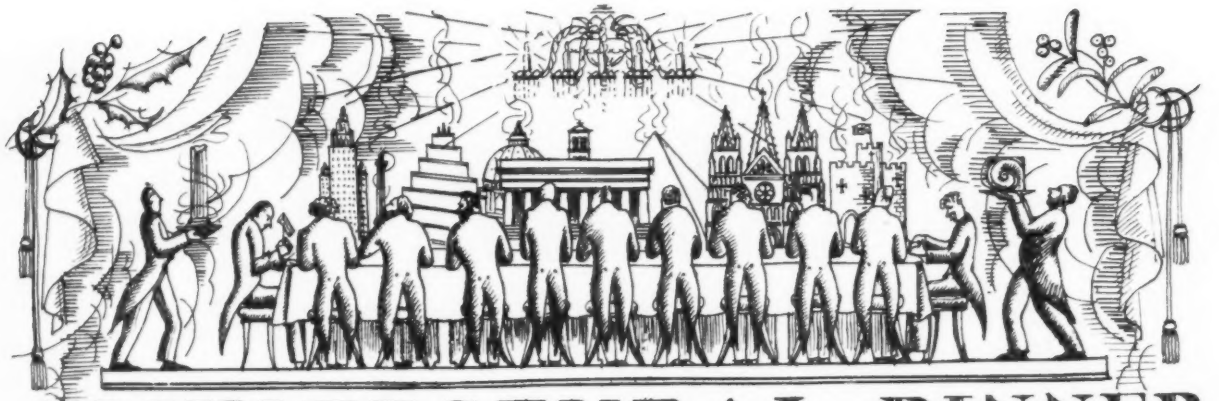


At the corner of Portland Place and Weymouth Street—in one of London's noblest thoroughfares—stands the whitest building in London. It marks an epoch in building. It is undeniably the first building in Great Britain to be completely faced with solid white cast concrete stone made in sand moulds. Every stone in the building is the same in its centre and on its surface. It is "white straight through." "Atlas White" Portland cement gives the stone its colour content. Those who inspect this building should note its cornices. They are made of real white cast concrete stone. Write for a copy of "Atlas White for Ornamental Cast Work."

Regent House,
Regent Street,
London, W.1.

Frederic Toleman

Architect: George Vernon, Esq.
Cast Stone Makers: Messrs. Emerson and Norris.



ARCHITECTURAL DINNER

Dogs' Teeth *Pièces à la Fourchette*
Skewbacks *Sour Grout* *Oeils de Boeuf Ramsey*

^^^

Thick Dentil *Portsch* *Clere Story Vermiculé* *Tas de Charge*

^^^

Mullion d'Or *Con Sole Viennoise* *Fillets of Deal*
Fried Slate Duchesse *Beam Paysanne* *Turret, Mortar Sauce*
Scumbled Whitening *Sea Ling au Bleu, Sauce Robert*

^^^

Dressed Quoins *Cottage Pie* *Cavetti Sicilienne*
Volute au Vent Choisy *Egg and Tongue Pie* *Pâté Rae Liverpool*

^^^

Pulvinated Freeze *Corn Ice*

^^^

Ramp Stake *Suckling Eaves Gablet* *Haunch of Tenon, Sauce Colonnaise*
Boiled Neck of Column, Taper Sauce *Handrail*
Batter Pudding *Surrey Cowl* *Bevelled Bat* *Long Hare Frappé*
Scarfed Joint *Window Head Espagnolette* *Gudgeon Rôti Financière*

^^^

Jamb Roll *Trifle au Rhium* *Spancakes*
Billet Mould *Pear Pushes*

^^^

Angels on Hammerbeam

^^^

Blue Staffordshire *Dutch Bond*

^^^

Am Pears

WINES

Baldachino *Brown Walnut*
Château Chambord *Château La Tour*
Perret Frères Monopole *Corbusier Triple Sec*
Port Cullis 1066 *Rare Old Gotch*
Quointrop *Battlementh* *Pew Gin*

THE ARCHITECTS' JOURNAL

Wednesday, January 11, 1928

STOCKTAKING

The New Year is always a time for stocktaking, and there are few more difficult tasks than attempting to arrive at a comprehensive view of the direction of changes in public mentality. In looking at the past year we can say with confidence that revulsion against the desecration of the country has spread to a wider circle. The Prime Minister, and others of almost equal eminence, have expressed their appreciation of the efforts that are being made to stem the tide of ugliness and vulgarity. It is unfortunate that the one body that could have done more than all others to lead the way has remained virtually inactive in so far as architectural quality is concerned. We refer to the National Federation of House Builders. It certainly requires more than ordinary vision, enthusiasm, and determination to enable the builders' leaders to initiate a comprehensive campaign of education among the rank and file. Many might say that improvement in design should be reached through the public demanding something better, rather than through efforts on the part of builders to lead the public. This, to architects, seems to be carrying the political principle of never acting ahead of public opinion rather too far. After all, every great calling or business must owe a moral duty to the community that it serves. Even in its purely commercial aspect it cannot in the long run pay for speculative builders to ignore the demands of æsthetics which are every day being voiced by responsible people. The day when builders of small houses, as a body, begin to take stock of their architectural shortcomings will mark an important step forward in our civilization.

A remarkable example of public spirit has been the safeguarding of Stonehenge. It is painful to imagine what it would look like surrounded by asbestos bungalows, teashops, and cinemas. It demands the bleak downs and unbroken skyline. Here, again, is illustrated the change in educated opinion. Thirty years ago people would have said that so long as the stones were left the surrounding country must take care of itself—"give way before the advance of civilization." Even the more farsighted would merely have sighed and said that unfortunately these things had to be in a progressive nineteenth century. It is extraordinary how firmly acceptances can be fixed in the mind. Suggestions that this or that is not necessarily so may be received with incredulous astonishment only to be accepted by the next generation as commonplaces. In the realm of physics we have received one shock after another. Our universe is of a definite size, Euclid's axioms are not applicable to actual measurements, we are not allowed to believe in infinite smallness; but the ordinary man can accept all these things more easily than believe that progress and commercial success need not be evidenced by soot and ugliness. This must mean that there is something radically wrong in a system of education that is encumbered by an overloaded curriculum in which civics, amenity, architecture, and the allied arts of life are absent. The first thing that should be taught to every child is that since he has to live in the world he must learn to make the best of it—to make it comfortable and beautiful. We are, of course, handicapped at the moment in such a programme because neither parents nor teachers have, as a rule, the slightest conception of how to do either.

In this connection we may quote Professor Östberg: "Nothing could be more desirable—and happily there seems to be a tendency in this direction—than to bring education into closer contact with handiwork, and that this form of life's work could be brought to include among its exercisers a greater number of trained intelligences." Such a training should not, moreover, be limited to technical schools; it should, rather, in deference to its importance, be an integral part of every school curriculum, for it is doubtful whether a true appreciation of the beauty and proportion of materials can be imparted except through the hand. Science has with difficulty forced its way into our schools, hence the crowded curriculum. Art has arrived still later, but she cannot, in a civilized country, be allowed to remain outside. To those who argue that education should be practical, we would say that more practical results would accrue from ten scholars who knew and cared about art principles than from a thousand who were well equipped with historical dates and Latin grammar. To those who contend that the training of the mind is the all in all of education, we would say that we have no reason to believe, nor evidence to show, that a classical training is the best means of producing useful citizens. Judged by the present-day condition of our country—presumably the fruits of classical study—its meanness and vulgarity, we might be led to suspect that it is the worst. In architecture we find all the visual arts assembled, and properly presented, it should constitute the readiest approach to a genuine culture in secondary education. May we hope that 1928 will mark the beginning?

NEWS AND TOPICS

NOT since two very young men, Giles Gilbert Scott and Ralph Knott, won, respectively, the competitions for Liverpool Cathedral and the London County Hall, has any architectural news aroused so much popular interest as when, last week, a young woman was announced as the winner of the Shakespeare Memorial Theatre Competition. Miss Elisabeth Scott, by winning, has produced the strongest argument against that section

Miss Elisabeth Scott.

of the community which derides the idea that a woman may make a successful architect; for this reason, as well as for her wholly admirable win, she is to be very heartily congratulated. Although Miss Scott is the daughter of a doctor, she can claim as blue-blooded an architectural connection as anybody may desire; her grandfather was Sir Gilbert Scott's brother, and she herself is a second cousin to Sir Giles Gilbert Scott—indeed, the aptitude for competition work would seem to run in the family! Miss Elisabeth Scott started her architectural career when she entered the A.A. schools in 1919; in 1924 she successfully completed the course and took her diploma. She is at present in the office of Mr. Maurice Chesterton, with whom, it is said, she will now go into partnership.

* * *

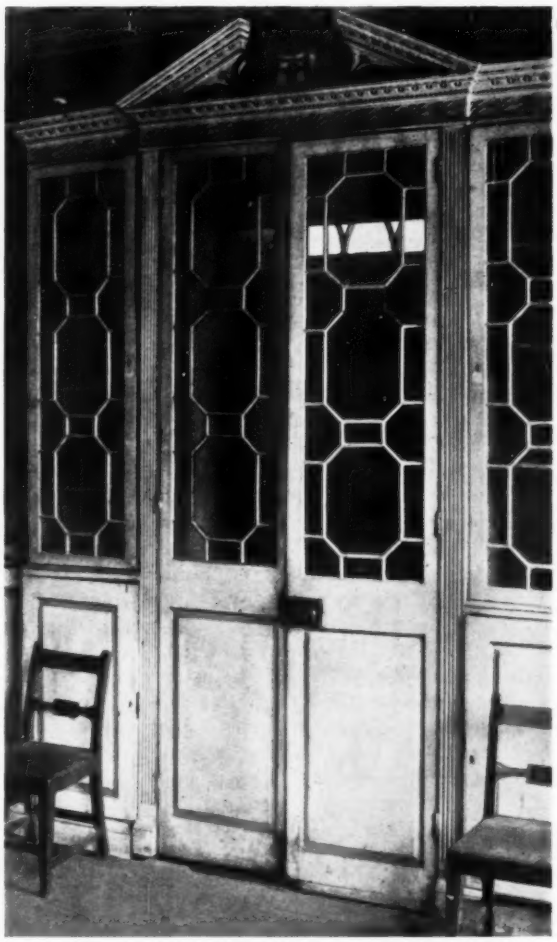
The promoters of the competition also are to be congratulated—for a fine piece of publicity. In some quarters the news was known on Monday. On Tuesday, Fleet Street (that knows how to keep a secret) was in possession of photos and "copy," and the prizewinner was interviewed. In Wednesday's papers there were the usual little hints, but not until Thursday was the news "released." Fleet Street had had ample time to work up the "story," and did it proud.

* * *

A friend who has just returned from Cape Town writes: "I feel I should call attention to the advertisement in the *Times* last week, for a qualified architectural assistant in the Michaelis School of Fine Art of Cape Town University. From my experience this should prove an excellent post with good prospects in one of the most delightful spots in the world and in the centre of art of the Union of South Africa. The position is rendered all the more important on account of the recent legislation brought into force at the commencement of the year, namely, the S.A. Act of Architects Registration, which requires all persons designating themselves by the name of architect to have passed examinations set up by the Inaugural Board for this purpose. Although the passage money out (£50) would only purchase a second-class ticket, the salary of £600 is an attraction which must be looked upon by those even earning the same money in England as something better. Living in Cape Town is certainly no dearer than in London, and income tax is only 2s. in the £, which does not begin until £400, in the case of a single man. So far as actual duties are concerned, these may be fairly compared with those in force in similar institutions in England, and the applicant has the advantage of carrying on his own practice in the Union, which with initiative should be a fine opportunity as great building activity exists through the country."

* * *

Half-way between Montrose and Stonehaven, on the Great North Road to Aberdeen, lies the village of Laurencekirk, which, in its present form, was founded by Lord Gardenstone (1721-1793). It is one of the earliest industrial settlements of the Port Sunlight type; Gardenstone, famous judge as well as pioneer of local industries, wrote that he "never relished anything so much as the pleasure arising from the progress of my village." Architecturally his finest gift to the village was a little library, where travellers to the north might drop in and read. A little



while ago, while on my way to Aberdeen by road, I stopped at this library, where Dr. Johnson and Burns must assuredly have spent some time, for they both slept at the coaching inn next door. But, alas ! there were no books there, nor any of the eighteenth-century portraits that once, I am told, graced its walls. One of the most exquisite rooms of its size and kind, the library itself, will soon be no longer. My snapshot shows the entrance door, designed continuously with the bookcases that go round the room. Inn and library passed out of the Gardenstone estate a little while ago, and the library is rented by a local firm of lawyers or estate agents, who transact in it a kind of business in which muddy boots and cigarette ends appear to play a considerable part. Is there no one in Aberdeen or thereabouts who cares sufficiently for architecture to save Lord Gardenstone's little gem ? Laurencekirk is still famous for its hand-loom linen, and antique dealers treasure its little early-Victorian boxes decorated with a black-and-white picture and bearing the maker's name and address in the lid. It cannot be allowed to lose such a delightful and really unusual possession.

* * *

The architect who would design buildings to withstand the destructive effects of tornadoes should consult the Inspection Department of the Associated Factory Mutual Fire Insurance Companies in Boston—if he is ever down that way. The department has made a careful study of damage to large buildings in recent tornadoes, and some of their conclusions are as follow:

> The main parts of reinforced concrete structures are little damaged. Skeleton steel-frame buildings with walls mostly of glass withstand tornadoes well. Brick walls should be thick, well bonded, and built with Portland cement mortar. Reinforced concrete roofs resist better than other types and add to the resistance of brick walls. Flat roofs are much better than steeply-pitched ones, and stiffen the walls to better advantage. The anchorage of roofs is important. Parapets are advantageous. Overhanging cornices are a menace. Pilasters stiffen walls. Stucco or diagonal sheathing is of assistance to light wooden-frame buildings. Concrete block, or unreinforced concrete, unless very massive, is no better than brick.

* * *

From a genial fellow, once an architect, but now temporarily out of practice, there comes the following (I take it that it is a specification for some job where the client's wife had made him distraught):

PRELIMINARIES

Fees Notices. Give all notices to local authorities and disorderly workmen, pay all fees on receipt of demand note whether legally due or otherwise, in the best and most workmanlike manner, whether specifically mentioned in this specification or shown upon the drawings or not, and all to be of their respective kinds.

Foreman. Keep a confident working foreman in the hut to hide the drawings and drink tea, and a deputy to explain in his absence that he has gone to another job " round the corner." Scrub all flues inside and out, cut away for and make good and remove when no longer required and leave the works in a gentlemanly manner before completion.

Payment will be made at the architect's discretion after the usual veiled venom has passed between all parties concerned up to an amount not exceeding 10 per cent. of the value of the work executed in fair-faced brickwork and limewhited.

EXCAVATOR

Bricks. The whole of the bricks used, except those for the walls, footings, linen cupboard, shelves and stacks above door level, unless otherwise described, to be Piddleton's bronze metal antique riveted to a gritty width with 3 in. by 7 in. twice rebated jambs as padstones where necessary. All to be as last described but cut to fit and given one coat of hand-sawn tile and tile and a-half as finish where passing through roof. Internal partitions to be of the full height and width except flues, but glazed in small squares. None to be more than two courses down without written consent.

PLUMBER AND OUTFITTER

Emergency sum. Provide and fix the sum of £49 17s. 8d. as emergency sum to be expended in full.

Windows. Windows where shown or intended or where required to be constructed as follows. Studs, braces and fishplates to be of 8 in. by 4 in. British standard cast-iron with arrises in Bean's cement laid on its natural bed. Stiles 4 in. by 1 in., but housed into hearth. Allow for profit and expenses of sub-contractor as last described.

Doors. To be as described in Pavior, but to have 3 in. by 2 in. brass lugs bedded in red lead and gaskin to pass a ¾-in. mesh. Put all necessary lead dots, large, loose or dead knots and iron valley rafters as weather bars. Hang to approved terra-cotta half-round angle irons caulked and sanded.

Stairs. As last described (see Preliminaries), but as follows. Handrail of approved type cane and white firebrick bedded in cart grease and blue lias lime, with all necessary bends, mitres, and those curved pieces at the top and bottom where required.

Dresser. Put a dresser where possible in the kitchen or coals, constructed in the usual manner with sliding shelves, etc., and flush switches painted four good oils.

FOUNDER AND BELLS

Provide all materials for and fit, frame, rebate, tenon, hang, put, fix, joint, make, execute, and do all foundering intended or intended to be intended as may be necessary, and provide all necessary sleeves, brackets, screws, breeze, fixing blocks, bolts, and straps as may be required to ensure the proper execution of the works. Allow for carriage and fixing.

JOINER

Glaze the back windows of the front room on the ground floor, and the front windows of the back room on the first floor, south front, with approved perforated zinc bedded in washleather, well spruttied, prigged, and back spruttied. Put obscured muffled cathedral clear sheet glass to skirtings of all rooms except ceilings. All other windows made to open as before described.

DRAINS AND CARPENTER

Connect to sewer in road with 6 in. P trap and take 4 in. rising main in cement to stopcock in roof and run branches to coot cupboard in last manhole. Waste from hall to discharge in ceiling with polished mahogany seat and 10 in. barrel bolt screwed to fascia.

ASTRAGAL

I DISCOVER ENGLAND

[BY RAGNAR ÖSTBERG]

I CAME to England in the beginning of July because it was too hot in Italy. And I went to Italy because an unusually northern early summer at home in Sweden had jostled and hustled me long enough—and then there was something in particular which lured me south. When I arrived at Peruggia the stone in the market-place lay glowing in the sun; the hills of Assisi lent no trace of coolness in the shade, and the watercolours in my brush dried up as rapidly as they flowed. But, nevertheless, there sat Miss Evelyn and painted in free and easy lines a landscape "bathed in light" and enveloped in the cool shade of the cypresses. Her calm and coolness excited my envy, as did also the perfect assurance with which she wielded her brush. How splendid never to feel a doubt! And she looked so well sitting on the steps right in front of the portal of the Assisi cathedral.

The heat was not appreciably less when we came to London. But the journey had completely changed my frame of mind. The intense vibration slowed down in some extraordinary manner, as in glass-making machinery, and the coolness seized me, as if from within. The polished, metallic surface of the Thames; the darkness of the atmosphere; the hardness of all sounds also indurated and braced me, refreshed me, and compelled me to adapt myself unceasingly—yet after only three days they made me cry out for the week-end. And when at last it arrived, no arrow from a full-drawn bow could have sped more rapidly than I did from London—to Oxford. What a transformation! Italy herself seemed in a trice to have settled here. What a pine! I looked at Evelyn, who was already at work, and sat down to paint with a strangely balanced sense of combined southern beauty and northern coolness.

Christ Church College, with its great quadrangle, constitutes a peaceful setting, where the carpet of the green lawn deadens the noise of bustle and strain. What an artistic domination lies embedded in these college gardens! A perfect orchestra which carries one along and leads to a new world, with the blue sky above. A space enclosed in massive walls and deepened by the rhythm of line and by the free play of detail. How proudly the tower spreads and then rises aloft with supreme assurance to unfold itself on high with turrets, pinnacles, and tracery.

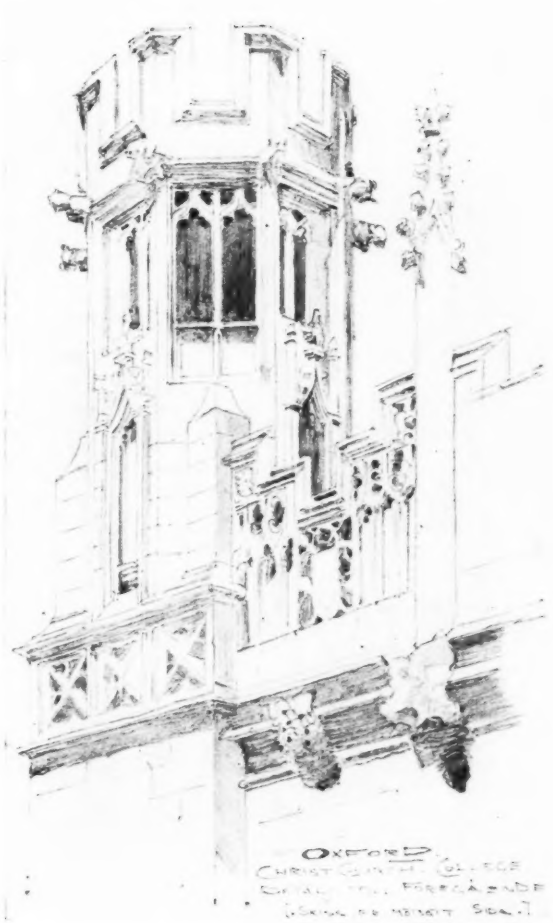
In this Gothic, originality shows forth delicately, like a stream through the ages. Extraordinary spiritual strength, imparting the great effect of northern unrest and classic calm; clear vertical upward striving together with a firm horizontal embrace of mother earth. Whilst the quadrangle is enframed by doorways, rows of windows, socles and cornices, we feel in other details a rhythm, in buttress and battlement, which elevates the whole.

The century-long battle between classic peace and Gothic movement fuses here in a resplendent unity which has no parallel in European architecture. And, curiously enough, there is in this unity no bitter taste whatever of compromise. The whole stands as a genuine manifestation of elemental force. Roman and Goth in one! English race! It was revealed to me then—and I believe it now. Christ Church College has a monumental character which gives a sense of classic calm amidst actual victorious conflict.

The basic tone of the quadrangle, green against stone-grey surfaces, also sounds a note of peace. The details and the cornice stand out clearly against the sky; the ornaments and capitals skilfully reinforce the same presentation of illuminated surfaces in contrast with shades which, even in dull light, is specially intensified by the under carvings of the cornice. The softness of the contrast between vertical and horizontal lines is mainly to be explained in this way. There are no strongly emphasized projections in the cornice to disturb the horizontal rhythm, which is felt more in a range of light and shade passing over the façade, whilst the vertical lines shoot up distinctly in buttresses and pinnacles.

The staircase in the corner of the quadrangle gives the impression of an architecture developed in a monolith block. This effect is obtained owing to the fact that the grey limestone material and the whole of the external detail are worked into this space. The irregular plan (about 13×14½ metres), with the staircase freely built in; the position of doors and windows; the high elevation of

Iffley Church. From a sketch by Ragnar Östberg.



Above, Iffley Church. Below, left, Christ Church, Oxford; right, Magdalen College, Oxford. From sketches by Ragnar Östberg.

the walls, with arches spread over them—all these features produce a captivating impression, at once astonishing and inspiring respect by their buoyant elegance and well-balanced strength. The profile of the "beams" is a delight to the eye with their suppleness and consistent strength. Always an impressive contrast between large, flat surfaces and richly articulated divergence as a leading motive, internally and externally.

Note, for example, in the tower, with its magnificent crown, the corner turrets, in which the decorative elements contrast, in delightful buoyancy, with the main mass.

In looking at Oxford, and especially at certain points of Christ Church, we seem to find little left of the dogmatic medieval spirit. Instead we find a Gothic impulse blending with the pure classicism which constantly inspires the Oxford structures. At the doorway of Magdalen College chapel the ways meet. The strongly-cubist composition has in it something of a noble shrine. It stands as if harnessed between two low buttresses, the front of which melt into the framwork of the doorway, and the base of which cautiously abandons the large proportions of the mass of the façade. Within these buttresses there is the rich sweep of

Christ Church, Oxford. From a sketch by Ragnar Östberg

the profile of the niches, with their intense contrast of light and shade, set against the even finer proportions of the wooden door. This clearly augmented refinement in richness and scale, compared with the entrance itself, suggests a most spiritual import, still further emphasized by the free sweep of the radiating arch in front of the gateway, which in a most delightful manner grows directly and logically out of the profile, and liberates itself. The framework, decorated with lilies, is supported by wonderfully sculptured wing figures, in the form of consols. The distinguished tenderness with which sculpture and relief are here treated can only be compared with the Pre-Raphaelite form of Italy.

These English forms are in a special sense for all time; they are not peculiar to any century, for they have a living adaptability, a suppleness, and a perpetual youthful vigour. Look, for example, at Iffley Church, the charming country church just outside Oxford. There we see the wisdom which passes down from generation to generation. Not standing more and more aloof from the new, which appears little by little, but ever changing with the times—and yet, by its permanent and essential character, aspiring upward and consistent. I am not surprised at the respectful and considerate tenderness with which leaves and flowers strain to climb the ancient walls of Iffley tower.

I myself, being less considerate, cannot resist the temptation to pluck a flower and to tender it to Miss Evelyn, who has shown me the way from Assisi to Oxford—for a week-end.

AN AMERICAN BUILDING IN THE CITY

[BY ELEANOR K. D. HUGHES]

LONDON is becoming familiar with American architecture at first hand. We have seen the gleaming white blocks of the new Devonshire House rise with an almost incredible quickness above the pavement of Piccadilly in place of the secluding brick wall and fine gates of the old mansion. Closing the vista of Kingsway there is Bush House, typically American. Its general effect will be better judged when the whole is finished and the central block which now stands alone takes its place in relation to the wings. Even in its unfinished state, however, the main façade facing up Kingsway lends a touch of romance and magnificence to the severity of the street. It is admirably placed for the play and interchange of light and shadow upon it. While the buildings of Kingsway face roughly east and west, this façade though looking north, and therefore cool in lighting, has enough open space round it for the morning

No. 147 Leadenhall Street, E.C. By J. W. O'Connor. Detail of the entrance.

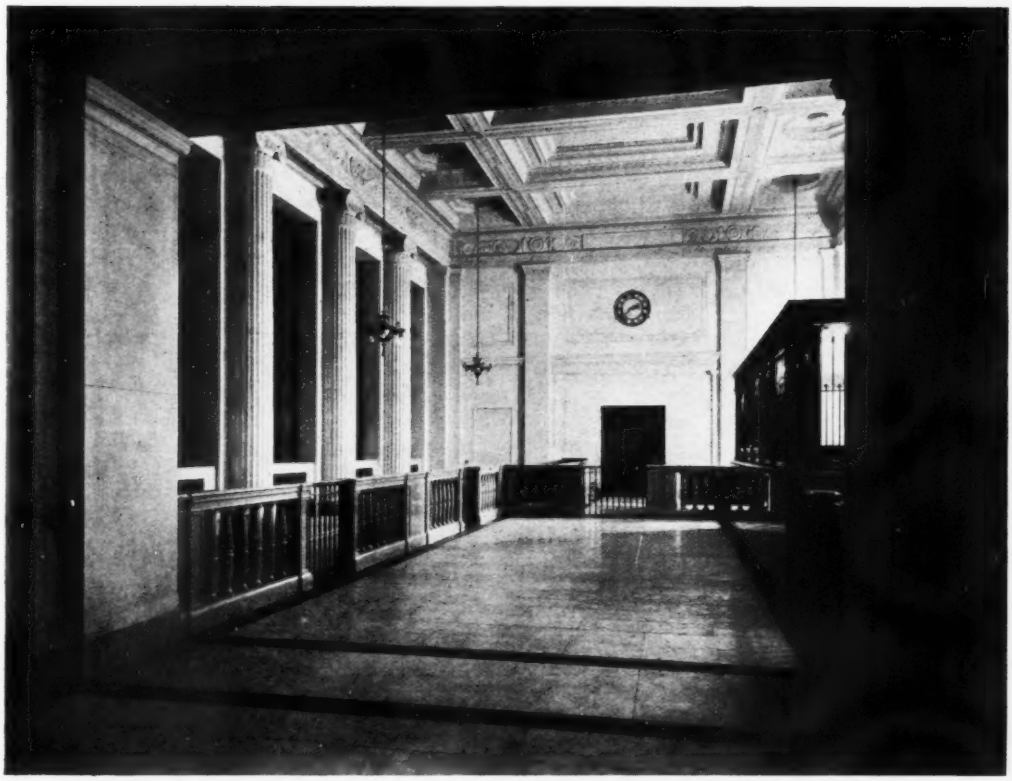
and evening sunlight to reach it. Its lintel and columns and the wall above the arch may be rose-tinted or gleaming white; while the semi-dome may hold in its curve, broken up and enhanced by its enrichments, a wealth of colour and shadow and reflected light. A building which closes a vista is not only a focal point, meant to be seen, but one generally grey or neutral in colour. The Strand façade of Bush House shows another arched motive, differently handled, having a wide surface facing south, with porch less recessed, and ornament in low relief—a foil to what may be called the high relief of the attached columns of St. Mary-le-Strand Church, with which the whole

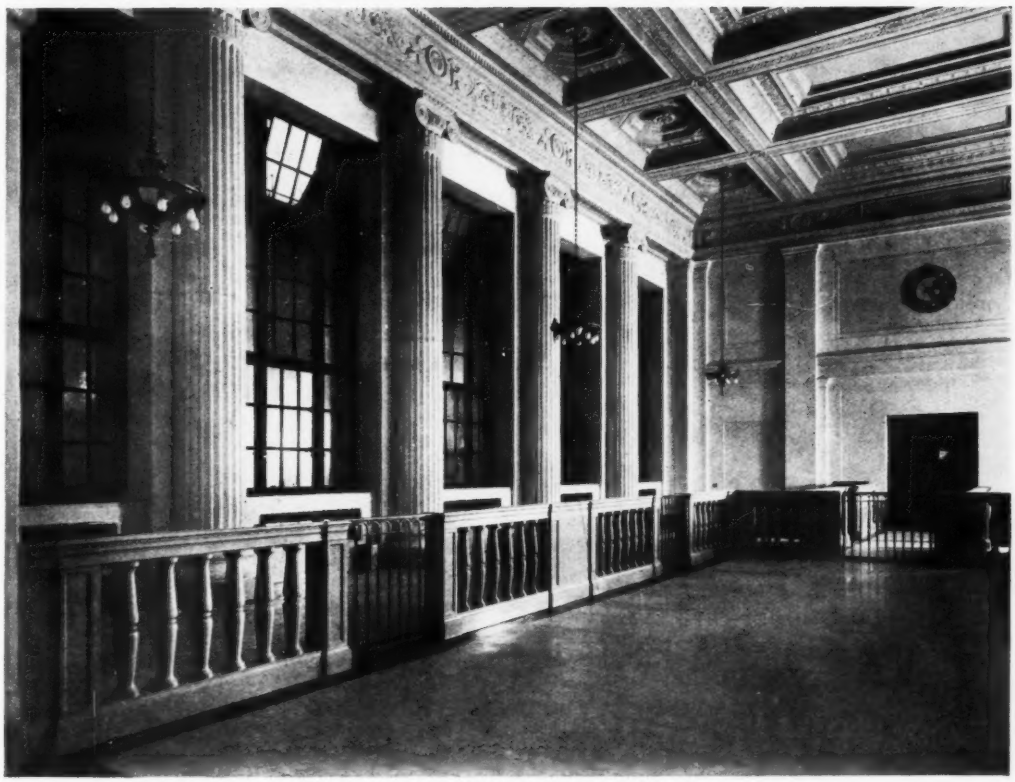
No. 147 Leadenhall Street, E.C. By J. W. O'Connor.

which stands under perfectly different conditions of lighting, and these appear to best advantage when the building is isolated in this way. The architect has made wonderfully effective use of the curved surface in this position. This is an example of what might be called an American instinct for entrances.

Part, perhaps, of the secret of London's wonderful beauty is in the lighting of wall surfaces which are in themselves building groups itself. Here is an instance of the triple motive, arched in the centre square beaded on either side.

This combination (may it be whispered?) seems to have been imported from Italy and nationalized in America. One of the most famous examples of it, perhaps, is the little gem of the Pierpont Morgan library. It appears, of course, in England, but with us it is bold and massive,





No. 147 Leadenhall Street, E.C. By J. W. O'Connor.
Two views of the banking hall from the entrance hall.

in the grand manner; in American work it has a Florentine refinement suited to a clearer air.

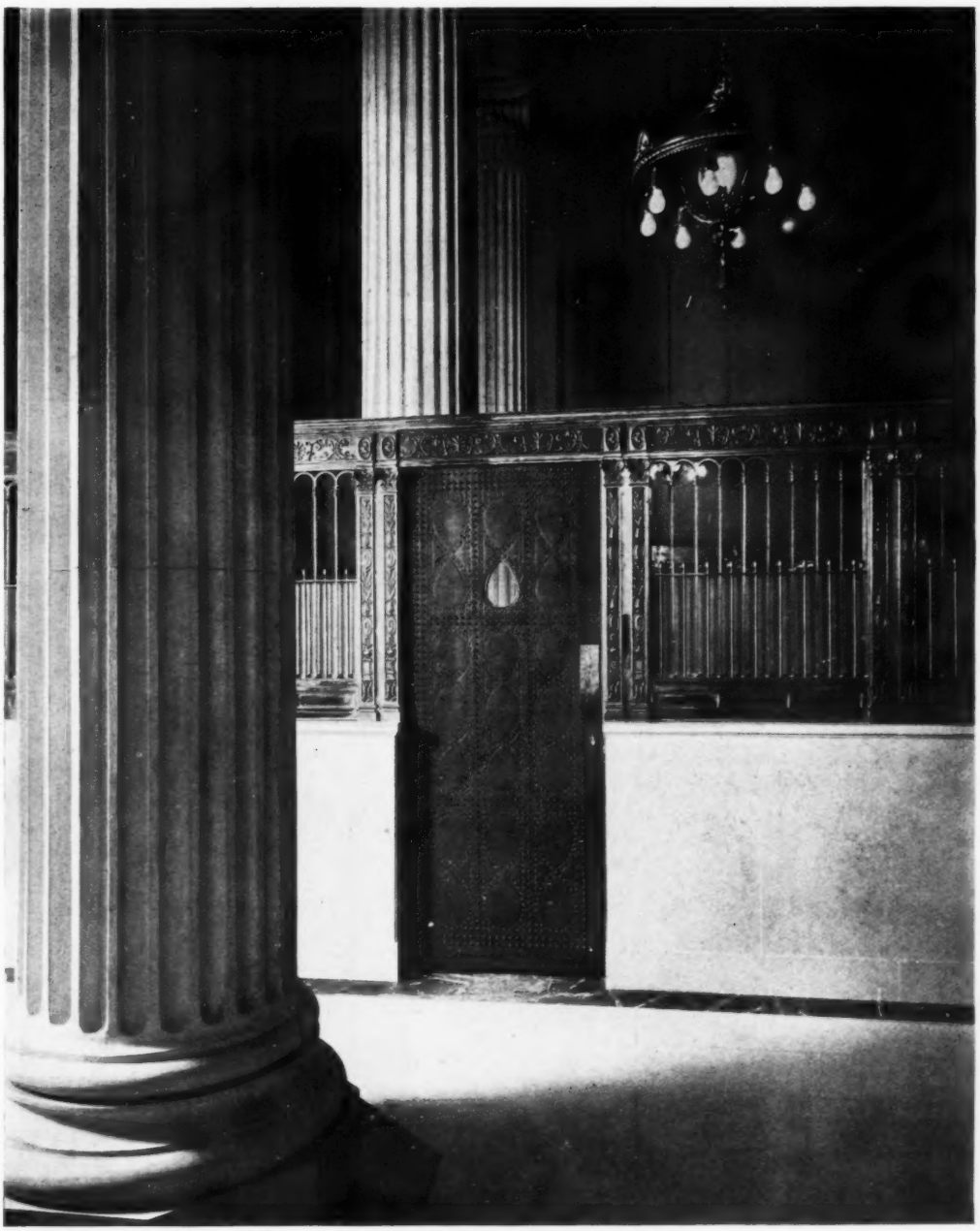
From the English point of view the American buildings of London have certain characteristics which differentiate them from our own, and certain things which they seem to have in common. The United States may produce a multitude of variations amongst themselves; but to us in London, with a more limited number of examples to consider, the broad outline seems the same. American buildings do not look foreign in London, and their presence in our streets should help to draw closer the ties of Anglo-Saxon friendship.

Their effect seems to be gained, not only by efficient planning, but by a directness and simplicity, combined with a sparing use of ornament which is employed only in appropriate places. Ornament serves to emphasize the entrance to a building in a manner generally refined and beautiful. One cannot help feeling that American architects thoroughly enjoy designing vestibules and entrances, and how well they do it ! The staircases, again, show fine and restrained design. Then there is a feeling for material. Reinforced concrete demands its own expression, and is admirably adapted to simplicity and economy of planning, minimizing supports and requiring these to be placed in

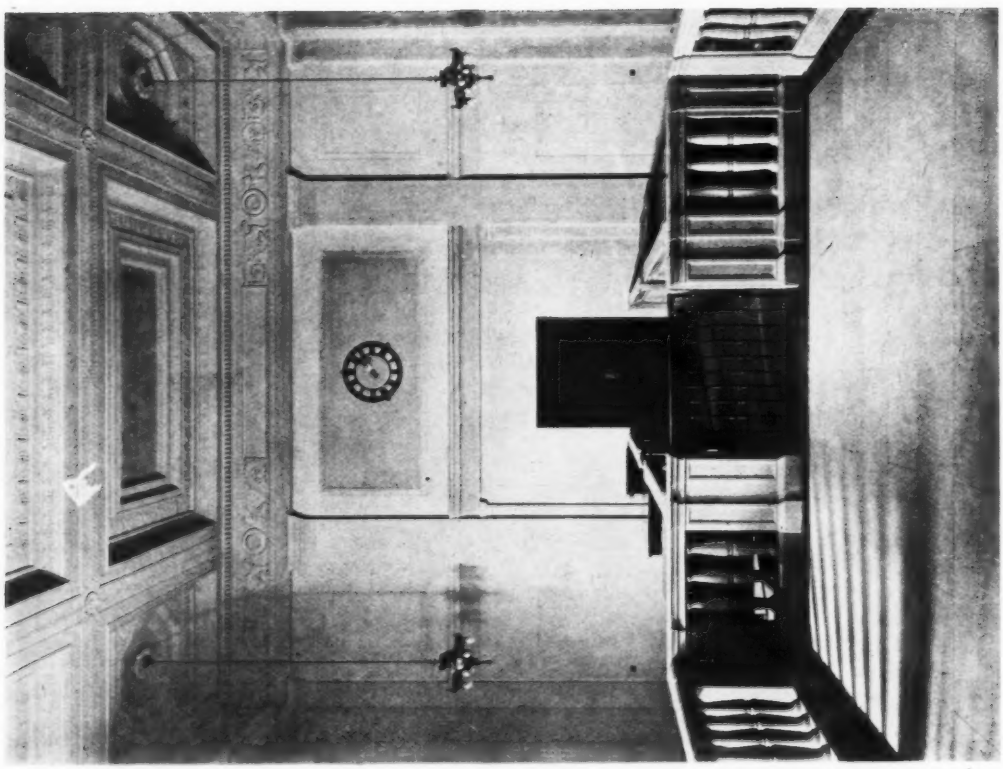
No. 147 Leadenhall Street, E.C. By J. W. O'Connor. Part of the banking hall.

an orderly and economical manner, and lending itself to the plain wall surfaces adopted by modern hygiene. It is one thing to plan according to construction, but quite another to invest such building with that indefinable something which makes it architecture as well. It is this architectural quality in which these American buildings seem to excel. Then there is the sense of scale. The box-like top of Bush House may be seen across London above the roofs, but the scale of the building is that of the Strand. Such are a few of the more obvious characteristics which seem to occur to the mind.

No. 147 Leadenhall Street, the new building erected for Messrs. Grace & Co., of New York, contains such characteristics, and is itself a comparatively small building of unusual excellence. It stands right in the heart of the City, opposite to the new building of Lloyd's, in one of the busiest centres of activity in the world. It consists of banking premises with general offices above in connection with them, and three floors of other offices for letting, approached by a separate entrance. The basement contains services only, and there are no caretaker's quarters. It is, therefore, a building for purely business purposes. One has only to stand on the opposite pavement—the temporary absence of traffic from Leadenhall Street provides an opportunity for a clear view—and to look down the street façade of which this building is part, to



No. 147 Leadenhall Street, E.C. By J. W. O'Connor. Part of the banking hall.



No. 147 Leadenhall Street, E.C. By J. W. O'Connor. Two views of end of banking hall.

recognize the extraordinary quality, not only of distinction, but of tact which marks it. It is brilliantly of New York, yet it radiates the very atmosphere of London. It is a mental pleasure to trace the subtlety of this happy combination. The frontage is not actually very wide, and the height of the building is not great as compared with other buildings in the street. It fits perfectly into its place, and is entirely free from that suggestion of advertisement which from an artistic point of view, if not from a business point of view, mars so many of our modern commercial buildings.

The façade consists of a triple entrance motive, arched in the centre, which has the American associations already referred to. Here it expresses a definite purpose, emphasizing the main entrance to the banking hall under the central arch, with a second entrance at the side to the main staircase and offices above. The main axis of the building is at an acute angle to the street, and in order to keep the building symmetrical very skilful use is made of the wider part of the angle for a more spacious approach to the offices or the street side. The upper part of the façade is perfectly simple in the eighteenth-century manner, and is finished above with a parapet, alternately solid and balustraded, also reminiscent of the eighteenth century.

The whole façade seems to offer a graceful gesture of reverence to the age and dignity of London, as well as expressing the dignity of American business. There is no concession, however, to mere archæology, and no detraction from the extreme efficiency of the building for its purpose.

The block consists of a basement containing services; main or principal ground floor running up two storeys in part and in part a mezzanine, containing the entrances, banking hall, two conference rooms intercommunicating but separately approached, and boardroom; general offices for the company above; and three floors of open office space stretching across the building from front to back, communicating with main and back staircases and lift, and having private rooms, strong room, and separate cupboard for all meters on each floor. The walls are divided into bays by the reinforced concrete supports, each bay having its own radiator with air intake behind it, and its own telephone attachment. The mezzanine floor contains the telephone exchange with fifty private lines. The ceiling divides in the same way into bays, and there are no intermediate supports. The basement contains services only, dispatch department, stationery store, housekeeper's office, boiler-room, coal cellars (well lighted from the pavement), and extensive lavatory accommodation. The heating system is worked from two large Robin Hood boilers with accelerator pump. For summer use there is a Potterton boiler for hot-water service only.

The material used is reinforced concrete, except for the façade and decorative work. All walls in the rear are white tiled; Derbyshire marble is used for the balustrade of the banking hall, for the staircase, etc. The bank counter is protected by a fine bronze grille, and bronze is used in the entrance hall in the lifts. The flooring is of concrete laid with rubber.

The vestibule and the banking hall are very finely designed. The banking hall is slightly reminiscent of one of Wren's churches—another instance of how, consciously or unconsciously, the architect has caught the atmosphere of the City. There is the same skilful management of the plan, which appears symmetrical and yet is not so, and the same feeling in the treatment of the classical columns. There is this difference, however, that while the growth of tall buildings round Wren's churches has condemned them to an almost perpetual twilight, this hall is flooded with light which the cream-coloured walls reflect with subtle gradation. There is a fine handling of scale and an effect of great spaciousness, enhanced probably by the low balustrade of marble with its fine little bronze gate which separates the public space from that allotted to officials. Light, space, dignity, and refinement are the notes of this main floor. It is a delight to enter it from the street. The detail, whether of marble, wood, bronze, is beautiful in itself and goes to make up the whole. The fittings, such as the specially made wide glass-topped desks, spaced comfortably apart, each having its own fittings and telephone, give a sense of dignity and effectiveness. These are placed alongside the public space inside the balustrade. The bronze gate leads to the inner landing and conference rooms. Several well-fitted private offices are placed at the side. The boardroom is of the type of the English boardroom, a little of the eighteenth century, light and spacious for its size, well furnished and well carpeted—a harmonious whole. The staircases are of concrete, the main staircase having a marble covering, dull marble on treads and risers, and polished marble for the strings, of the same cream-coloured marble as is used on the ground floor. All skirtings are square-edged and of marble. The hard wood handrail is supported by slight iron balusters alternately round and square, and the newel, a fine and restrained piece of ironwork of the baluster type. The inside window sills are of slate. The windows are of hard wood, being sash windows with small panes. The doors are hard wood throughout, stained and polished. The whole gives the impression of clean efficiency, simplicity, space, and refinement. It is, in brief, fine architecture.

No. 147 Leadenhall Street, E.C. By J. W. O'Connor. A lift indicator.

AN ARCHITECT'S CAR

[BY CLOUGH WILLIAMS-ELLIS]

AGAINST our obvious gains in the last few decades of headlong scientific and mechanical progress it is credibly asserted that we have to set certain losses, but that is a good deal a matter of labels. At all events, the pleasures of prophecy—one of the oldest social diversions in the world—are greater and more rewarding than ever before. For one thing, so many fantastical prognostications have lately been so surprisingly justified that the more intelligent of the public dares hardly to smile, certainly not to scoff, when quite incredible things are foretold. The incredible and the impossible have, in short, been very wisely separated into their appropriate categories; though it is a bold man who will dare in these days to make much of a list under the latter heading.

One of the obvious reasons for the increased popularity of prophesying is that one's wildest speculations may quite easily be confirmed in tomorrow morning's newspaper, or in a paper at next year's meeting of the British Association, or in a terse cable from Moscow, Chicago, or Copenhagen. In short, it has become a far more exciting sport than when ancient greybeards merely foretold calamities that would befall their children's children long after they, the prophets, were safely dead and buried. Seeing that they were in any case not going to be there to pay their losings if they lost, it is, indeed, wonderful that they punted and speculated so timidly.

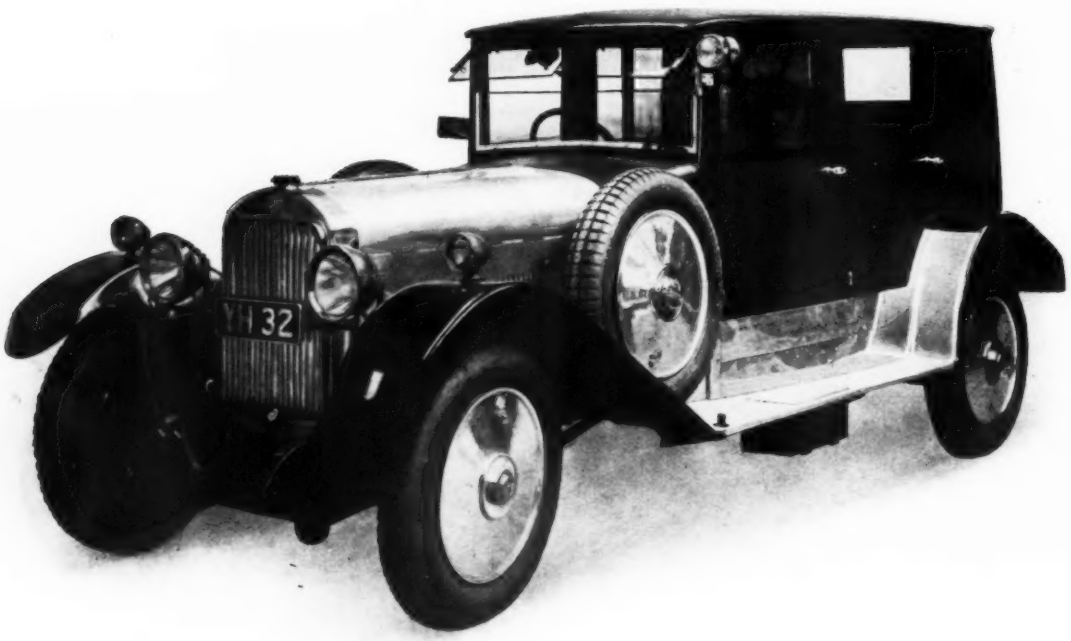
With regard to the motor-car, many of the leading experts, who ought to know what they are talking about, and perhaps do, say that the average, normal, modern motor-car has, generally speaking, reached finality so far as its lines and proportions are concerned. They, of course, admit the probability of all sorts of minor refinements and improvements, but certainly give one to understand that the car of ten or twenty years hence—or, indeed, for as long as mechanically-propelled vehicles traverse our roads (which incidentally they appear to assume will be always)—will be substantially much the same as it is now. Let us also prophesy, leaping only ten years on; and when that time arrives let the Editor of THE ARCHITECTS' JOURNAL dig out this prognostication on the occasion of that year's Motor Show, and feature it either as an example of amazing prophetic intuition, or as an example of the wild sayings that so regrettably characterized the year of the total eclipse—according to the event.

The typical higher-priced car of the year 1937, then, will be found to be as follows:

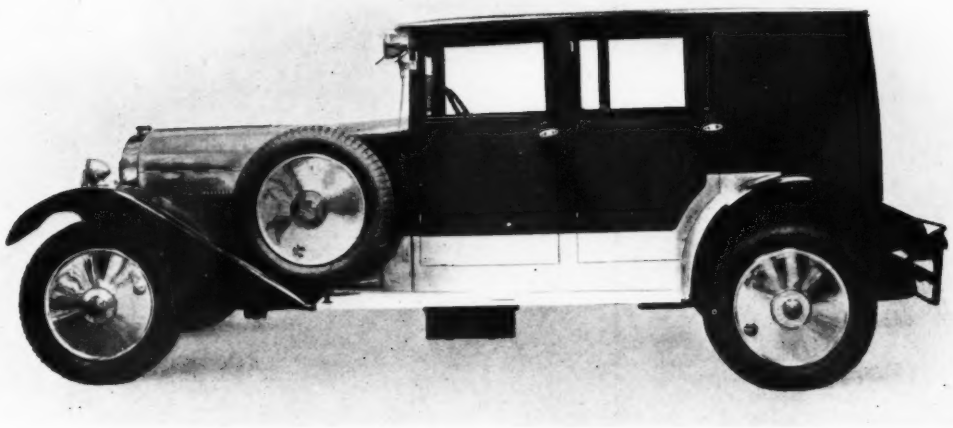
"Its general outline is that of a slug, with perfectly smooth and unbroken streamline both in vertical profile and in plan.

"As practically all the roads are now smoothed-out to perfect evenness, and as dogs, pedestrians, and other obstacles to legitimate traffic are now rigorously denied access thereto, a very few inches clearance between the chassis and the road-surface is now required.

"The wheels, of course, are barely visible, being aligned



Mr. Goodhart-Rendel's car. The body was designed by R. A. Duncan.



on the central long axis of the car, and being still in couples less than a foot apart, as on the old war-time Crossley tenders of the R.A.F. They are yet, however, far enough apart to give adequate stability to the car when standing still—the centre of gravity of the engine, and, indeed, of the whole vehicle, being well below their axle line.

" The underside of the body is, of course, curved like its roof, only more sharply, like a boat's keel, in order to give good clearance when the car is rounding a bend at speed. At really low speeds the automatic gyroscope, of course, comes into action to give the necessary stability.

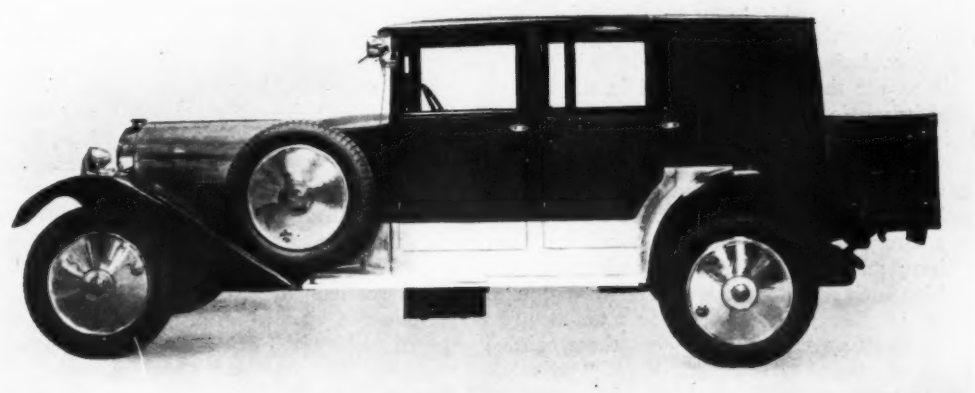
" The body, from its keel up to its maximum beam, is of polished stainless steel, and above that, in long panels or ' planks ' of flexible triplex Vita-glass between stainless steel ribs that flow in an unbroken curve from the nose of the car to its tail. Panels of this glass open out gill-wise for ventilation at low speeds, when it is not necessary to use the compressed air or oxygen reserve.

" The air-cooled engine, being now so infinitely lighter and smaller than any units of the same power of even five years ago, occupies a relatively small space in the centre bottom of the car, and the disappearance of the old, unwieldy water radiation arrangements have also greatly reduced the weight and added a large amount of useful space to the accommodation of the car.

" The warming and cooling arrangements for the inside of the car, and the provision for the admittance of only filtered air, are thoroughly efficient; and the braking follows the usual practice of air compression, whereby an air-pump is brought into action, storing up air under high compression for use in the self-starter and boosting for special spurts.

" Only the sports models are fitted with the small rudimentary folding wings and tails wherewith one may so well enliven a long journey on a crowded road, particularly if there are good gradients on which to get up a good sprint for a ' hop.' To many critics, however, this attempt to cross the air-cars with the road-cars seems disgenic, and not in the best interests of either mode of locomotion.

" Now that the almost continuous ' sheet ' lighting of all main thoroughfares has largely done away with the need for the old bewildering head-lights, the glow thrown out from the transparent body of the Neon-lighted car is certainly sufficient for most night-driving purposes; for, after all, as there are no pedestrians, and there is no slow traffic on the motor-roads, and as all the cars, as well as the road itself, are lit, all one really requires one's eye to tell one is just where one is, so that preparations to take such curves and gradients as are left can be made in good



Mr. Goodhart-Rendel's car. Body designed by R. A. Duncan. The bottom view shows luggage-carrier down.

Mr. Goodhart-Rendel's car.
Body designed by R. A. Duncan.

time—that is, say, half a mile or ten seconds before one gets to them. For this purpose the automatic geared illuminated map-strips unrolling on the dash are an excellent device."

So much, then, for the car of a decade hence. What of the car of today? Or, as we are more particularly considering Mr. Goodhart-Rendel's car, here pictured, of the car of tomorrow morning? Perhaps, after what has just been said, it may look rather more unexcitingly normal than one might expect, remembering that the body has been specially designed by one ingenious architect for another. There is certainly nothing fantastic or *outre* about it, and compared with certain recent Continental body-designs, especially Italian, it would look sedately normal.

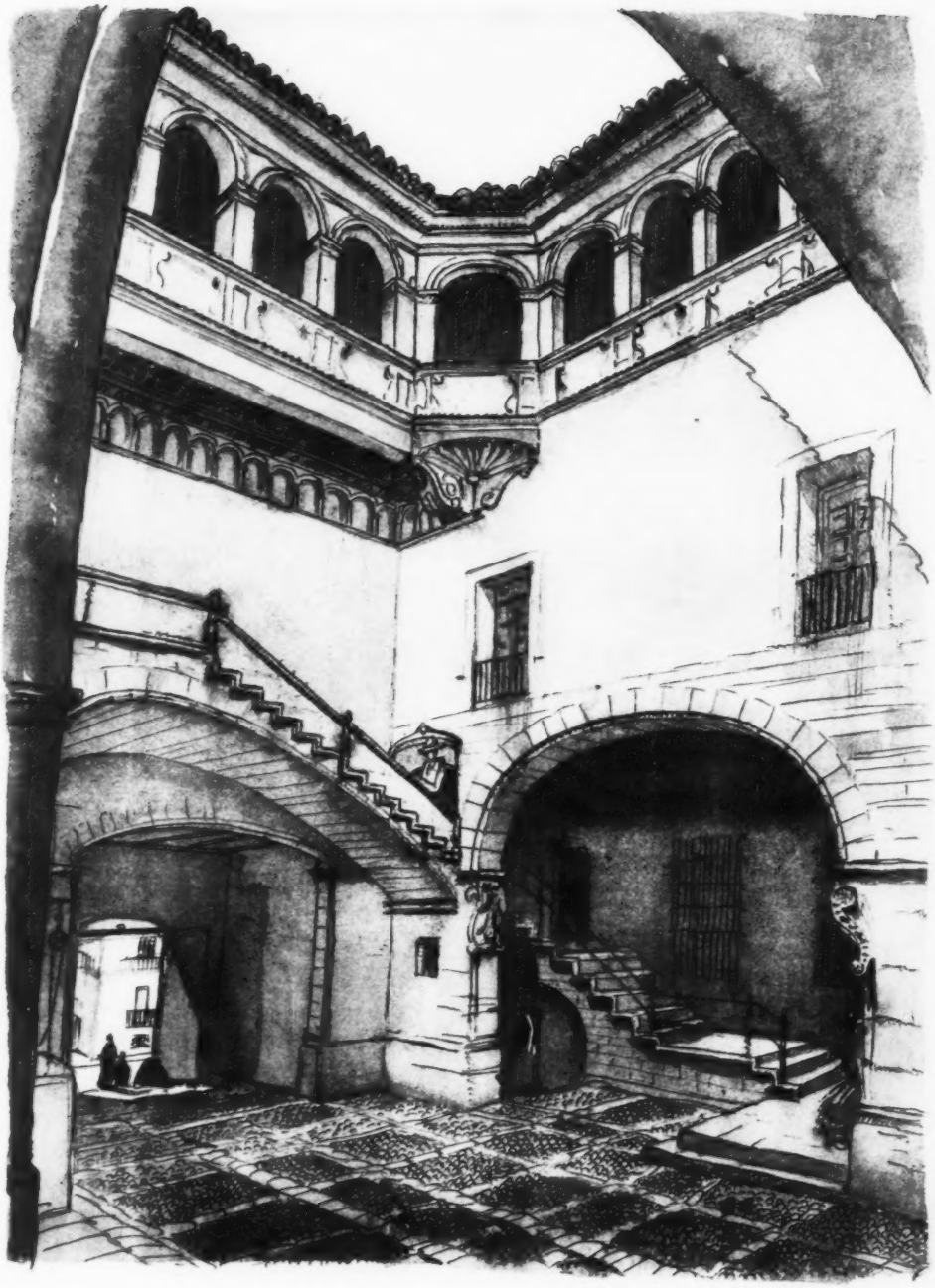
What Mr. R. A. Duncan, its coachwork designer, has done is to accept the motor-coach body at its present general level of evolution, and give it just such slight differences from the norm as appear to be logically or æsthetically called for by its use and environment. It is just such purposive variations as those displayed in this car that give its evolution that little jolt and twist which, seeming slight at the time, may be found in the end to have deflected its whole trend from other competing lines of advance into that which ultimately becomes its actual history.

There are certain otherwise excellent cars that no one, architecturally-minded, could possibly own or drive with pleasure or self-respect, simply on account of their unacceptable lines; and in a less marked and more subconscious fashion such considerations probably weigh with the general public far more than motor manufacturers are aware. Amongst professional engineers there exists a quite surprising awareness and appreciation of "style" in machinery; and other things being equal, there are those who will only use British or American or German or French machines, as they have more than once confessed to the present writer, solely because they feel that the given problem which all may answer with equal efficiency is only *beautifully* answered by the machine stamped with the particular native style and genius of the country they favour. It is not the country, however, that they favour, but the style.

To return from that digression to Mr. Rendel's Duncan-designed body, one must chiefly say of it that its lines are extremely satisfying, that it has no nonsense whatever about it, and that it has certain novelties of real practical advantage, such as the bright aluminium exterior skirting, which not only receives the kicks, but serves a useful æsthetic purpose in reducing the apparent height and, therefore, increasing the apparent length of the whole vehicle.

The sides and back, to use a seafaring expression, "tumble home" in a pleasant but not exaggerated fashion—the back view especially giving one in consequence a sense of great stability. The coachwork is in a dark blue fabric in the Weyman fashion, with the painted parts black cellulose. The makers' designs for the radiator and aluminium bonnet were retained, but the wings are purpose-made.

If motor manufacturers have hesitated to call in outside designers, and especially architects, to advise them on the non-mechanical parts of their cars, it is, perhaps, because they fear that anyone who had the artistic sense must also have the artistic nonsense and the "temperament" of which they have heard so much and of which they are so wisely distrustful. The Duncan-Rendel demonstration should do something towards proving to them that architects have enough imagination to be trusted not to bolt off into the unsuitable forms of static architecture when the demand and need is for dynamic or wheeled architecture. The very fact that the deflection of a mere fraction of an inch in the line of a coach body makes or mars the general suavity, is the best argument one can have for getting the most skilful designers to determine precisely what trace that line shall follow.



PATIO OF THE CASA DEL MARQUES, VALENCIA.
[FROM A SEPIA DRAWING BY RAYMOND MCGRATH.]

THE INTERIOR OF THE HOSPITAL OF SANTA CRUZ, TOLEDO. ARCHITECT, ENRIQUE DE EGAS. [FROM A SEPIA DRAWING BY RAYMOND MCGRATH.]

ENTRANCE TO THE CHAPEL OF THE CONVENTO DE SANTA ISABEL, CORDOBA. [FROM A SEPIA DRAWING BY RAYMOND MCGRATH.]

THE YEAR IN ARCHITECTURE

[BY PROFESSOR C. H. REILLY]

LOOKING over the architectural output of 1927 as shown in these illustrations, it is interesting, if a little disconcerting to the younger section, to see that the established heads of the profession have this year justified their position and, one might almost add, their titles and decorations. Of course, the younger men may reply these seniors have nearly all the good chances and that when one of the younger men gets as good a chance—like Mr. Lidbetter with the Friends Meeting House in the Euston Road—he does as well. This, however, is a fruitless, as well as an age-long controversy not worth pursuing. All one can say with any certainty is that with this particular output the younger generation does not seem to be knocking at the door in 1927 quite so loudly as one imagined from the work of the schools, nor is the modernist note in the sound they make quite so insistent. Let us therefore get to the facts.

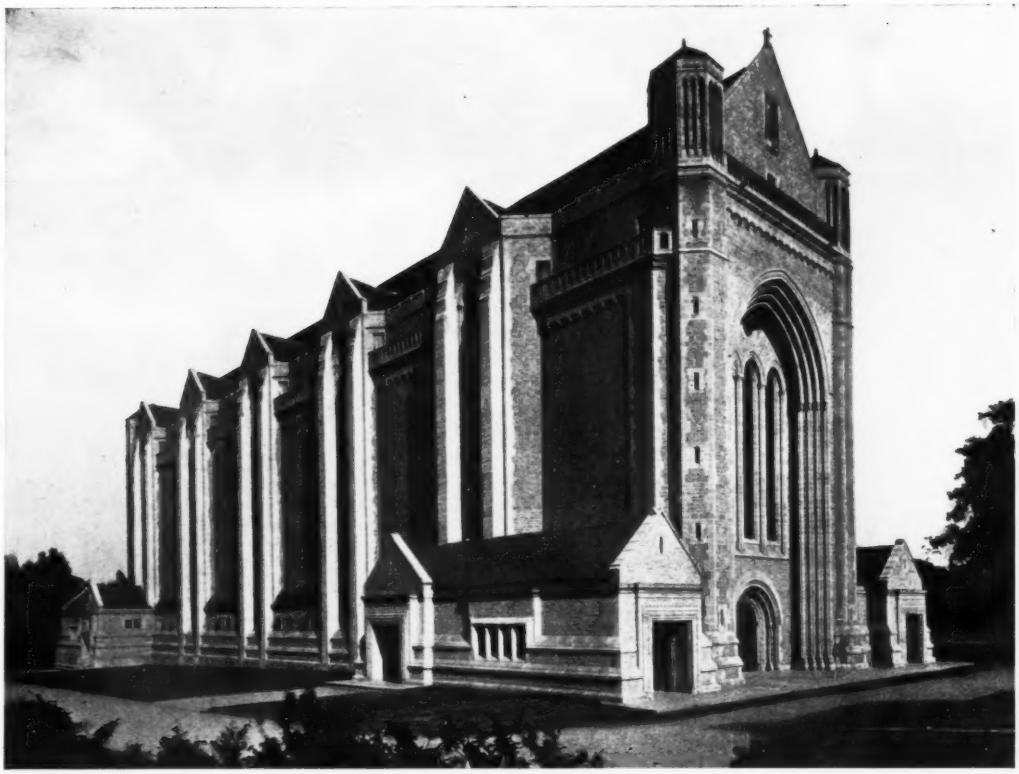
The County Fire Office. Elevation by Sir Reginald Blomfield. Plans by Newton and Woodward.

The chief work of the year is, I suppose, the completion of Regent Street by the Quadrant and the Piccadilly Square new buildings. Here, probably, Sir Reginald Blomfield has erected both the most prominent and probably the most important buildings of his career. Let us acknowledge, frankly and thankfully, he has saved Regent Street as far as it was possible to save it. More than that, he has given an elegant, well-mannered, yet gay, entrance to a street which at one time promised to be almost entirely ponderously pedestrian or pompously parvenu. The skill with which he has reduced Mr. Norman Shaw's town-hall architecture of the 'nineties to reasonable and inviting street façades for a first-class shopping centre is something we can all admire. Admitted that he had the great sweep of the Quadrant as laid down by Nash to work upon, and that it would have been difficult to spoil so fine a curve unless one were foolish enough to break it, yet the more one studies these new façades of Sir Reginald's the more one discovers what difficulties of adjustment and compromise he has had everywhere to meet, and with what skill and judgment he has done it (as seen from the main street). Till now one may confess one has not thought of Sir

Reginald in the first place as a man of finesse and infinite pains. He had, one knew, other more downright and perhaps greater qualities, moral as well as architectural. Here he exhibits for us in these street fronts the same sense of style, elegance, and charm which makes all his books works of art. This Regent Street and Piccadilly work is a new revelation of his powers, and one which has come very fortunately with a great opportunity. That the work is based on tradition, both English and French, may not today entirely please the youngest of us, though he may take some encouragement from the freedom with which Sir Reginald has placed his own Doric columns under the same entablature as Mr. Norman Shaw placed his Ionic. This work has been frankly a piece of scenery-making, and the author of it has put in his high lights, his points of interest, his texture, and his gaieties as dictated by the composition of the whole. His use of the particular traditional forms suggests the parade life of such a street, the luxury character of the shopping carried out in it. Let the man who for such a purpose would deny himself any of the suggestions which, by associated ideas, such traditional forms can give contrast Sir Reginald's Swan and Edgar building with Sir John Burnett's Vigo House. One is elegant and tempting, and the other heavy Teutonic and, to me, rather repellant as a place in which to buy anything. Of course, one may carry such an idea too far. A well-shaped building is a well-shaped building whatever its purpose. Vigo House has undoubted strength and power; one might go to it to hear a good Scotch sermon on the certainty of eternal damnation, but not to buy a tie.

Turning to the work of Sir Edwin Lutyens, it is illustrated in the year's output by the façade of the new headquarters of the Midland Bank in the City. The part built is only a part of the completed façade, which I imagine will continue for at least another bay on either side, but enough is there to see that the comparatively new problem of the great office block has here, as so often happens with Sir Edwin, received a new solution. In Britannic House he gave us a romantic adaptation of a Renaissance cardinal's palace to this purpose. Here, for a bank, he has chosen severer motives, inspired once again perhaps by San Micheli, and has made out of them a very original composition—indeed, a composition which no English architect save, perhaps, Vanbrugh, could have conceived. American architects spurred on by the Zoning Law may have solved the problem of the very high building reaching a new combination of strength and picturesqueness through the grouping of variously-sized blocks round a central tower. No one, I think, has so successfully till this building solved the more difficult problem of the large block *not* a skyscraper. Most people for the purpose have seized upon the Florentine palace and pierced its walls with the numberless additional

Midland Bank, Poultry. By Sir Edwin Lutyens.



Charterhouse School Chapel. By Sir Giles Gilbert Scott.

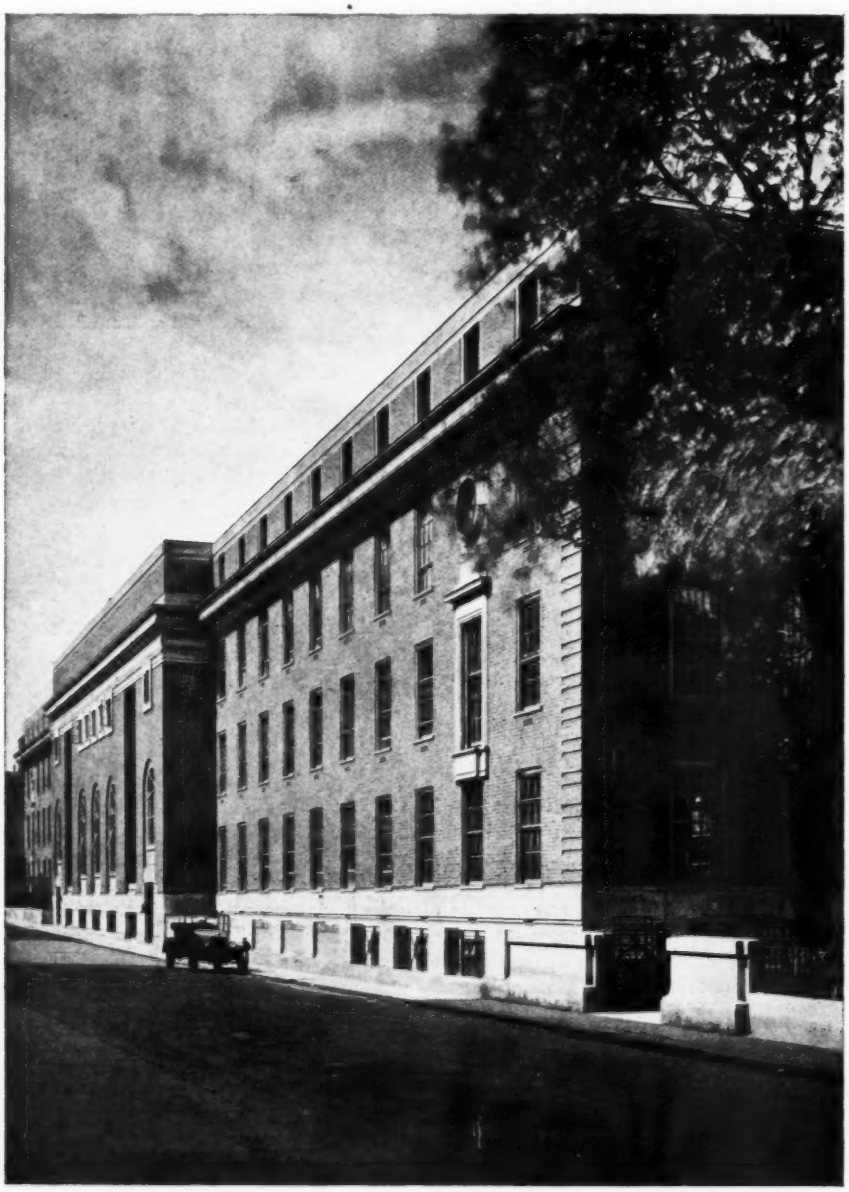
windows required by a modern office, thereby of necessity spoiling and weakening the original and depriving it of most of its character. Here Sir Edwin had frankly given up the crowning feature of the Italian palace—its great cornice. The Americans did that years ago with their tall buildings, but it was an obvious thing to do on a thirty-story structure. It was not an obvious one to do on a six-story one in an old country like ours. Yet one sees at once that it is right for the narrow City street. It is right, too, for the block if the consequent alterations are made, and Sir Edwin has made them. As the building is no longer to be designed to grow up to the climax of a great cornice it must be designed as it were in the opposite direction, that is as if growing out of the ground. This it seems to me Sir Edwin has done. The elaboration is all at the base. The chief cornice, indeed, is there. The building grows up step by step with a battering wall, the batter of which will be far more apparent when the return walls show. As the building grows up it gets plainer, but always maintains its richness and strength, not by means of ornament, but by continuous rustication and fine reveals. Its great series of lofty arches like those of some Roman aqueduct lift the building from the hubbub of the street. It seems to me both the strongest and most original of all Sir Edwin's designs—and who has made so many? I doubt whether England has ever before had so fertile an artist as he is continually proving himself to be. More power to him, may he have many more great jobs, for he will always be a leader of the youngest of the younger men. In this particular building the only thing which seems a little out of character, as if for the moment he had returned to an earlier manner, is the little Wren-like pilastered and pedimented arch in the attic under the dome. That seems to me to strike a rather different note to the rest of the building.

Sir Giles Scott is our other great originating architect, who in the same way applies great powers of design to develop a past style in order to make it express modern needs and feelings. 1927 saw another great work of his unveiled—the fine and austere chapel of Charterhouse School. It is a building in which the spirits of Greek and Gothic architecture seem almost to meet. There is the simple severe outline to the main structure with strong vertical lines at regular intervals contrasting with the main horizontal mass, while on the other hand there are subsidiary buildings about the base to give scale by contrast, like the Galilee at Durham or the tugs to the great liner. With the windows sunk into the narrow spaces between pairs of buttresses the structure seems to have more plain wall surface with consequent monumental character than any northern Gothic building, old or new, or most classical ones for the matter of that. I have not seen the actual building, but I am told it is adequately and impressively lit in the interior with its deeply-sunk windows. On the hill among the smaller scale Waterhouse Gothic buildings, with their hard detail, it must look like some great temple belonging to another and a finer race of men. This old school and its headmaster, who has been a moving force in the matter, are to be congratulated on carrying through so bold and brave an undertaking, and on giving the architect the opportunity to build what is probably the finest of all our war memorials.

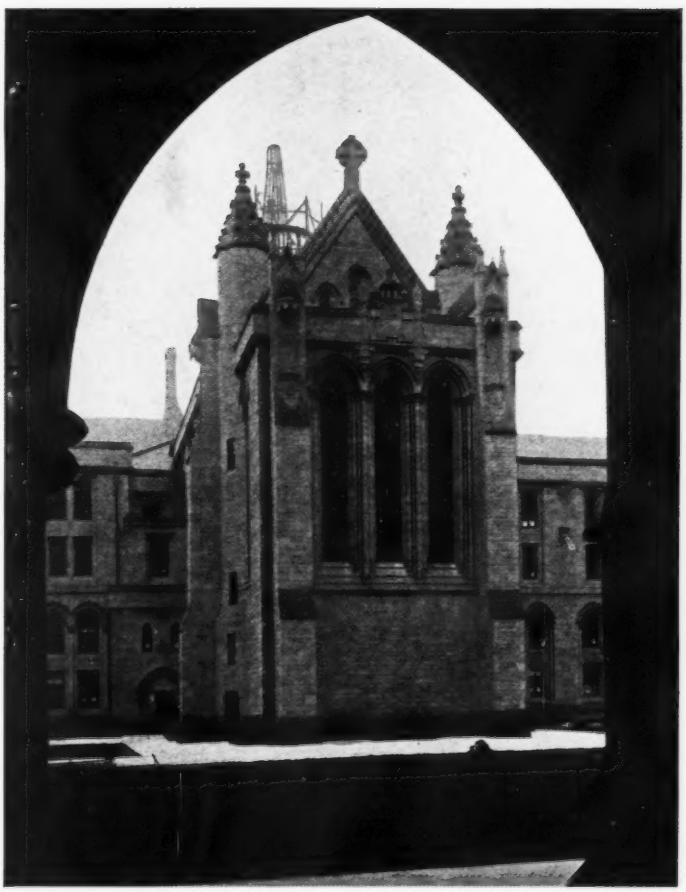
The Friends Meeting House in the Euston Road has been rightly praised and appreciated on all hands, and has

received the year's medal. It is rarely that a building won in competition reaches so quiet and dignified a result. Generally such buildings carry upon them the marks of the struggle, the exciting features which singled them out from their confrères and caught the assessor's eye. Perhaps the fact that this competition was limited to architects belonging to the community the building was to serve helped to bring about this happy conclusion, for the character of the building, simple, solid, upright, and strong, with no frills, seems exactly suited to its occupation. One of its pleasantest features is not shown in the illustration. It is the courtyard leading to the main hall with a well-head in the middle of it surrounded by ordinary corridor and office windows. This courtyard, however, serves some religious or semi-religious purpose in the meetings of the Friends, and to it by great scale and simplicity Mr. Lidbetter has very cleverly —cleverly is not the exact word, for it is done with real feeling—given the requisite character. Any architect passing should pay it a visit, as well as to the rear of the interior.

Sir Robert Lorimer is represented in the year's work by the Scottish National Memorial, about which opinion appears to be keenly divided and almost on national lines. That in itself suggests that the building has strength of character. Scotchmen would not love it so unless it had. To southern eyes, however, and as seen in photographs, it is a strange mixture of styles, scales, and detail. The mass and outline seem to suit the castle group. No harm has obviously been done to that famous skyline. That is, indeed, something. Whether in reality light and shade blend together what in the photographs appear such incongruous shapes and motives only a visit can tell. It is difficult



Friends House, Euston Road. By Hubert Lidbetter.



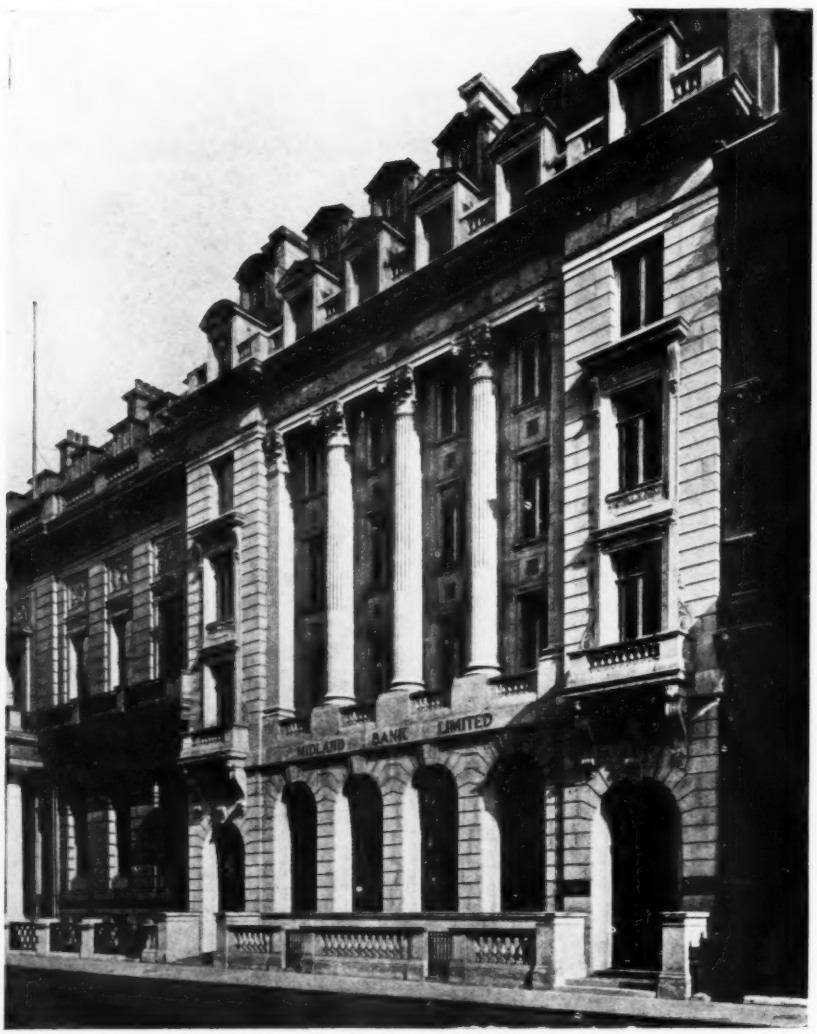
Above, Scottish National War Memorial, Edinburgh Castle. By Sir Robert Lorimer. Below, University Memorial Chapel, Glasgow. By John Burnet, Son and Dick.

Above, Stockport War Memorial. By Holliday and Agate. Below, Eleventh Church of Christ Scientist, London. By O. P. Milne.

to believe the author of the Thistle Chapel has not succeeded in another chapel interior where once again he has had at his service the best of Scotland's famous craftsmen.

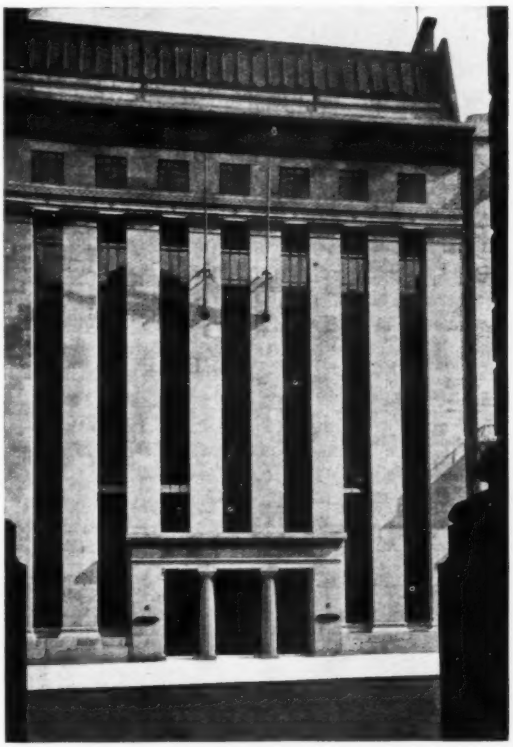
Gothic motives seem to be coming back at a great rate. Even in Bond Street, among the luxury shops, a Gothic structure has appeared, and to house, of all things, delicate

Above, Bond Street Tube Station, London. By Adams, Holden and Pearson. Below, Atkinson's, Bond Street, London. By E. Vincent Harris.



Above, London Life Insurance Building, King William Street, London. By W. Curtis Green. Below, Midland Bank, Pall Mall. By Whinney, Son and Austen Hall.

Messrs. Wrigley's building. By Wallis, Gilbert and Partners.



Left, Courtauld's offices, St. Martin's-le-Grand. By L. S. Sullivan. Right, Fortnum and Mason's, Jermyn Street, London. By Wimperis and Simpson.

Oxford School of Pathology. By Edward Warren.

perfumes. It sounds incongruous, yet one knows how it adds interest to a liqueur to buy it from the celibate inhabitants of a monastery. Perhaps some such thought was at the back of Messrs. Atkinson's mind when they asked Mr. Vincent Harris to work in a style so different to his usual strong and super-classicism. Of course, he would do well—as well as possible in such a manner—and when time has toned his gilding and softened his outlines this building may not make us regret Mr. Voysey's hand in its predecessor. At present it is an exciting exhibition piece, well balanced and composed, and no doubt serving its owner handsomely as an advertisement. It is interesting to notice how its Bond Street front helped Mr. Harris to turn a difficult corner in his great Manchester scheme. I think the picturesque composition of the gable over the great recessed centre is, however, more satisfactory here than at Manchester, where the recess seems to be trying to swallow the circular library.

Let us now have two examples of modernism. Certainly in turning over piles of illustrations of buildings born dead and carefully mummified, it is like a clean, refreshing wind to come across a pure little building, Mr. Sullivan's offices for Messrs. Courtaulds, in St. Martin-le-Grand, free from unnecessary detail, and mainly offering long, plain strips of Portland to be weathered into a permanent pearly white, and therefore always to contrast with the metal filling between them. It is a very simple scheme reduced to a number of strong vertical lines held together by a few horizontal ones at the top and bottom, and no ornamental detail—except, perhaps, that the long vertical strips have been given pilaster caps—is allowed to interfere with its simplicity. The building has obviously been influenced by Adelaide House, but it has its own character, which is more delicate and in a sense more charming than that of the latter. The other modernist building is a factory by Messrs. Wallis, Gilbert and Partners, very obviously from the photograph for Messrs. Wrigleys, the gum manufacturers. Indeed, their name wriggles and sticks all over it. If, however, one can imagine it removed one can see that the building is a very direct and forceful expression of the needs which it serves. The long factory floors stretch from end to end of the building and are expressed as continuous beams on the long sides. At the ends, where hoists and offices may well be, is a concentration of weight. If the very little ornament had been left out where the floor beams appear to be tied to the end masses the effect might have been a little better, but it is anyhow very good. Messrs. Wrigleys, who apparently have first invented and now serve a new need of the human race, ought to have the sense to see that their architect's fine factory, freed from most of its lettering, would be a far better advertisement to them than their gold letters which so nearly destroy it. As it is, with letters on every front and against the sky, it appears as if they feared that after all the need for chewing gum might not be so real.

Mr. Verity always does well with his theatres and cinemas, especially with their exteriors. The Carlton Theatre in the Haymarket is no exception. Once again he has given a distinguished façade with plenty of interest, yet with fine wall surface and restraint. His detail is always well studied and full of charming ideas and conceits. This time he is a little Spanish in his flavour, but whatever he is everyone welcomes it. He is perhaps our English McKim, both in his methods and results. Let us end on that good, safe, central position from which any adventure in any direction can be started.

Above, the Carlton Theatre, Haymarket. By Frank T. Verity. Below, the "Glasgow Herald" building. By Percy Tubbs, Son and Duncan.

SOME AIR PHOTOGRAPHS OF HOLLAND

[BY ERIC R. JARRETT]

THERE is something in a bird's-eye view which is peculiarly intriguing to everyone, whether he be layman or one possessing the technical training of an architect. Both find the fresh viewpoint a fascinating experience—a fascination which, however used we become to flying, will never be dulled because it must ever remain an unusual rather than an habitual point of view. There are few, excepting those unfortunates who suffer from vertigo, who do not feel within themselves an impulse to climb, and it matters very little what it is that is climbed provided that when the top is reached the reward of a view is obtained. If there happens to be a lift or a funicular to aid the ascent, then such assistance is often welcomed, though the stalwarts may object that the reward is too easily obtained and that the fruits of victory should be reserved for the strong. But that does not affect the result; the view remains the same and, providing always that the Air Ministry reports visibility to be good, lies there to be enjoyed by those who have eyes to see.

Wherein lies this fascination of seeing things from above? Why is one urged to climb the Monument in London, the Eiffel Tower in Paris, the belfry in Bruges, the Campanile in Venice, or Lange Jan in Middelburg? The answer is probably to be found in the fact that nearly every one of us loves a map, and the better we read a map the more interest we get out of it; the more we can read into it the more entertainment will it yield up to us. A map is a fascinating document and can be as exciting as a treasure hunt, and we may extract much the same thrill from tracing on the Ordnance Survey the West Bourne in its course from Hampstead to the Thames, or the line of some ancient trackway in Shropshire, as we do from that enthralling piece of paper, dabbed all over with red crosses, in *Treasure Island*, though we do not expect a hoard of pieces-of-eight as a prize. Now, a bird's-eye view, taken obliquely and not vertically downwards, has many of the qualities of a map, with the additional charm of presenting to us the aspect of those features which in a map are shown only in plan. It is easier to read and to the untrained map-reader conveys more; the less technically equipped observer may appreciate shapes and changes of direction which would escape his notice on the ground, and he will gain a sense of direction and a grasp of the layout and essential features of a city or district far more readily than by groping his way round a strange town with the aid of a map. Even the native will have his eyes opened to many points that he only faintly appreciated before. How many Londoners are there, for instance, who realize that the river makes a right-angled bend between Westminster and Blackfriars?

There are, in addition, many advantages which to the trained architectural mind are of great value. Essentials in the training of an architect are the development of an appreciation of form and mass; a feeling for composition in solids; a grasp of the fact that a building is three-dimensional; not merely a plan, a section, and an elevation, but a perfectly co-ordinated blend of all three; that form is of prime importance and detail secondary; that no building can be regarded as an isolated unit, but must become an integral part of its surroundings, and will be judged a success only if it is in scale and harmony with them.

The château of Muiden.

How better can these many factors be absorbed than by the making of models, the preparation of isometric and perspective drawings, or by the study of air photographs such as those which accompany this article? The value of this method is fully appreciated in the schools, both in England and on the Continent, and the Architectural Association, for one, encourages the study of form by the introduction in the curriculum of composition of abstract form-cubes, prisms, cylinders, or spheres—modelling in clay and cardboard and the setting up from plan of elevations in isometric projection.

These air photographs very definitely serve a useful

Above, Amsterdam, showing the Wester Kerk. Below, Amsterdam, showing the Dam.

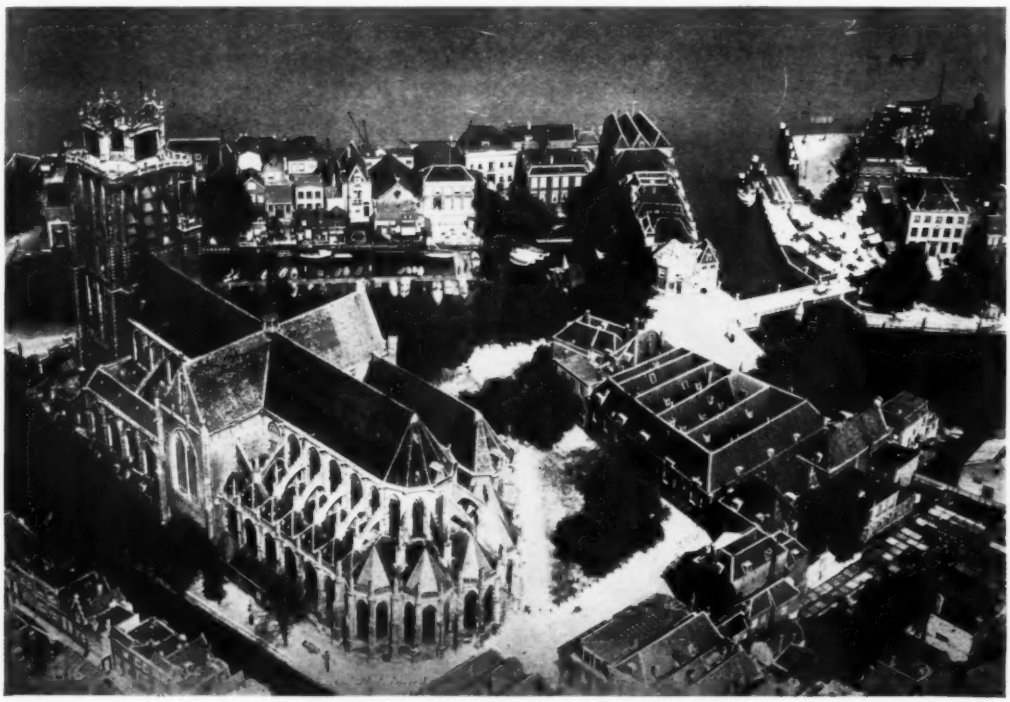
purpose in the study of form, and as an illustration the photograph of the thirteenth-century Château of Muiden may be cited. There is a composition of cubes, cylinders, cones, and pyramids. The plan can be noted and the admirable manner in which the elevation builds up directly from the plan. It is patent that the castle was designed as a fortified place, and that its qualities are derived from its fitness for this purpose; that the merit of the composition as a mass depends upon the happy juxtaposition of varying shapes, and that its success as a piece of architecture comes from the suitability of these shapes for their function.

All this may be apprehended better and more easily in this one photograph than by half a dozen taken at ground level; the viewpoint is sufficiently removed to obliterate some of the detail, and the observer can concentrate upon the essential form without distraction. It may be said that the château has been well restored and that its condition today probably resembles closely the appearance it bore when originally built.

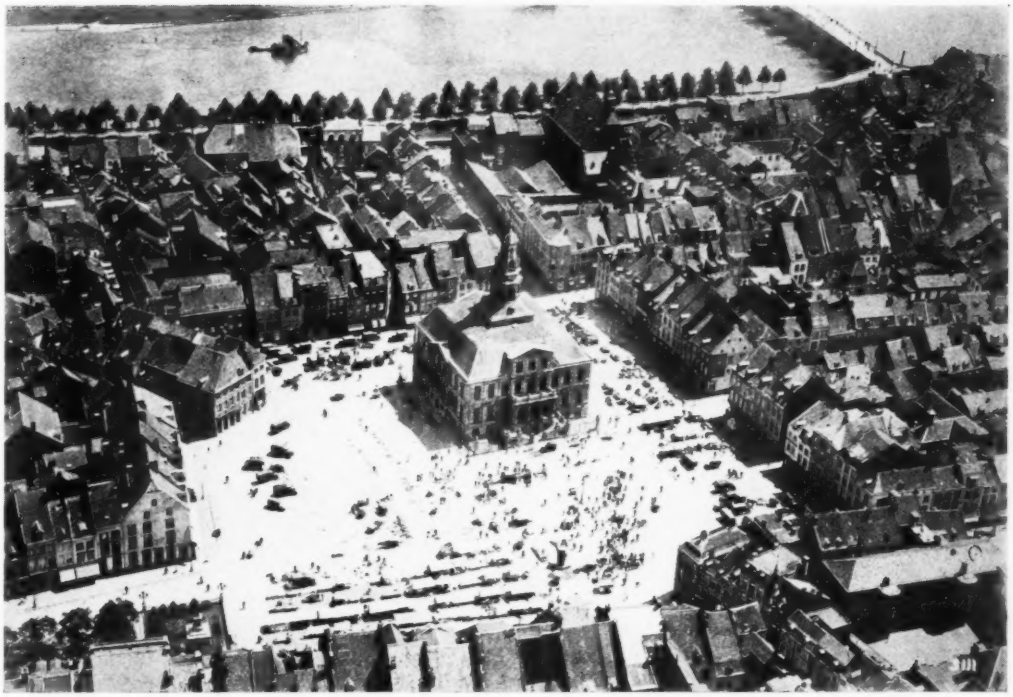
In considering the question of scale and harmony these views again help us. The château at Muiden stands alone as an isolated building, and its scale is dependent upon the relative proportions of intrinsic and individual masses unrelated to any adjoining masses; but when we assess the correct scale and harmonious placing and arrangement of a building in a town, then we approach a wider field of inquiry into which other factors are introduced. Our building can no longer be regarded solely as an entity, but as one unit in an arrangement of many units. It is not sufficient that it possesses good scale in its parts, but the whole mass must bear a definite relation to its surroundings. To appreciate this quality it is of great convenience if we can remove ourselves sufficiently far so that the eye may take in the whole area, and this is often difficult on the ground and we are in danger of missing the wood for the trees. By elevating ourselves some hundreds of feet above our subject we remove this objection and are enabled to make an unfettered judgment. It is true that we must make allowance for the unusual viewpoint, but our knowledge and experience as trained observers at ground level will assist us; and if we are contemplating a building which normally pleases and satisfies us by its scale, proportion or suitability, then this less usual view will help us to decide why. The photograph at the top of page 69 will illustrate this point. The church is the Wester Kerk in Amsterdam, seen from the north-west.

We can appreciate in this view the magnificent manner in which the Baroque spire rockets away up skywards, the stately height of the nave, the satisfactory way that this height is supported by the transepts and aisles so that the whole grows comfortably out of the pavement, and the cunning introduction of the two little houses clinging to the base of the tower for the purpose of merging the great scale of the church into the general scale of the surrounding buildings of the town.

There are other points of interest to be observed in this photograph, notably the three great canals, the Prinsen Gracht, the Keizers Gracht, and the Heeren Gracht, which, in their disposition, govern the town plan of Amsterdam. Each is some two miles in length, and they are laid out equidistant from each other and in a spider-web formation about the Dam, the central square of the town. The main streets cross the canals at regular intervals, approximately at right angles, and there is therefore a series of streets converging upon the business centre. The Dam, viewed from the north-east. is illustrated on page 69. This view shows the Royal Palace (built in the seventeenth century as the Town Hall and not a very notable piece of architecture), the Nieuwe Kerk to the right, immediately behind them the Post Office, while beyond lies the Singel and the three great canals. The curved

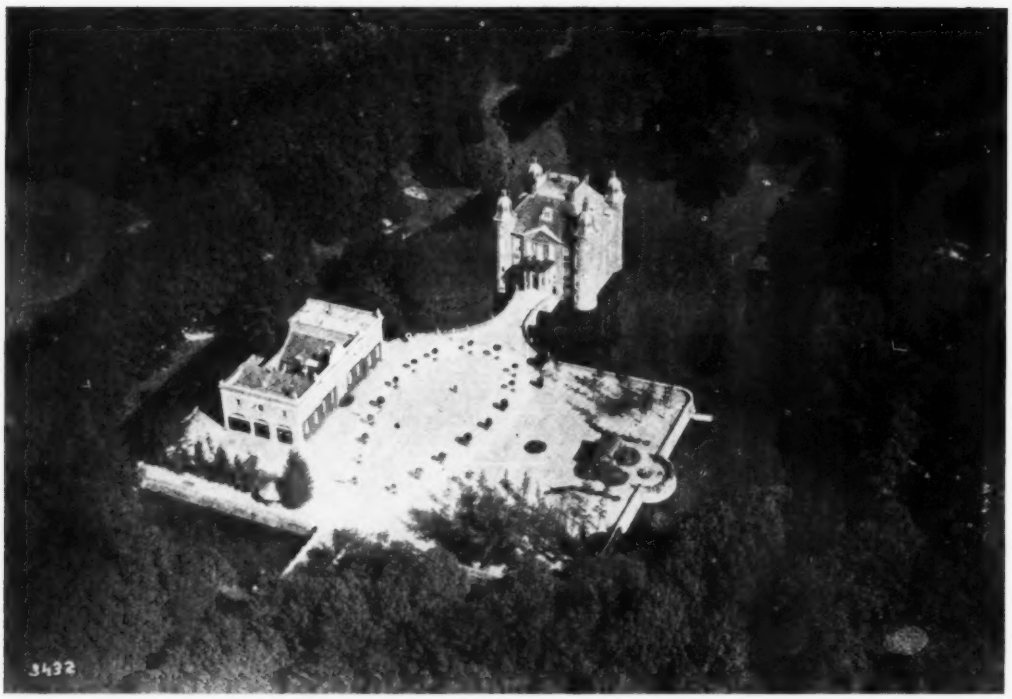


The Groote Kerk at Dordrecht.



street in the top right-hand corner appears to the left of the photograph at the top of page 69. It is obvious that photographs such as these must be of great use to the town planner. The value of a large open space can be well seen in the photograph of the Groote Kerk at Dordrecht, which is one of the most fascinating of the small towns in Holland. The tiny houses withdraw themselves decorously from too close proximity with the enormous church whose massive tower overlooks the River Maas, where strings of great 100-metre barges pass slowly by on their way up from Rotterdam to the Rhine. Again, what an excellent impression is gained of the Market Square at Maastricht, how readily we visualize the busy life of the town that can warrant the allocation of so large a space for market purposes, how

Above, the Market Square at Maastricht. Below, Zutphen.



easily can we notice the odd encroachment of the houses butting in at the corners of the square! Then, too, how useful would be the photograph of Zutphen if we desired to remove the wooden bridge and substitute another in stone or concrete. It would be a particularly obdurate town council that was not impressed by the idea, after studying this photograph for a moment, that there were two more suitable positions for such a bridge than the present.

The aeroplane has introduced another factor into architectural photography, and it may well be that the architect of the near future will take advantage of it and add the air-photo to the preliminary survey and study of his site.

Above, Castle Biljoen, near Arnhem. Below, Roermond, showing St. Christoffel Church.

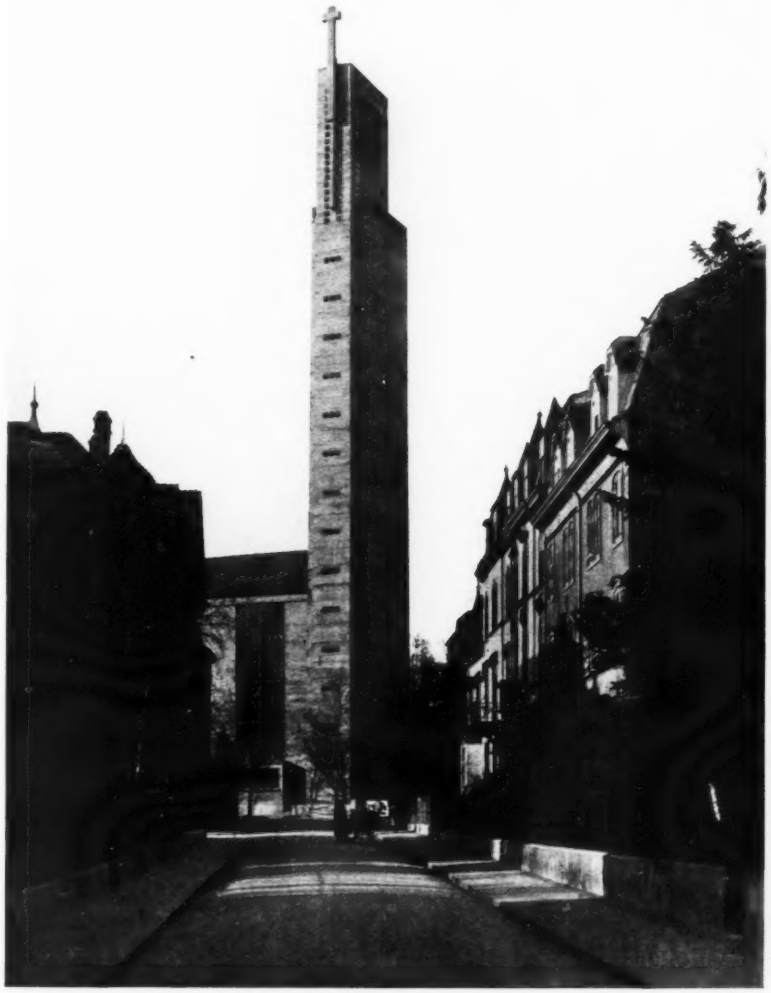
JUDENBURG, AUSTRIA. S. MAGDALEN'S CHURCH. THE ANNUNCIATION. 15TH CENTURY. (FROM "STAINED GLASS TOURS IN GERMANY, AUSTRIA, AND THE RHINE LANDS." BY CHARLES HITCHCOCK SHERRILL. JOHN LANE.)

SOME CONTINENTAL CHURCHES

[BY HAROLD TOMLINSON]

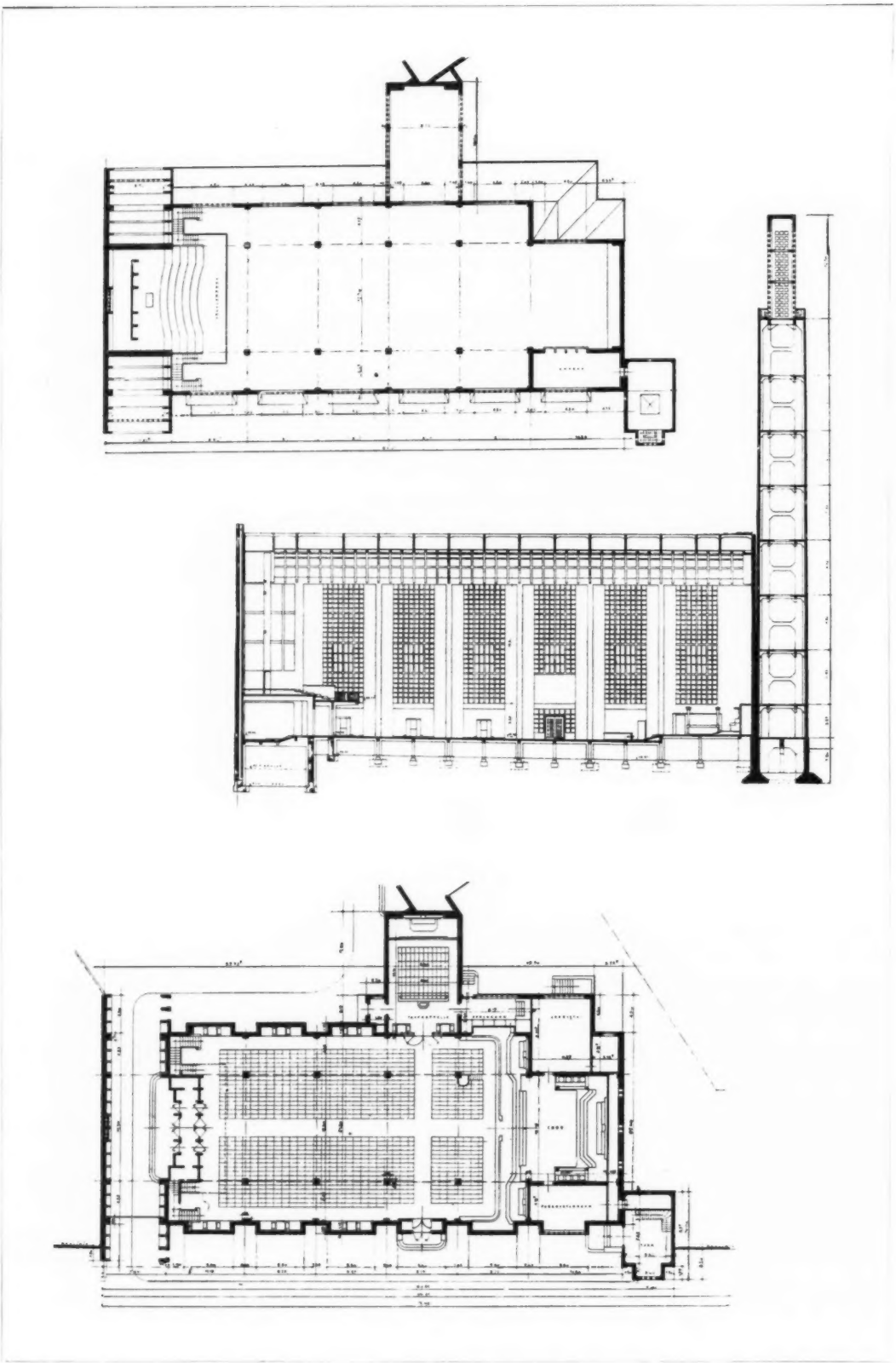
THAT the simplification of the problem often increases the difficulties of the design is an architectural paradox borne out by work in reinforced concrete. The practical limitation of economy, which is almost always responsible for the choice of this medium, renders it impossible for the designer to explore the full range of its possibilities. It is, perhaps, fortunate that this is so, for, though it may be admitted that structure plays a great part in the art, architecture is not at its happiest when the obvious mechanical facts are unduly stressed. Concrete makes possible fenestration which is horizontal, and it is sometimes argued that windows should take this form; but buildings already executed in this manner would seem to prove that structural reasons alone have not been responsible for the continued use of vertical windows.

Over-fenestration is one of the pitfalls into which reinforced concrete may lead us. It was not because glass was cheap that the later medieval builder designed large windows; it was not because he needed more light; nor was it because the construction was easy. His large windows were designed more and more as time went on to show his fine stained glass to advantage, and, in Late Gothic architecture, this vertical picture window determined the form of the whole building. How cheerless is the result when the coloured glass is absent may be seen in the Lady Chapel at Ely; and neither the elaboration of internal decoration nor the unreal semi-obscurity which drapery provides can compensate for its loss. Ritual today does not require a medieval gloom, but there is a limit to the amount of illumination through white glass which the human animal can tolerate.



Church of St. Antony, Basle. By Professor Karl Moser. An aspect of the tower.

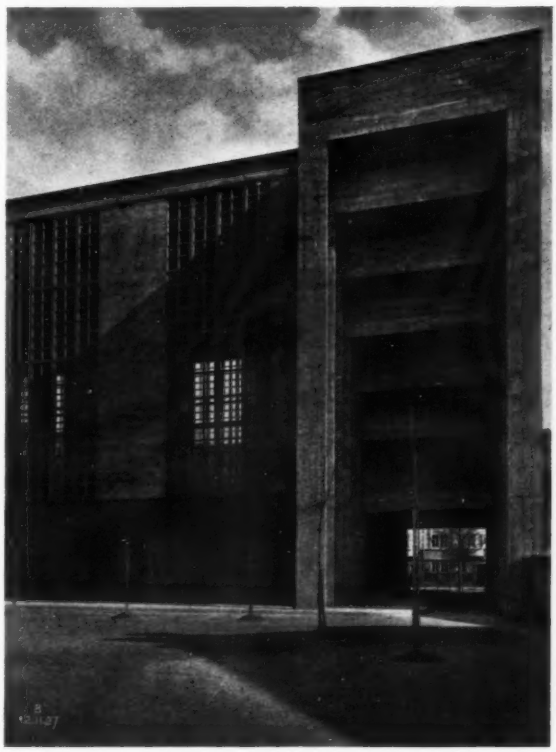
In two of the churches here illustrated the first impression is one of coldness; due, no doubt, to the large areas of filtered sunlight. In the church at Montmagny, by the



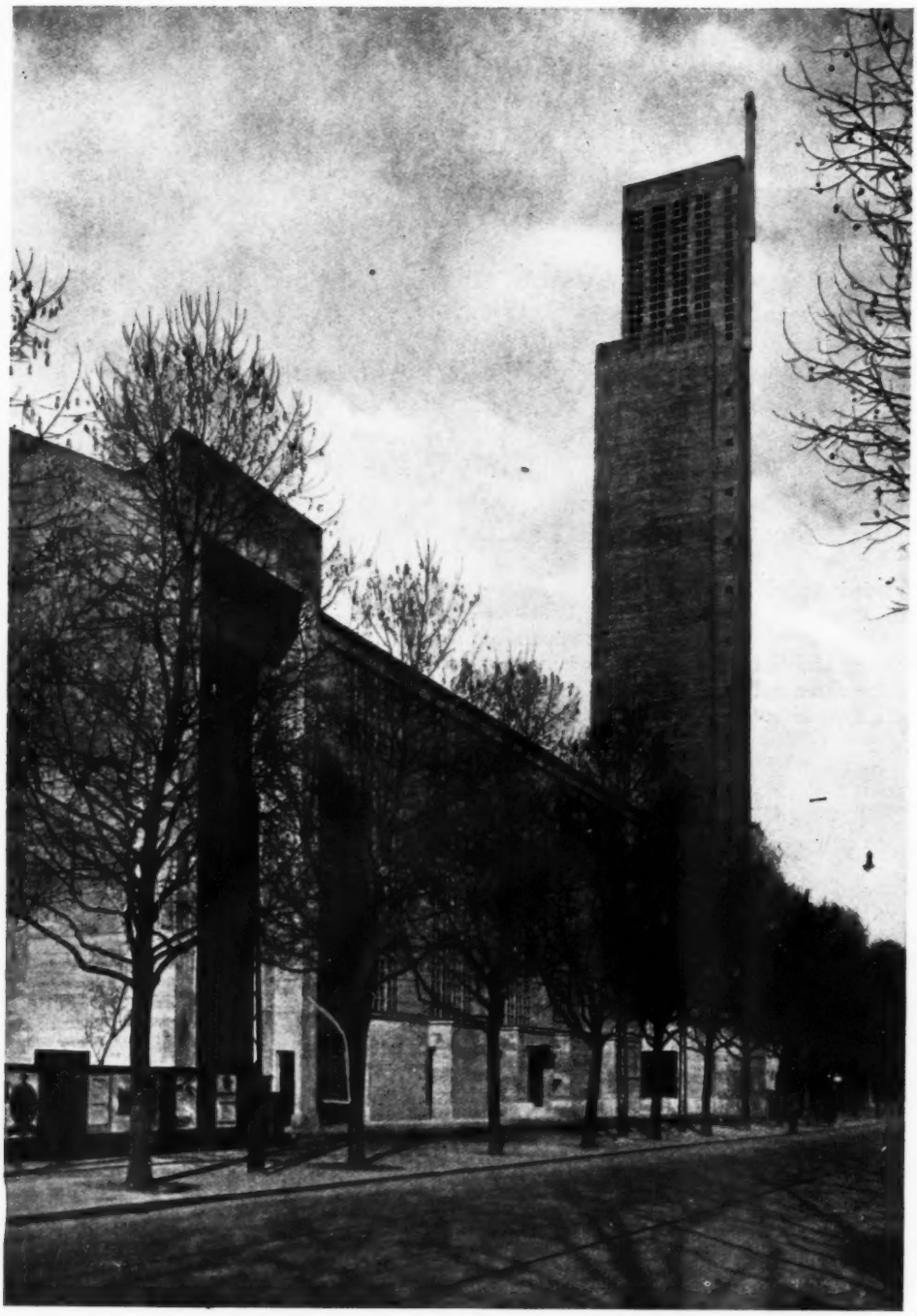
Church of St. Antony, Basle. By Professor Karl Moser. Below and above, ground and first floor plans. Centre, longitudinal section.

brothers Perret, it is intended, when funds permit, to substitute panes of coloured glass, and so the effect may be improved as was the case in their now famous church at Le Raincy. Primary associative impressions make it very difficult to criticize these buildings on æsthetic grounds. One says immediately of either the Montmagny church, or of that by Professor Moser at Basle, that it is a brilliant solution of a difficult problem; but it is not easy in a short time interval to digest forms which are either entirely new or so much disguised as to be almost unrecognizable.

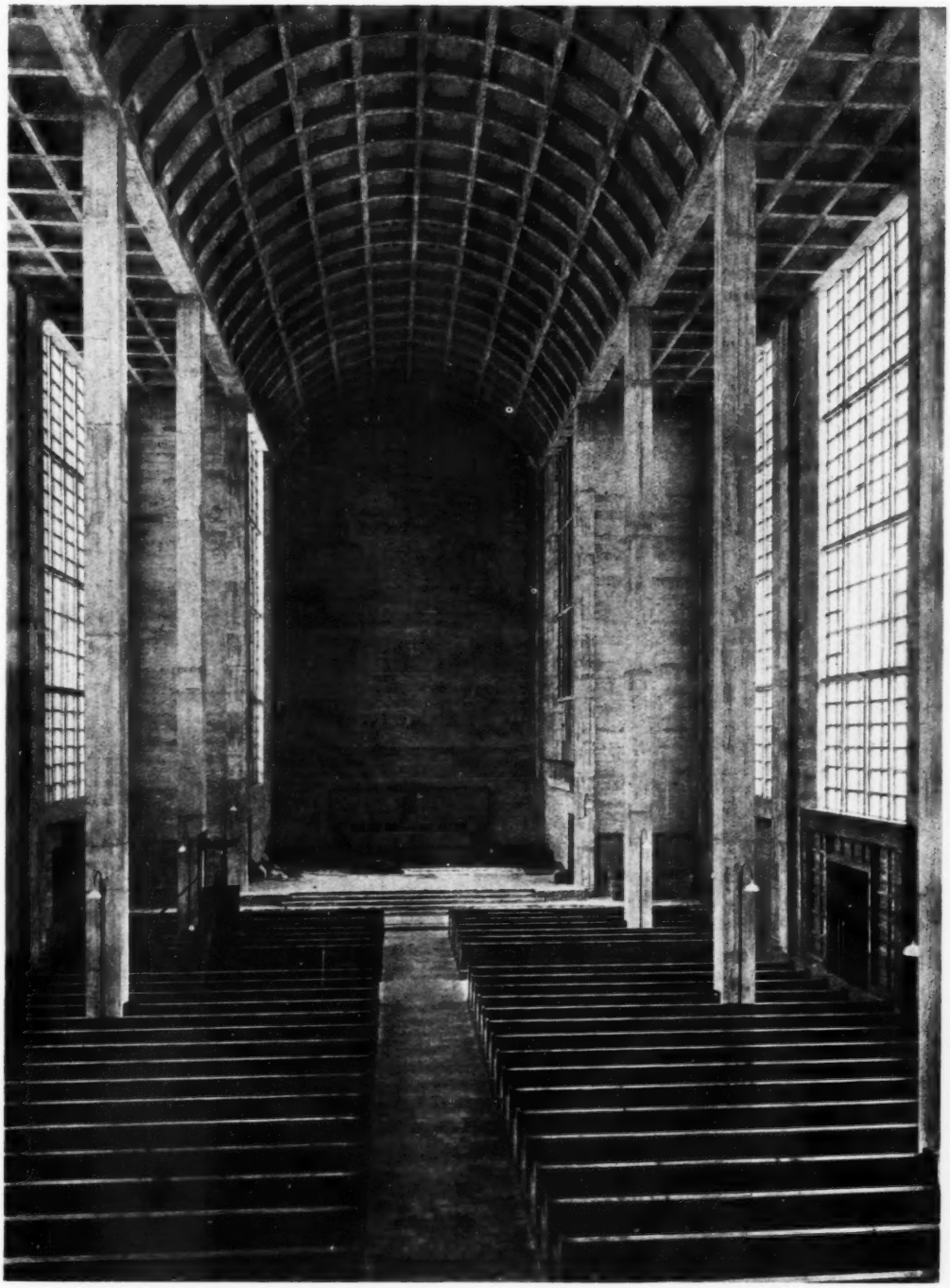
In the Basle church the through penetration of the transeptal porches provides an intense focal point. Curiosity



Church of St. Antony, Basle. By Professor Karl Moser. Above, "north" front. Below, detailed view of covered entrance under gallery.

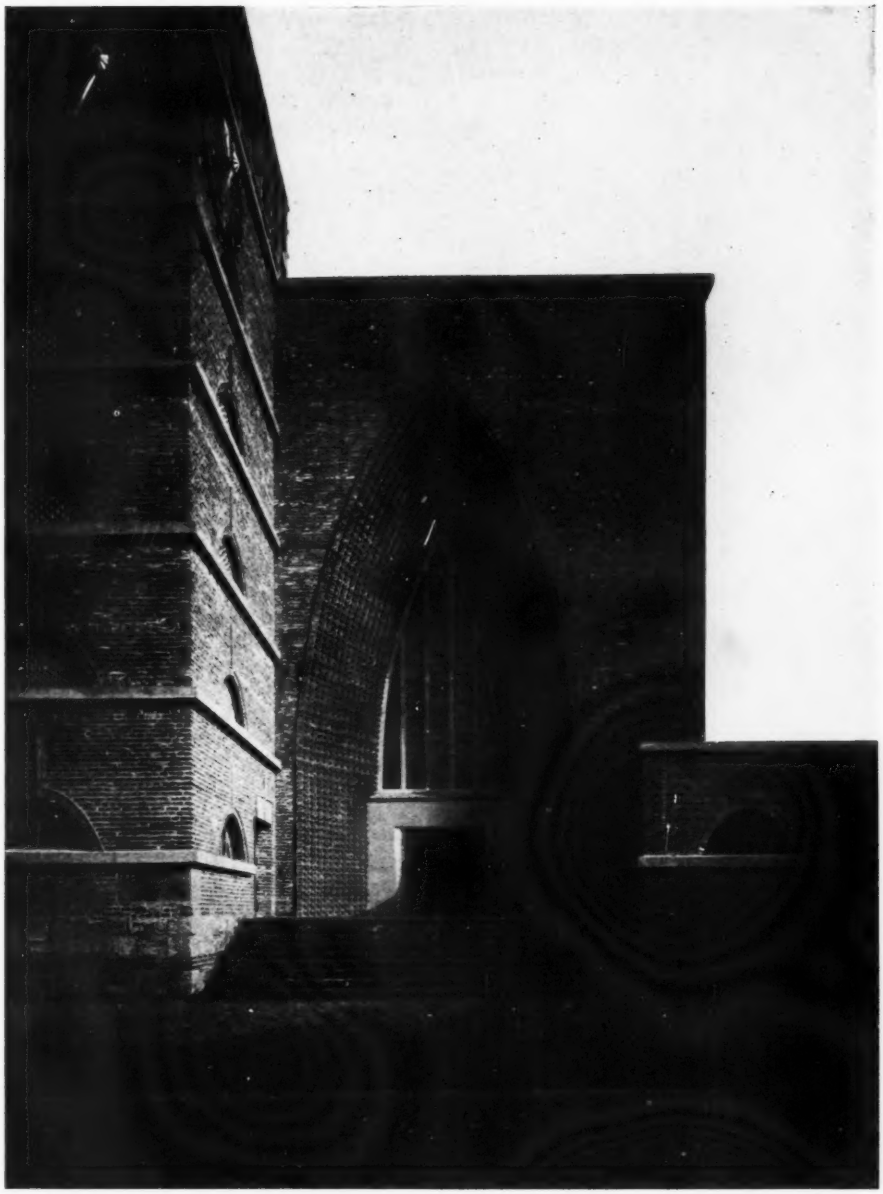


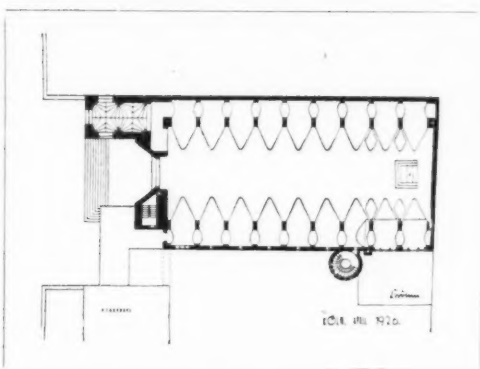
Church of St. Antony, Basle. By Professor Karl Moser. View from Kannenfeldstrasse.



Church of St. Antony, Basle. By Professor Karl Moser. The interior, looking east.

Church of St. Antony, Basle. By Professor Karl Moser. The interior, looking west.





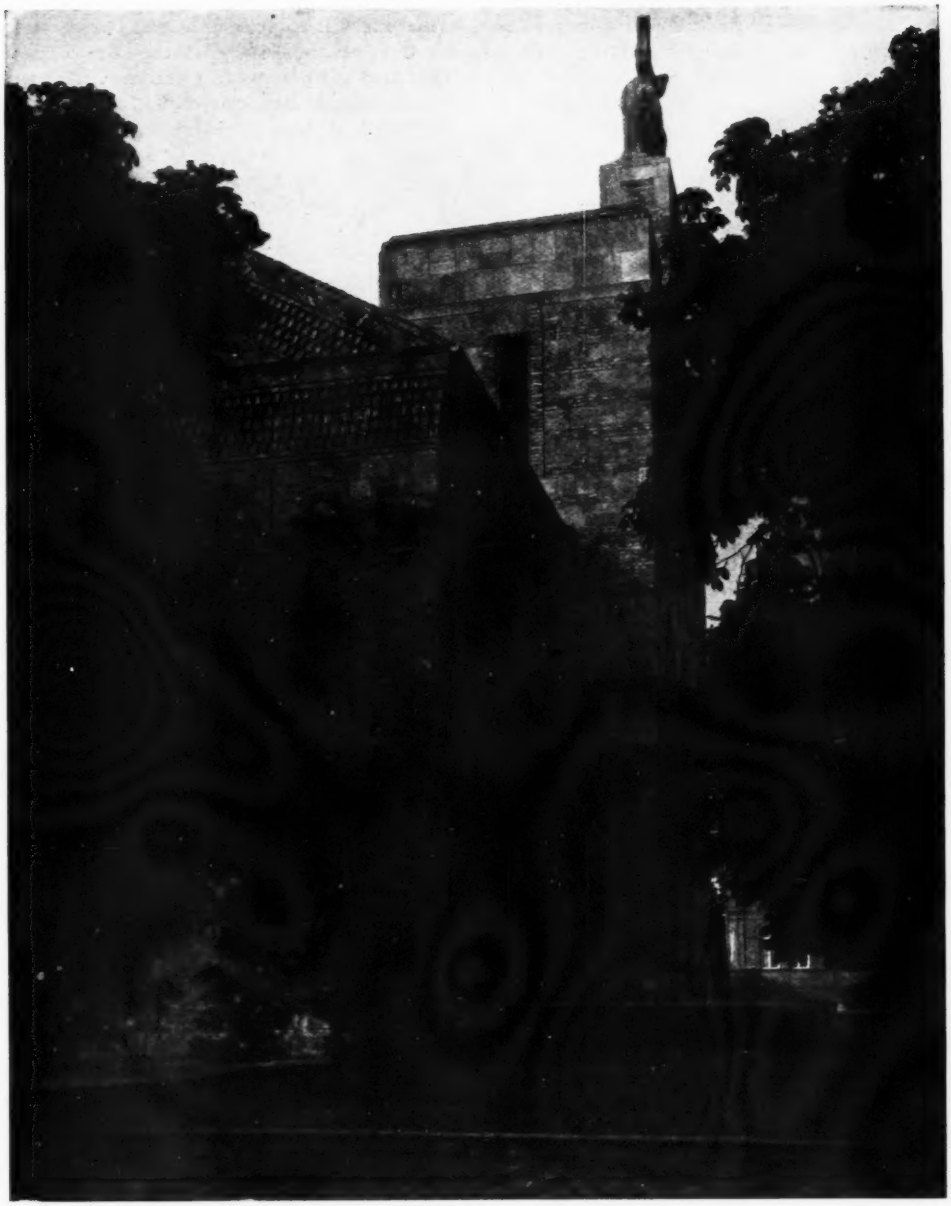
Roman Catholic Church, Bischofsheim, near Mainz. By Professor Dominikus Böhm.

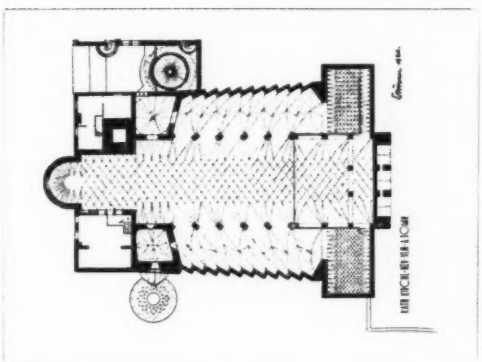
Roman Catholic Church, Bischofsheim, near Mainz. By Professor Dominikus Böhm. The choir, looking south.

is aroused so strongly that one longs to see how these receding planes, with their inverted clerestories, are managed internally, and the use of a gallery as a roof to a covered carriageway is no disappointment. The subtle interrelation of the gallery and the articulated strutting before it is something new and, one is almost convinced, something good. The east end, however, is bleak internally. The large wall expanses terminating aisle and choir might have been fine, but the hand of the designer is exposed rather too naïvely in the brick altar. Here is confession: bricks displayed like pearls invite a comparison which is as prejudiced as it is irrelevant.

Other impressions of this church are entirely pleasurable; the tall square piers seem well fitted to support the simple coffered vault, and the slightest elaboration would have been fatal here. One feels also that the discipline of the mullion-transom pattern is admirable. It is the tracery in Montmagny church, and in the earlier one by the brothers Perret, which seems to worry and to be too fidgety. Differentiation without sufficient difference accentuates the effort to gain effect, and gives the impression of a sentimental and unnecessary gesture to the Gothic style. Reinforced concrete must rid itself of architectural pressed flowers. The windows at Basle owe everything to traditional usage, nothing to stylistic idiosyncrasy. They serve their purpose well, without stimulating an interest which they do not justify.

The tower at Basle pays rather more respect to the vista it terminates than to the church. Perhaps Professor Moser decided that it should stand with an obelisk-like aloofness at the street end, and so deliberately refrained from emphasizing the unity of tower and church. Whatever the reason,



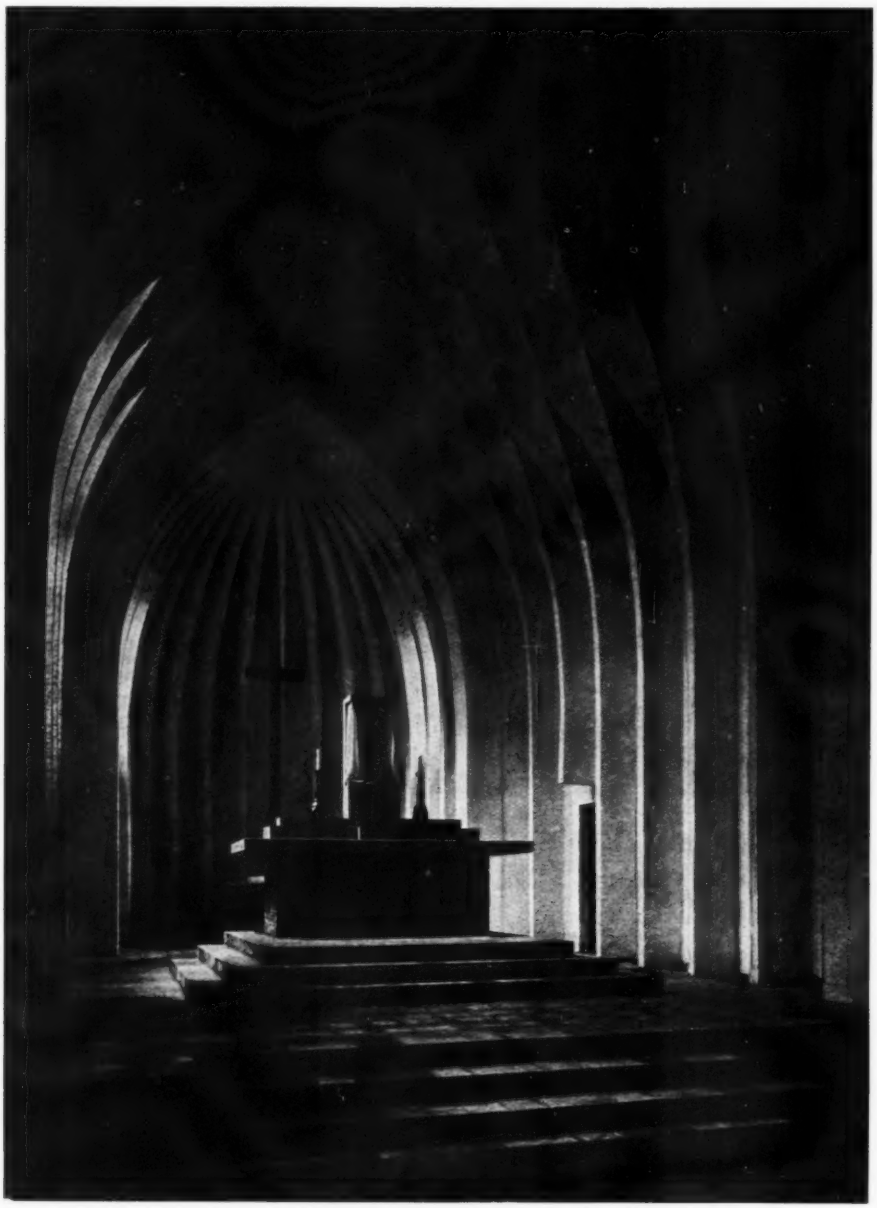


Swabian War Memorial Church, Neu-Ulm. By Professor Dominikus Böhm. Above, the exterior. Below, the ground-floor plan.

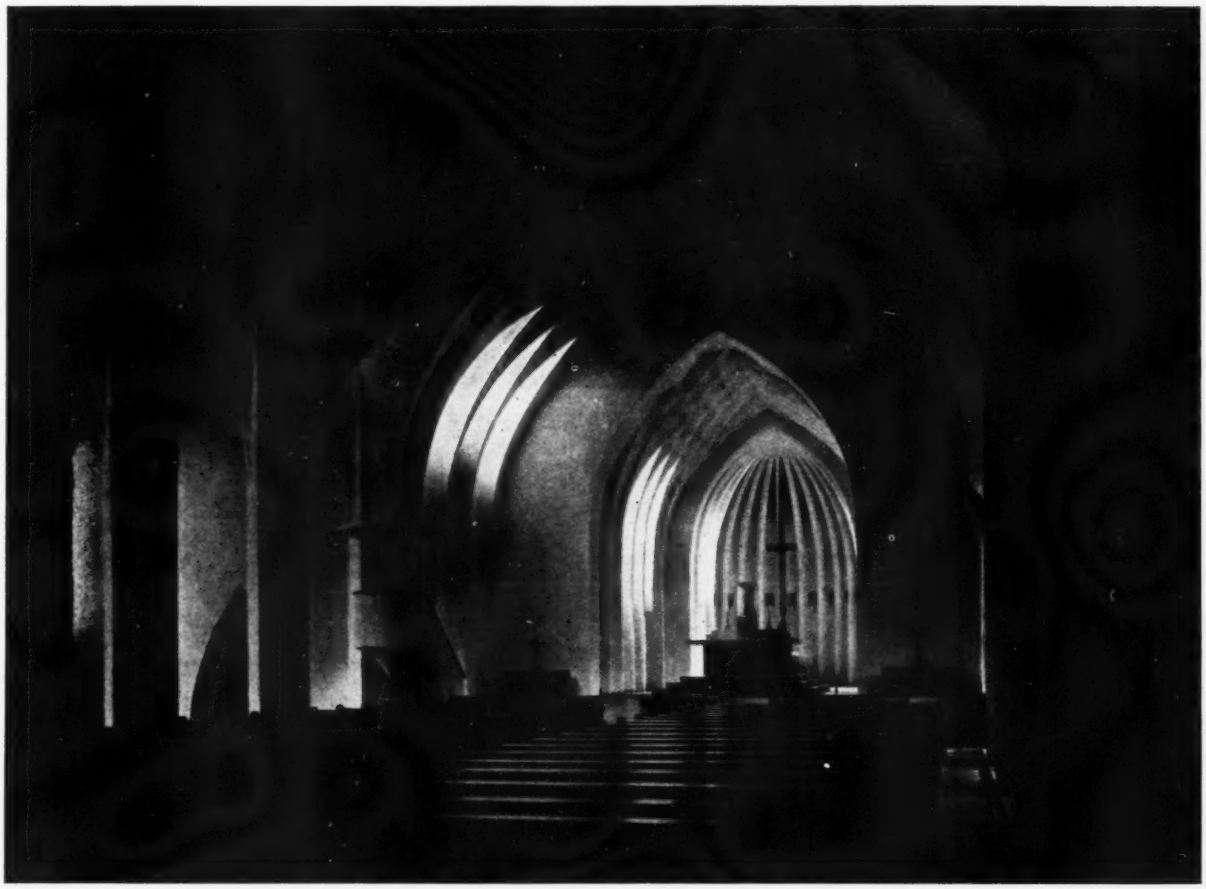
one had the impression of two entities, and in the view from the street this is a relief. If the tower had appropriated the church with any aggression, one would have cried for a complementary buttressing building on the other flank. Seen from the south the tower suggests almost active detachment, owing to the manner in which everything is straining towards the street vista, and the small plinth, which is the only feature common to church and tower, fails to provide an adequate restraint. So far as the main body of the church is concerned, sufficient plinth support is suggested by the string course, which returns round the exedræ under the windows.

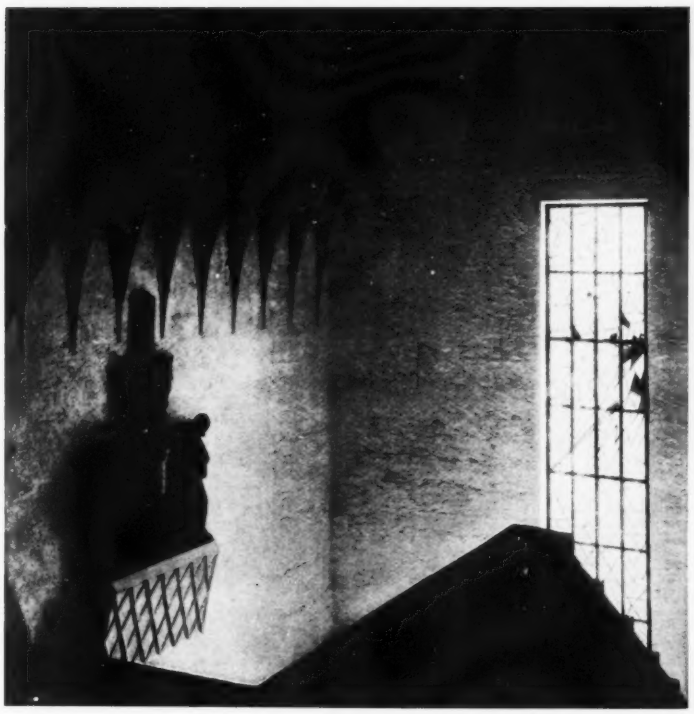
The great weakness in the Montmagny church lies in the far too vigorous line of demarcation between the upper and lower stories. Indeed, owing largely to differences of texture, the contrast between immobile base and restless upper story is so great that one is almost prepared to see the top launched easily off the base on an aerial voyage. This aspect is particularly marked in the west end, where, owing to the further accentuation of string course into porch, the tower, despite the exposure of its outermost supports, appears to stand on nothing more solid than compressed air. These defects might have been avoided by a more visible emphasis below of the lines of the vertical window divisions above.

Patterns formed by the rearrangement of the units used in the earlier church at Le Raincy will be recognized in the windows, and it was no doubt the necessity for the most stringent economy which made impossible much progress in the newer church. It is almost inhuman to apply strict



Swabian War Memorial Church, Neu-Ulm. By Professor Dominikus Böhm. The interior, looking east.





Swabian War Memorial Church, Neu-Ulm. By Professor Dominikus Böhm. Above, another view of the interior, looking east. Below, a staircase window.

criticism to a building which, 40 ft. wide, almost as high, and well over 100 ft. long, was built in 1925 for 325,000 francs. This church has, in fact, gained over the earlier one by its simplification. The interior is much more coherent in its integration, and the internal vista shows a great contrast to the less determinate unity of the Le Raincy church. Perhaps one has not yet learnt to tolerate a nave almost imperceptibly separated from the aisles, and in this respect also the Basle church is, in some subtle way, superior.

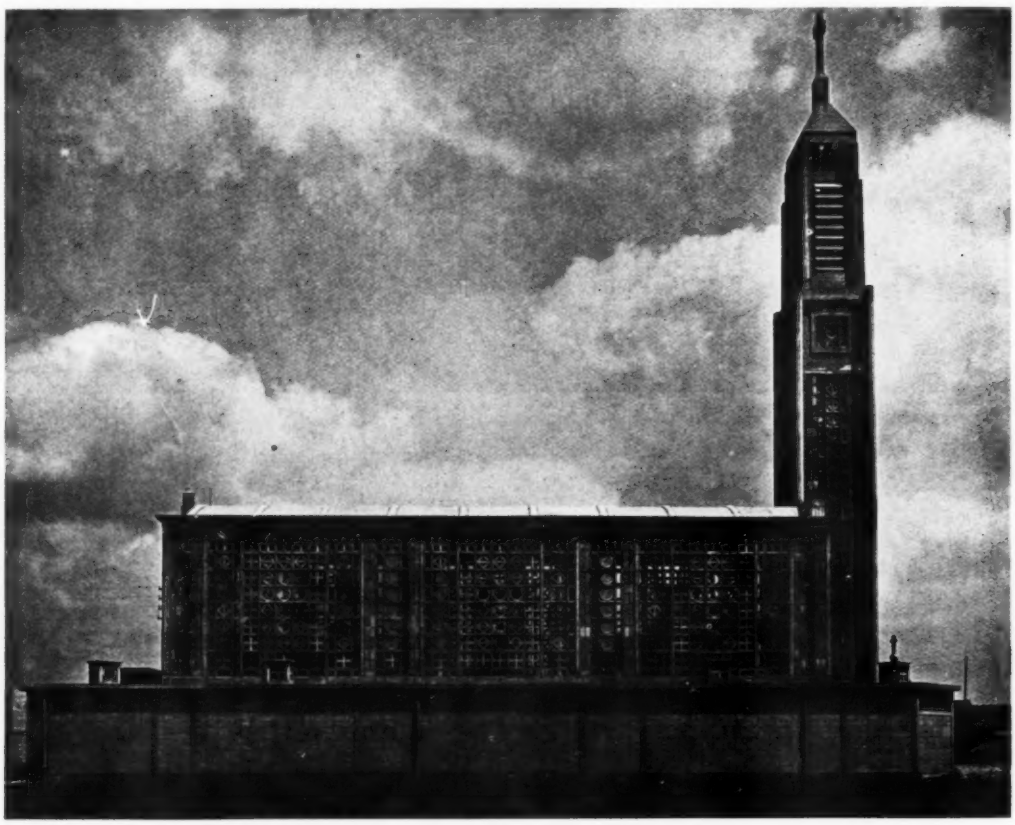
The two German churches by Professor Böhm differ from those described above in that they are faced externally with brick and stone. At Neu-Ulm it would have served no purpose to have used concrete, for stone from the old fortifications and brick from the old church were to hand.

In spite of the conventional shell the interior is startling in its originality. The church is tapered towards the eastern apse, with a compelling perspective effect, and only in concrete would it be possible to provide the secondary directional impulse of the vault pattern. The walls, too, are serrated with teeth whose major sides lean towards the apse; and so strong is the suggestion of progress towards the east that one is convinced that, once well advanced in the nave, it would be difficult to retrace one's steps. Save for the pointed arch the Gothic influence is sensed rather than perceived, although the vault pattern over the nave is reminiscent of the style, and the manner in which the ribs die into the piers recalls the later Gothic work in Germany and France. The lighting is subdued and skilfully managed, and shows to good effect the coarse texture of the untreated concrete. The competition between the different foci provided by the altar, and the arresting cross behind it, tends to destroy the effect of visual axial unity. The small crosses on the side altars also contribute towards this effect of slight anticlimax. The possibility of unsupported projection has given rise to a ruthless removal of pier support whenever a door opening is required, and, despite a growing tendency towards frank statements of this kind, it is difficult to become accustomed to what is, after all, an unnecessarily brutal form of architectural conversation.

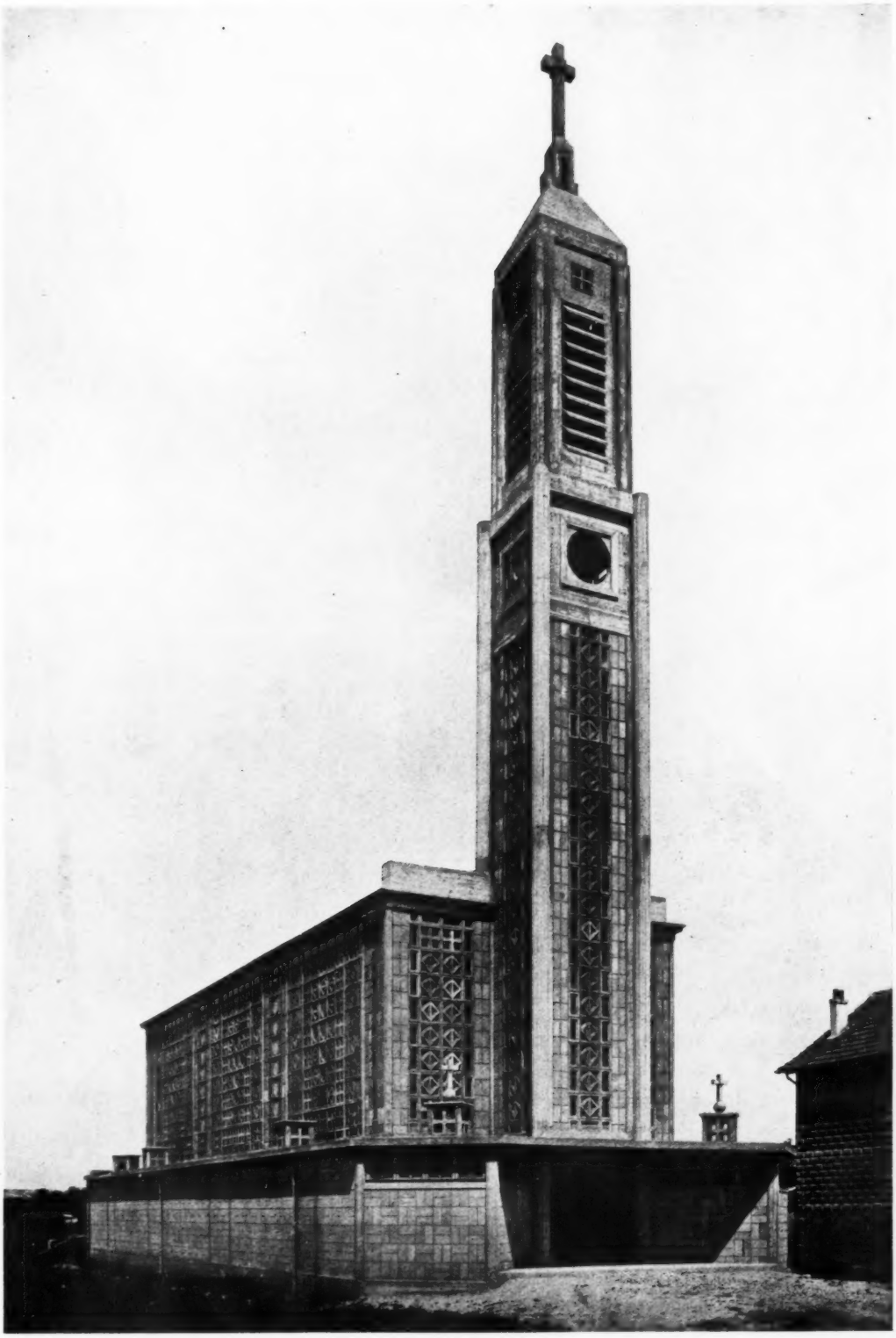
The Bischofsheim church owes less to tradition. The pointed arch is still used, but the vault is formed by the intersection of parabolic tunnels, and it is rather bewildering to realize that the complexity of the chancel, where a gallery is held on divided supports, arises from a very simple plan.

The Neu-Ulm church, despite its complexity, is restful; Bischofsheim is too dynamically disturbing to be entirely satisfactory, and externally nothing has been gained by novelty. The Bischofsheim church was built in four months and cost 116,000 marks.

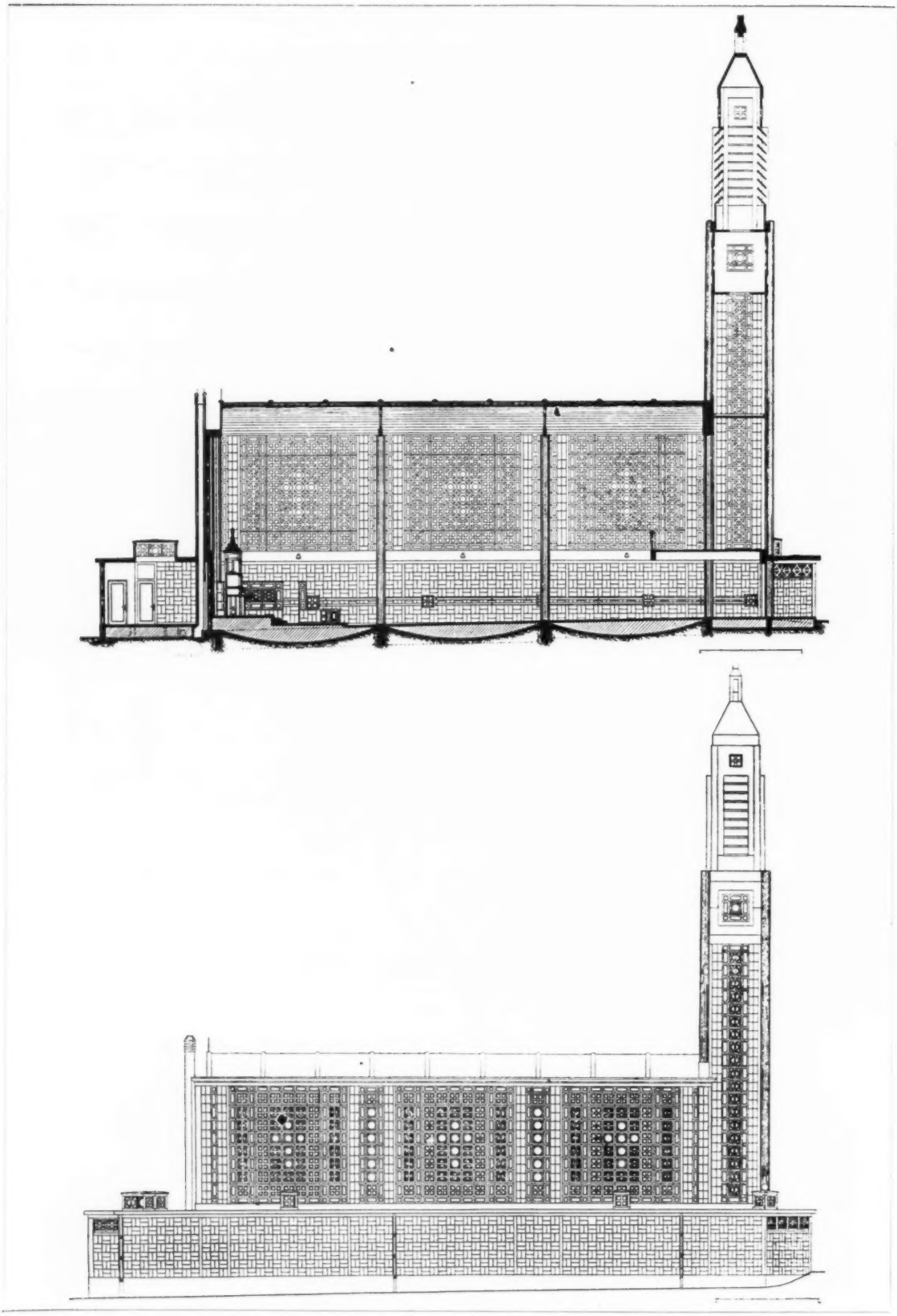
The study of these churches, showing as they do the most advanced work in reinforced concrete, is well worth while. It leads one to believe that success with this medium will not be attained by any sudden departure from convention, but rather from the gradual evolution of a style which is willing to take all that the past can teach, without any arrogant sense of superiority, and without showing too openly the apparent sleight of hand of which it is capable.



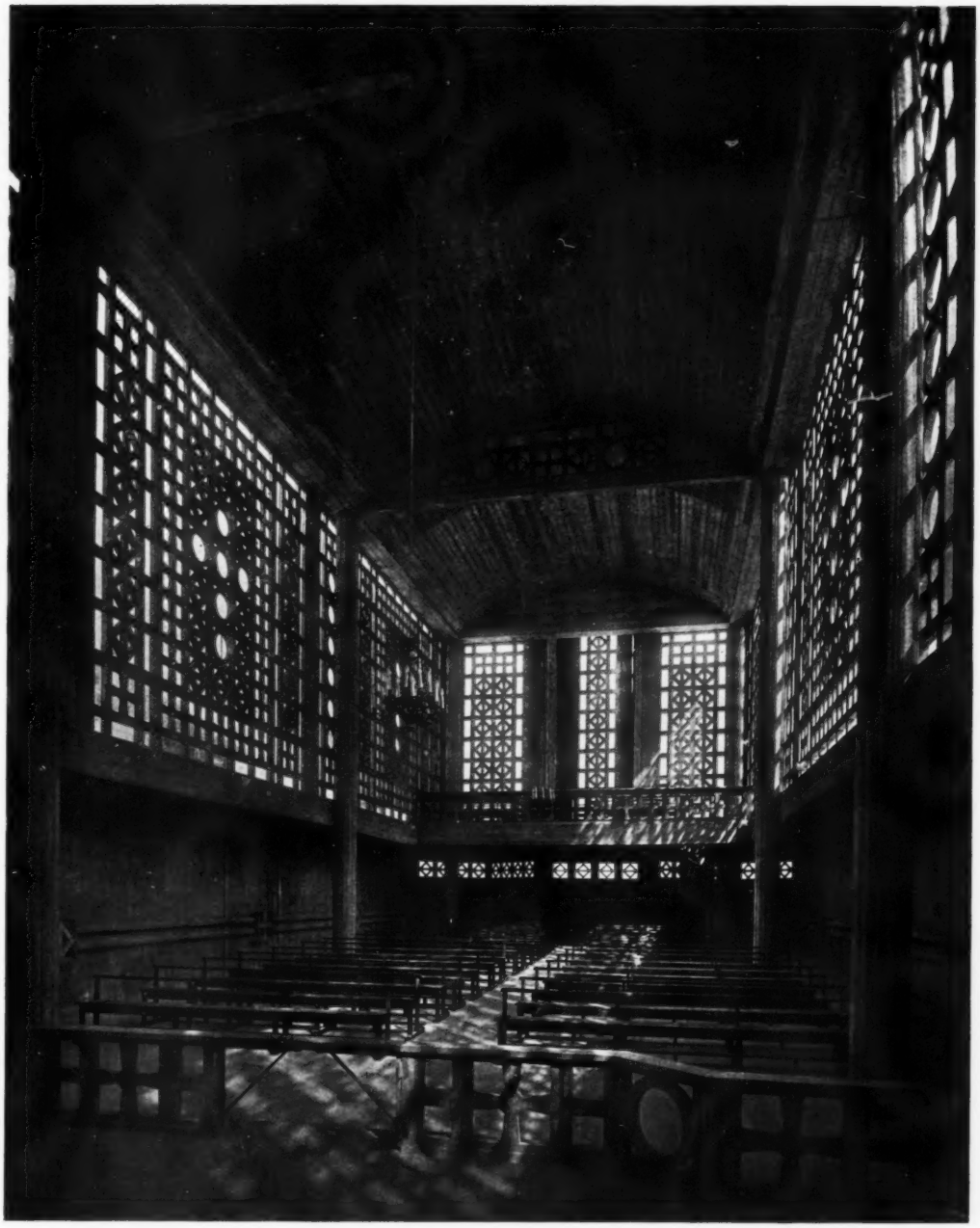
Church of St. Teresa, Montmagny. By A. and G. Perret.

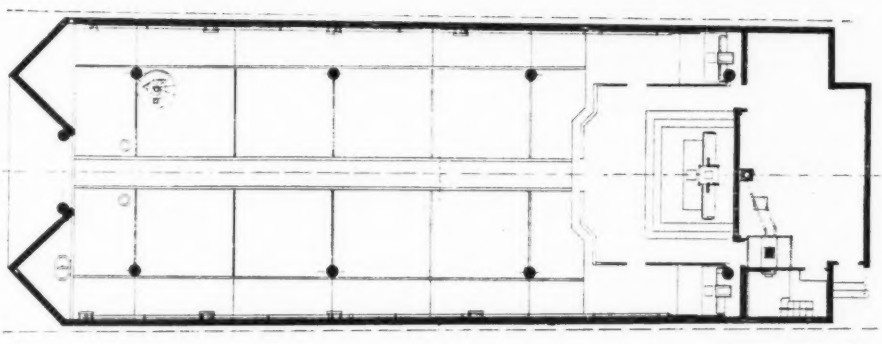


Church of St. Teresa, Montmagny. By A. and G. Perret.

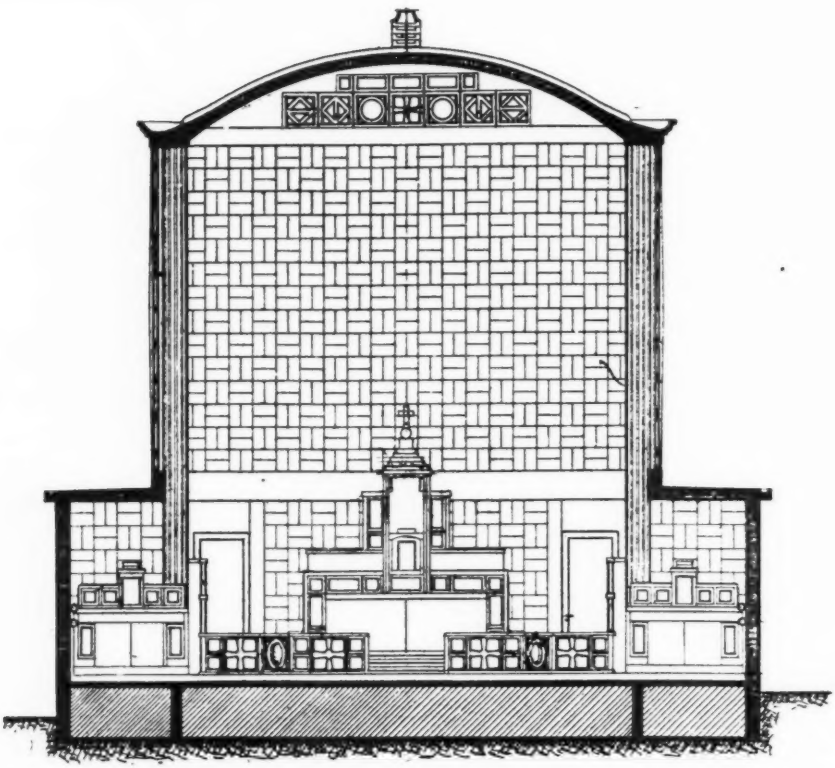


Church of St. Teresa, Montmagny. By A. and G. Perret. Elevation and longitudinal section.

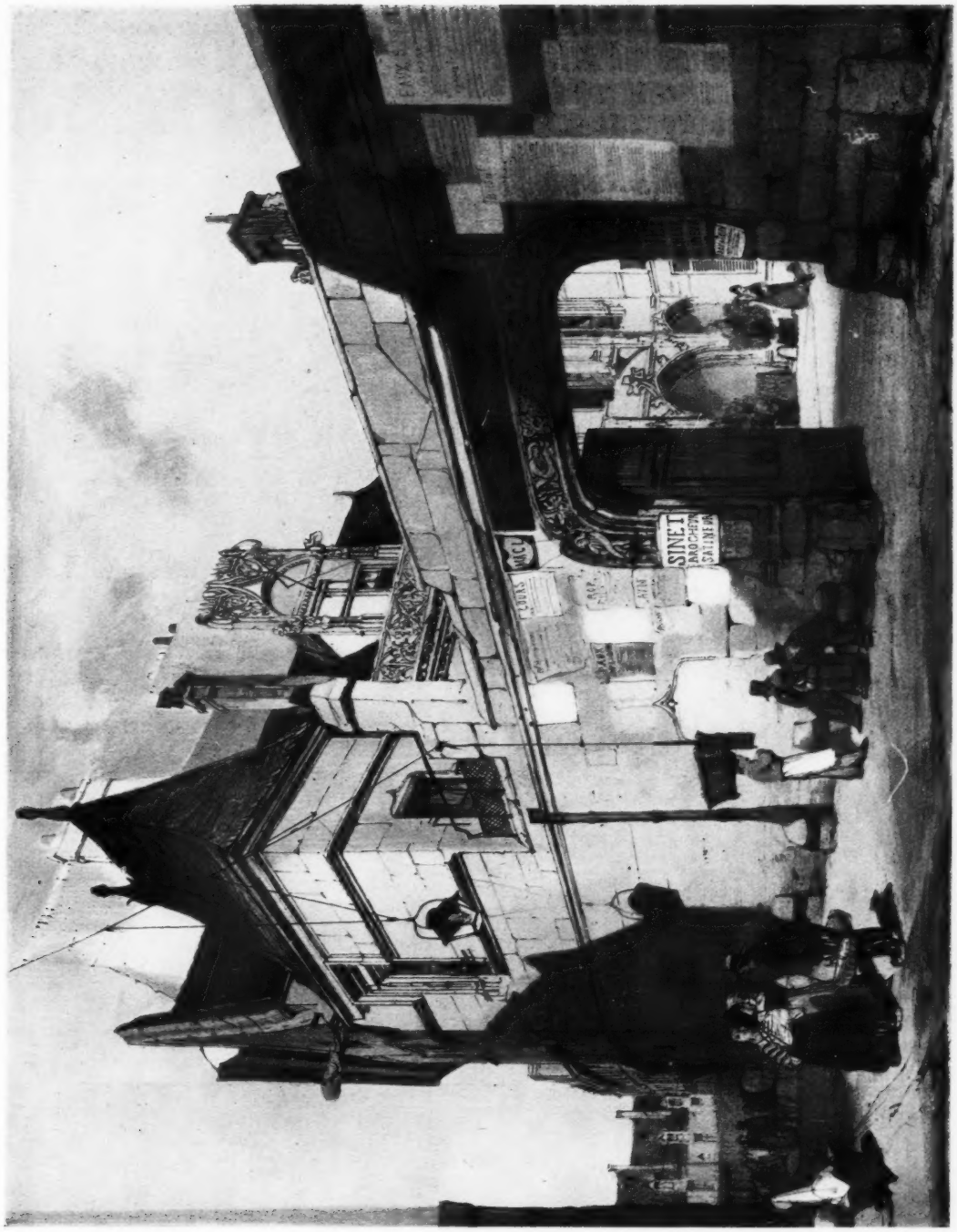




Church of St. Teresa, Montmagny. By A. and G. Perret. Above, the interior. Below, the plan.



Church of St. Teresa, Montmagny. By A. and G. Perret. Above, the nave, looking east. In the foreground is the staircase to the gallery. Below, cross section.



THE HOTEL CLUNY, PARIS. (FROM "PICTURESQUE ARCHITECTURE IN PARIS, GHENT, ANTWERP, ROUEN, ETC., BY THOMAS SHOTTER BOYS." BY E. BERESFORD CHANCELLOR. THE ARCHITECTURAL PRESS.)

TWO HOUSES BY MESSRS. IMRIE AND ANGELL

[BY R. E. FIELDS]

THE two houses illustrated present Messrs. Imrie and Angell in two rôles. One as experts in the vernacular architecture of the English country cottage, with its pleasantly irregular, haphazard plan and unsymmetrical elevations, and the other as no mean exponents of the more formal Georgian which, though coming to us from abroad and certainly not indigenous, has rooted itself so quietly, unostentatiously, yet firmly in our soil that one may be forgiven for regarding it as a traditional English style. The arrangement of both of them was dictated by a definite programme of requirements, and the design, as good design must, has developed reasonably out of the programme.

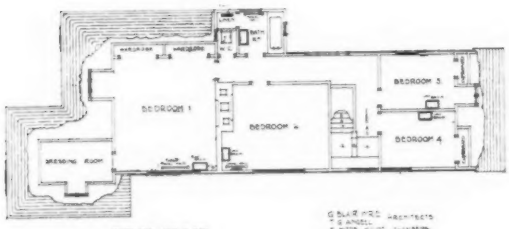
A point worth particular notice is the completely satisfactory manner in which each in its separate way fits the site. It would be impossible to interchange them, and they are clear evidence of the architects' creed in connection with house design that siting comes first and materials second. As Mr. Imrie himself expressed it, a house must sit down on its site as a hen settles herself in a dust-bath at the roadside; and he went on to say that it was useful to study a site and its surroundings at dusk, when colour and detail had been washed out, and one could appreciate approaches, contours, masses, and shapes in silhouette without the disturbances caused by seeing too much.

The Slip, on the shores of Bosham Harbour, a few miles from Chichester, takes its name from an ancient boat-building slip; and the old stones of its wall, raised upon to form the garden boundary, may be seen in the illustration of the south front. It was here that Harold is reputed to have built his ships, and the theory is supported by the fact that, when digging the foundations, three layers of tar, shavings, and chips were discovered at levels of 18 in., 3 ft., and 6 ft. beneath the surface. Furthermore, the old Saxon church of Bosham, on whose site the present church stands, appears in the Bayeux tapestry. With so much archæological interest at hand, it is only proper that a house built here should be redolent of the soil and should express in design, materials, and execution the characteristics of that very English county, Sussex.

Built for Mr. Prevost Battersby as an author's retreat, the house has been planned to take full advantage of the wide views over the harbour: the disposition of the windows and loggia provide for the admission of sunlight

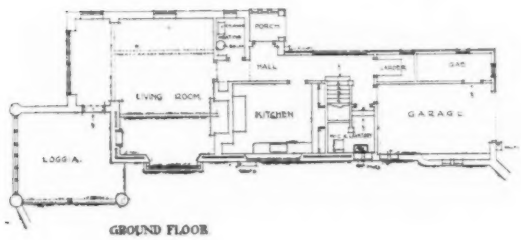
The Slip, Bosham, Sussex. By Imrie and Angell. The entrance porch.

COTTAGE AT BOSHAM SUSSEX
FOR
H. P. PREVOST BATTERSBY ESQ



FIRST FLOOR

G. BLAIR IRES ARCHITECTS
7 ST. ANGELL
2 PITTS COURT CHAMBERS
TEMPLE E.C.4.



GROUND FLOOR

The Slip, Bosham, Sussex. By Imrie and Angell. Above, a general view. Below, the plans.

The Slip, Bosham, Sussex. By Imrie and Angell. Above, from the foreshore. Below, garden entrance.

The Slip, Bosham, Sussex. By Imrie and Angell. The living-room.

all day, while the position of the porch gives protection from the south-westerly gales which sweep the harbour. Having regard to the special requirements, the planning is ingenious. The respective positions of living-room, kitchen, and heating chamber are worth noting, as by this means the three flues are comfortably accommodated in one big stack, the necessity for others being obviated by a central heating system. Lavatory basins with hot and cold water are provided in all bedrooms, and lighting was originally by gas, though electric light has been since installed.

The construction carries out local tradition, not with a conscious air of imitation, but in a straightforward manner that disarms criticism and is best suited to deal with the exigencies of climate. The walls up to the first floor are 16 in. hollow, composed of chalk, flints and stone found on the beach, the stone probably having been brought from France as ballast. The bricks are 2 in. Sussex, and the upper walls are of studding hung with weather-tiling.

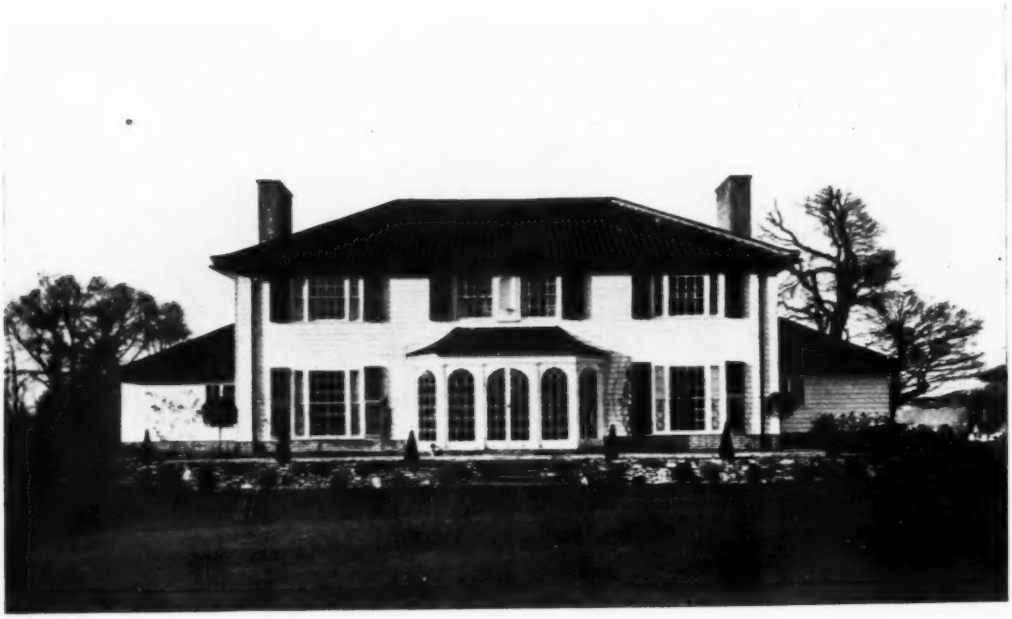
The roof is laid with old tiles. With the exception of the gutters and drain-pipes which, by special request of the client, were of teak, the whole of the woodwork, including the kitchen, is of English oak. All the carpenters' work was carried out by local shipwrights, and notice may be directed to the half-timbering of the porch, which displays an adzed face and provides a salutary lesson to those who try and get texture by overdoing it; a poisonous habit analogous to spelling " the " with a " y." Except in the loggia, where, owing to the large area, it was necessary to use oak frames, metal casements with lead lights are fitted, with big panes measuring 11 in. by 8 in. and 1 in. lead cames.

The interior relies for its effect upon good materials used with great taste and restraint. The plastered walls, left from the wood float, the simply-designed fireplace, and the plain oak door with its bobbin latch in the living-room form a discreet background for good furniture of any period, though particularly suitable for that shown in the illustration.

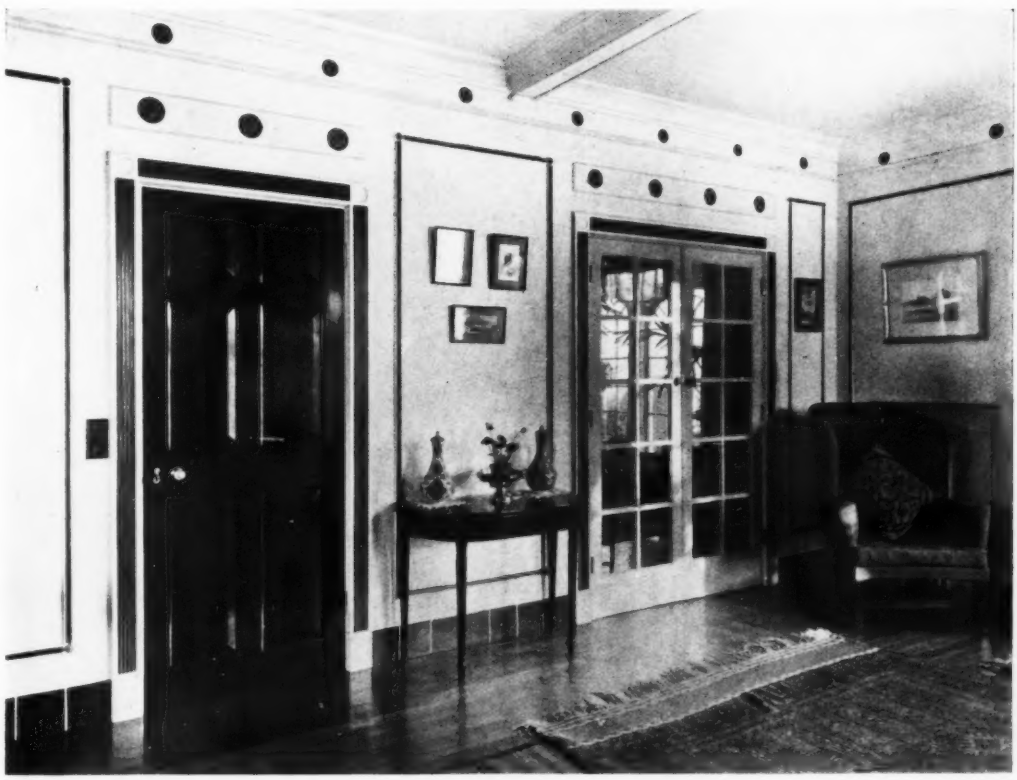
An extremely interesting contrast is afforded by Ridge House, Esher, though the same qualities—expression of locality, suitability of plan and character of elevations—can be found as readily here as in The Slip. Here we have a house more amply planned, having large symmetrical rooms calling for symmetrical elevations, built in the more sheltered county of Surrey and nearer to London—in fact, a more sophisticated dwelling. The nationality of the owner, a Canadian, is subtly expressed by white weather-boarding and the delicate colonial Georgian detail of the charming little porch and the carefully handled window above it.

The sun-parlour on the garden front was an essential requirement, and the treatment of the large bay has been seized upon as a focal point which gives great individuality to that elevation. The plan is admirably contrived, and the evenly-balanced elevation is a perfectly true expression of it, and both work with that apparent ease which one knows to be the result of infinite care and thought. Central heating has solved many knotty points, and has made possible the use of but two stacks in positions where they are most required, forming steady verticals which, in conjunction with the strong vertical lines of the pantiles, effectually act as stops to the strongly-marked horizontality of the weather-boarding.

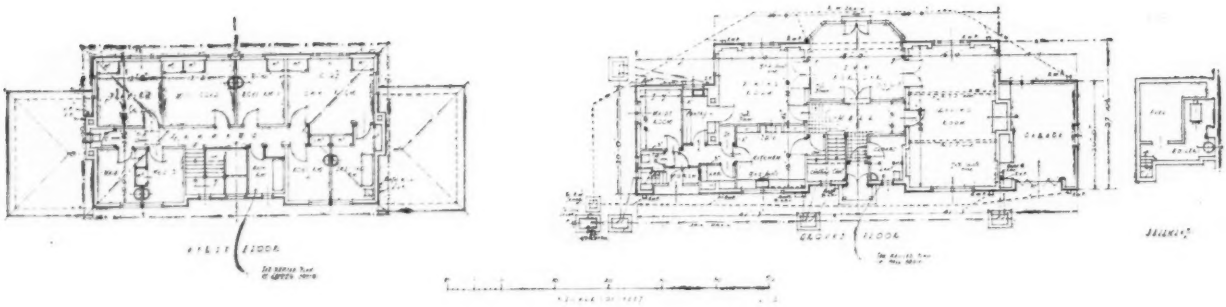
Ridge House, Esher, Surrey. By Imrie and Angell. Above, the entrance front. Below, a view from the garden.



Ridge House, Esher, Surrey. By Imrie and Angell. Above, a view from the garden. Below, the window to the sun parlour.



Ridge House, Esher, Surrey. By Imrie and Angell.
Above, the dining-room. Below, the drawing-room.



Amongst the essential requirements that have been embodied in the plan was the fact that the house was to be run by two servants; lavatory basins and built-in wardrobes were required in all bedrooms, and study of the plans will show that these requirements have not only been complied with, but have been utilized with great effect.

The walls up to the commencement of the weather-boarding are 11 in., hollow, built of Brown's Redhill bricks, rising four courses to the foot with wide joints. The weather-boarding is carried on battens fixed to 9 in. brickwork, the brick quoins being protected by an angle-flashing of Ruberoid. Collier's red pantiles cover the roof, and the weather-boarding, 6 in. wide and chamfered at the lower edge, is painted two coats, with a further coat of white distemper. The shutters are painted blue-green. Copper is used for the roof of the sun-parlour.

On the ground floor the floors are of teak 3 in. wide by $\frac{1}{4}$ in. thick, fixed with glue and panel pins to $\frac{3}{4}$ in. rough boarding laid diagonally. The same method is adopted on the first floor, but here oak is used instead of teak. The ground-floor skirtings are of black tiles.

The living-room walls are coloured cream with mouldings and pateræ gilt over red. Rough plaster covers the dining-room walls. These are painted a dull gold as a foil to some fine Persian plates and tiles, while the cornice is emphasized with a line of blue. The doors in both rooms are of mahogany.

"Ridge House," Esher. By Imrie and Angell. Above, the plans. Below, the staircase and hall.

WINNING THE COMPETITION

It has been said that the best thing to do with an architectural competition is to win it. Profoundly struck with the truth of this observation, the Editor of THE ARCHITECTS' JOURNAL *has been trying to find out how it can most conveniently be put into practice. Among the theories advanced by a number of distinguished architects he thought none more worthy of his readers' attention than those of Mr. Cyril Farey, Mr. Arthur J. Davis, Mr. H. V. Lanchester, Mr. Egerton Swartout, and Mr. C. Cowles-Voysey. They are given in full below. Between them they cover every phase of successful competition operations.*

ARCHITECTURE IN COMPETITION WORK

CYRIL A. FAREY

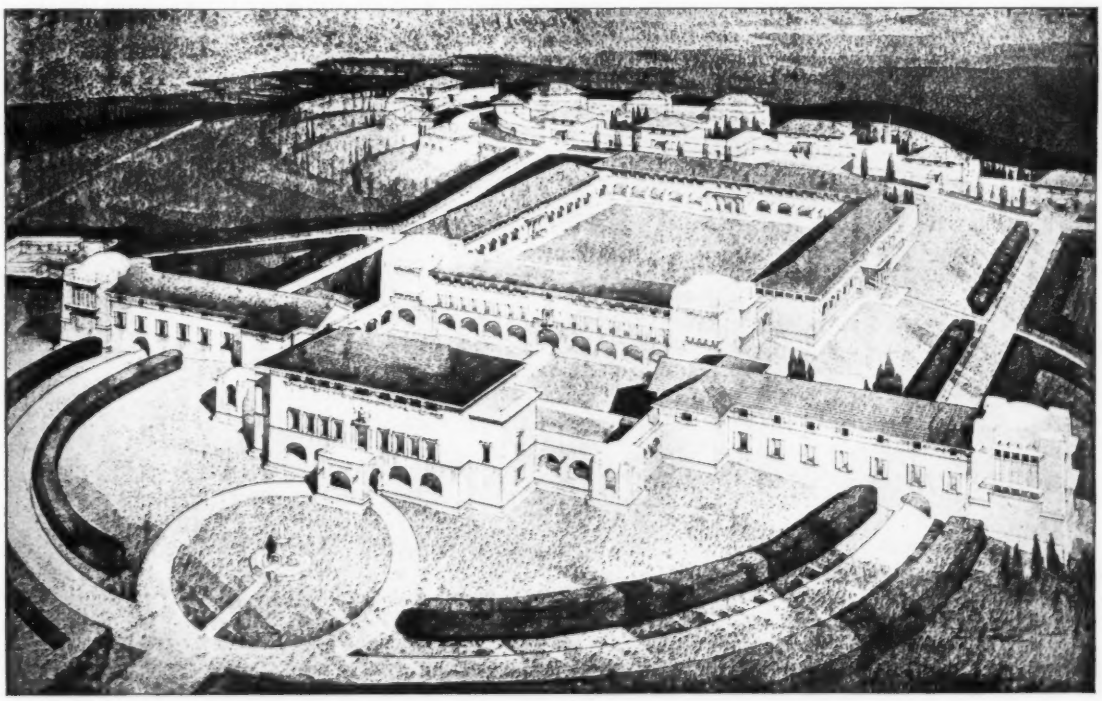
WHY is it that so many very able and even eminent architects find their designs rejected time after time, in competitions of widely diverse character?

The plan is, without a shadow of doubt, the most important part of any scheme; it is essential that the fullest possible consideration should be given to that part of the design, because, to some degree at least, a good plan will beget a fine elevation; certainly a good elevation rarely grows out of a mediocre plan.

Here arises one example of what I mean when I talk of confusing "architecture" with "competition." In designing, say, a town hall on an irregular or sloping site, in actual practice one would probably not stress overduly the question of axial and symmetrical planning; for reasons of economy, or even of convenience, it might be better to ignore such considerations altogether. But in competition work axial or symmetrical plans usually meet with greater success, first, because strongly defined axes give a very tidy and clean appearance and tend to overrule considerations of pure economy in the assessor's mind; second, the plan is thus made to appear very simple and easily readable; and, third and perhaps most important of all, it is a formula which makes for speed in designing. A clean, readable plan, in my opinion, is a most important consideration; and for this reason I am against the use of "mosaic" lines, or of anything else which tends to clutter up the rooms and make them appear less commodious; the time which is taken up by this very tedious and useless fad can much better be employed in looking carefully for "dark corners." It is my experience that most assessors are extremely keen on the provision of well-lit rooms and corridors, however unimportant their purposes.

In so far as the elevations are concerned, I have already hinted that in order of importance they are subsidiary to the plans; in fact, I believe that today not enough attention is usually paid by assessors to the elevations, and that the ultimate exterior appearance of the building is sacrificed too much to the working efficiency of the layout.

The question of rendering is one on which much ink has been spilt. There are those who would like to see the use of wash for voids and shadows forbidden, and drawings presented in line only. There is no doubt that rendering does help to judge designs very considerably;



Raffles College, Singapore. The bird's-eye view of the winning design. By Cyril A. Farey and Graham R. Dawbarn.

and it must be remembered that it is also apt to emphasize certain shortcomings which might otherwise escape notice. In cases where particular care has been given to the massing of the elevation, rendering definitely helps to develop appreciation of the fact in the assessor's mind, and bad points as well as good are likely to be brought out. It must be borne in mind that, although a superlatively fine piece of rendering may serve to win a competition over schemes which are otherwise its peers, mere high quality of presentation will never, by itself, deceive an assessor into awarding the prize to a mediocre plan. For this reason I endorse my previous advice, that one should never waste precious time in having recourse to such " red-herrings " as " mosaic " or " vaulting " lines; " competition design " is not synonymous with " exhibition drawing," and, from the point of view of efficiency of design, such tricks deceive nobody.

In the competition for Raffles College, Singapore, I think that the following were the principal causes which contributed to our success:

1: The linking together of all the main buildings by a simple unit which controlled the design.

2: A broad, simple treatment which is suitable to the East.

3: Very careful preliminary study of contours.

Although I am in favour, generally, of the competition system, I feel that one of the drawbacks appears to me to be a tendency to eliminate to a great extent the artistic side. How often do we not see in the winning design a good workable plan fulfilling all requirements admirably, and in the completed work an expressionless mass without any æsthetic feeling?

STULTIFICATION BY PROGRAMME

ARTHUR J. DAVIS

AN entrant for a competition cannot tell beforehand whether he will succeed or not. But he can, and should, put himself in a frame of mind that will make success possible. To do this is more difficult than would at first appear. Consider the young and ardent architect with the printed conditions on the drawing-board before him. What is the first question he will ask himself? Is it: " How am I going to win this competition? " It may be so ; but there is another one, more important: *What is the use of this competition?*

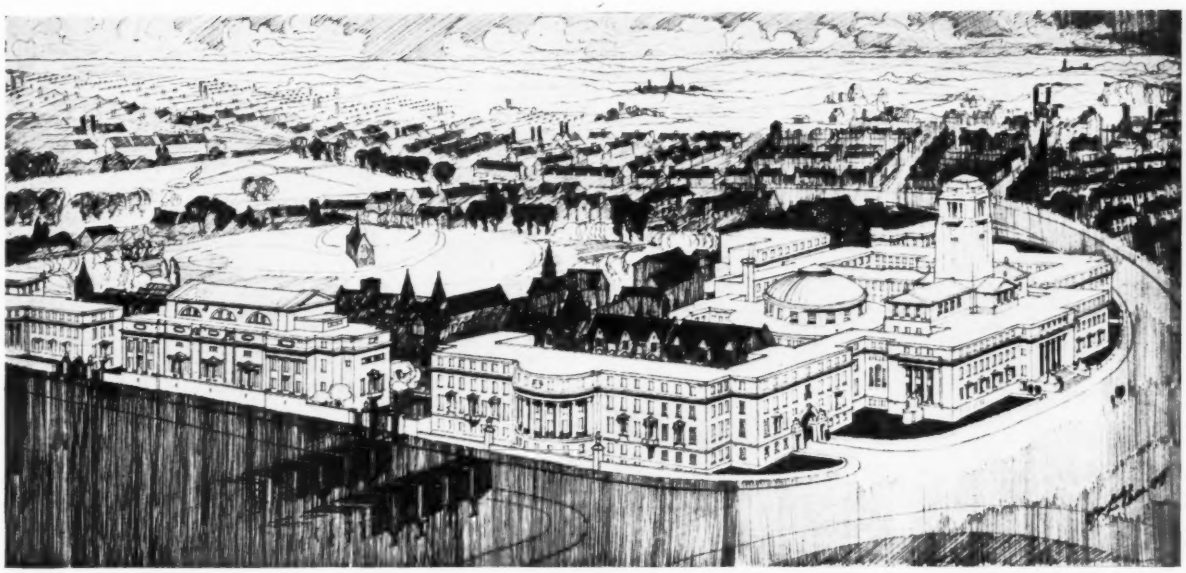
It is obvious that if the promoters wanted merely a building to provide certain accommodation and to fulfil a number of definite purposes, which they themselves had described, they would gain their ends quite satisfactorily by employing one or other of the many individual architects who were in practice in that neighbourhood, or elsewhere, and who had wide experience of such work; the situation would be quite admirable, because they would thus employ the brains of a specialist and temper his idealism of thought with their own convictions. But they want more than a building of this sort; they want the very best planning and elevations which human skill can give them; they want, in fact, superlative architecture. And so they ask advice of the professional body, which tells them the proper procedure and advises them as to the choice of an assessor or a jury. These are the points to be remembered: that the purpose of a competition is to lengthen the odds on finding the best possible solution of the problem, and that the assessor's responsibility lies in his careful judgment and selection of the design which is, in his opinion, the best. It is important to remember, therefore, that the assessor, or the jury, is virtually responsible for the conduct of the competition. Subject to arguments and discussions on matters of irrelevant detail with the promoters, it is his part to draw up the programme to the best of his ability, in accordance with the reasonable and possible demands of the people who institute the competition.

Having arrived so far, we next have to realize that the assessor himself is not infallible, and that, being a wise man, he will himself be the first to admit it; and so it is reasonably safe to suppose that where one can be sure of improving upon that for which the programme has asked, one should not lower the quality of one's scheme by adhering to a formula which is inferior to one's own.

The most common fallacy in the drafting of competition programmes is the fact that irrelevant or unimportant clauses are set down in such a way as to make them appear to be rigidly binding; and it is the almost invariable mistake of competitors to regard *all* the clauses as being quite inflexible. It is my opinion that every programme should be clearly prefaced by some such statement as that *the conditions laid down therein are given as suggestions only, to guide the competitor and not necessarily to bind him, but all deviations made from the conditions laid down are made at the competitor's own risk.* For, after all, these clauses have arisen, in the main, merely from the scheme which the assessor himself has evolved; they have probably, according to his arrangement of plan, been essential; but to the man who has started out on a scheme of his own, fresh and unbiased by recent bickerings with promoters, they may prove to be nothing but a trial, and may, by their self-assertiveness, cause him to ruin a scheme which has hitherto surpassed by far the quality of that which gave rise to them.

An admirable example of this very situation lies in the competition for the Opera House, in Paris. The promoters wanted the finest opera house which could be provided; the programme was drafted accordingly, and, maybe, took into account all that was then known of that subject. But Garnier saw fit to ignore details; he realized that the object in view was to provide the finest possible theatre, and he saw, too, that the men who had drafted the conditions had themselves no clear perception of the ideal; so he boldly put his own scheme on paper, regardless of all but the most binding clauses; and the assessors recognized at once that his solution took the matter far beyond their own conceptions.

It is, perhaps, a little dangerous thus to suggest that those who take part in competitions should tend to ignore the programme; qualification of any such remark is needed. It rests at the discretion of each individual which of the conditions he accepts and which he rejects. For instance, it might be stated that the building should " not exceed seventy feet in height from pavement to cornice," or that " the building should be three stories in height." When confronted with these, or any other, conditions the architect should say to himself: " Now, why? " And the answers to that question will indicate, or at least suggest, the importance of each clause; thus, the reason for the first is probably a question either of ancient lights or of conformity with existing buildings; the second, one supposes, arises out of the fact that the assessor has found that the use of three stories provides him with a good solution to the problem. In the first case the conditions should certainly be adhered to; in the second it would be at the competitor's



The reconstruction of Leeds University. The bird's-eye view of the winning design. By Lanchester, Lucas, and Lodge.

discretion to decide whether the superiority of plan and elevation given by the introduction of a fourth floor would warrant his ignoring the assessor's suggestion. For certain clauses (such as questions of site) there are obviously reasons which make them absolutely inflexible; for others considerable latitude is allowable; the responsibility of deciding lies with the competitor, and in his ability so to decide with reasonable safety lies his fortune in competition work.

But I am convinced that the competition only justifies itself by allowing the freest possible hand to the architects competing; close adherence by the assessors or by the competitors to unimportant clauses nullifies the whole object of the system. The programme should be regarded as a helpful guide provided by the assessor out of the goodness of his heart.

THE FIRST COMPETITION

H. V. LANCHESTER

THE merits of the competition, in enabling the young architect to bring his qualifications before the public by direct and straightforward methods, are generally accepted, and the protests from those "diehards" who would abolish the system become less and less frequent. At the same time the young architect who has most to gain by success is often diffident of his chances, and liable to be discouraged when he sees old-established firms continuing to take the field. Possibly he may feel that this is hardly fair play, not recognizing that the game of competitions has its fascinations and that the skilful player would feel acutely the deprivation were a term to be put to his activities. Moreover, competition work abounds with "tricks of the trade," and after one or two attempts the novice will become aware of some of the "dodges" which the skilled competitor uses; afterwards they are both on the same footing.

After all, is the young man very much at a disadvantage? Probably he will have to make a few attempts unsuccessfully before he finds his feet; that he should regard as part of his education, but the excuses sometimes made for standing aloof have little to justify them. The man who has prepared large and elaborate designs during his career as a student will not be scared by the amount of draughtsmanship required in the average competition, but he will sometimes feel that his altered circumstances make things more difficult. In the old days he had the run of large studios and all the time he needed. Now, if (as is most probable by the time he has reached the stage of experience appropriate to competitive essays) he works in an office, there is only a room, and possibly not too large a one at that, at his disposal, while his available time is limited to some three or four hours a day. He pictures other competitors in independent practice devoting an unrestricted amount of time and employing a large staff on the identical competition, and imagines that he must therefore inevitably be out of the running. Never was a greater fallacy. The largest and most efficient staff will not win a competition unless there is a sound idea at the back of the design, and there is no way of arriving at this idea except by good, solid thinking on the part of one brain, or at most two. For the exercise of this form of thought the young man is often quite as well placed as the architect in practice, whose many responsibilities leave him only scraps of time available for concentrated thought.

It may be safely affirmed that the architect in a big office never studies the earlier phases of a competitive design during office hours; it would be useless if he attempted it, and the scheme only appears on the office desk when it is more or less worked out. In such a case the architectural assistant is practically on an equal footing as regards the conception of a design, and, this achieved, there should be little difficulty in his being able, either individually or with a partner, to prepare a presentable set of drawings. A good design, reasonably well presented, will always triumph over an ill-considered or illogical one, however artistically this is dished up.

Of course, the young competitor should naturally be careful as to the competitions he takes up. To begin with, he should not choose one in which the assessor's known architectural sympathies are strongly at variance with his own; no one should do that. Then again, he should choose a subject which either comes within his range of experience or in which he is particularly interested. The actual amount of drawing required may influence his decision, but as a rule only to a minor extent, for only in a few cases is this beyond the capacity of a competent draughtsman, with possibly help from a friend or two, within the time allowed.

A few words should be added on the question of out-of-pocket expenses. In most cases two or three pounds ought to cover these—paper, mounting, and dispatching; perhaps a little typing might have to be paid for. When strainers are required the cost will be slightly increased, but most young architects should have strainers left over from their student days, or can at least borrow them from friends. The same strainers have often done duty half a dozen times, sometimes without alteration and sometimes reduced with the aid of a saw, chisel, and screwdriver. Only a very important competition ever demands a really heavy expenditure; normally the costs are small, provided that the competitor has the capacity to deal with the matter himself or with such aid as he can secure, on a reciprocal basis, from his friends.

Let no young architect, either assistant or in practice, be discouraged from entering the glorious game of competitions, if he feels that he has a gift for the type of design that it demands. The game does not cover the entire field of architecture, and some forms of ability do not lend themselves to it. It is unlikely, however, that those unsuited by temperament will be tempted, or if they are, it will only need a few attempts to define their position. The others need only be warned not to lose sight of the fact that it is a game, with a certain element of chance; if they regard it as an exact estimation of merit they are liable to get disgruntled when they find that an assessor gives somewhat different valuations to various aspects of the problem from those in their own minds.

THE AMERICAN POINT OF VIEW

EGERTON SWARTOUT

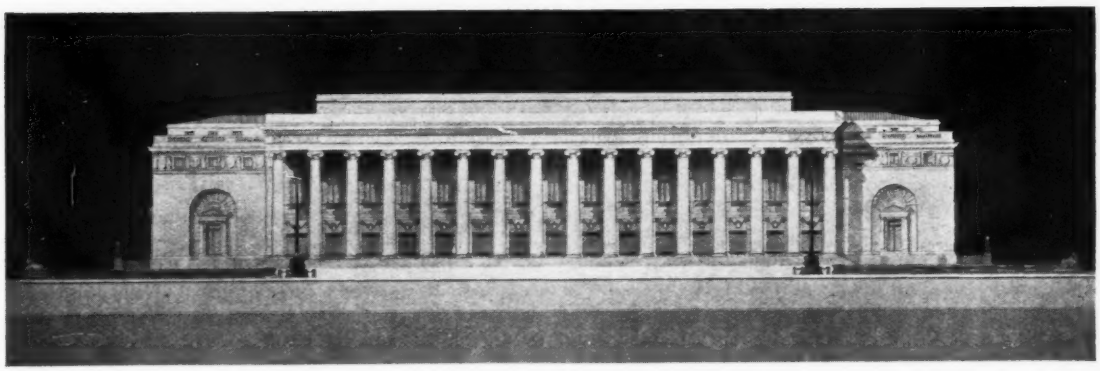
Our architectural magazines over here—I am writing this from New York—generally run to pictures. They are good pictures, and the architecture they express is quite often good and usually interesting. The magazine circulation depends on the illustrations, and not on the text, which is fortunate, for the text is, as a general rule, vapid and unreadable, apparently written as hack stuff by people who have not the faintest glimmer of an idea of the subject on which they write. I myself have just finished an article on some Vermont Colonial Churches. I've never seen the churches, and I've never been in that part of Vermont, and I'm not at all an expert on the history of Colonial architecture. I told the Editor this, but he said: "Oh, go ahead and write me 1,200 words—anything you like; nobody reads it, anyway. Write something funny."

Now, it is hard to be funny about Vermont churches; there really is nothing funny about them; the Puritan never is funny; but the Editor thoughtfully supplied me with some extracts from old records which showed the astonishing amount of Vera Cruz rum that the church deacons provided the workmen when the frame was up, and I got off an article which was, I'm afraid, rather sacrilegious, and which had nothing whatever to do with the churches in question, but which, strangely enough, seemed to satisfy the Editor.

But your English magazines are quite different. I'm fairly familiar with them, and I've always read with the greatest interest the authoritative and well-written articles they contain, and I have, therefore, the greatest hesitation, not unmixed with timidity, in writing anything on a subject that I know even less about than Vermont churches—the vexed question of English competitions. The Editor in his letter to me enclosed a list of questions as a sort of groundwork, and I will try to answer them, not with reference to the English practice, but to our own—the American.

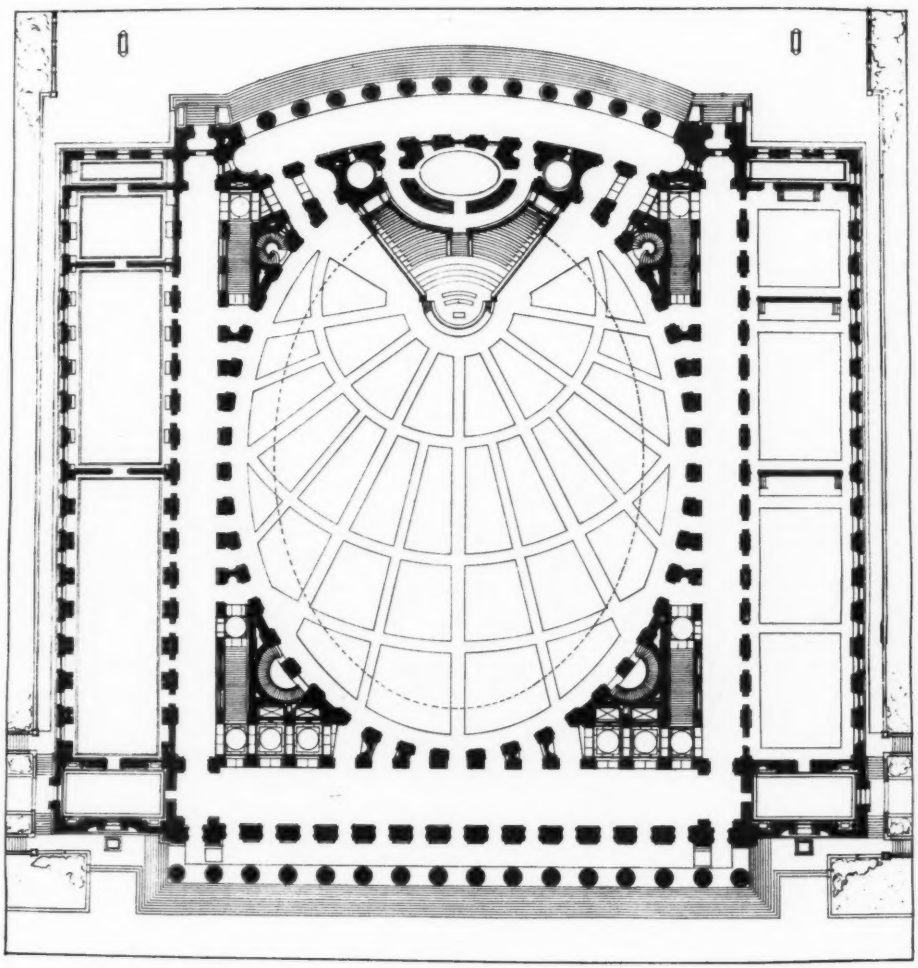
ANY attempt to decide between the design and the presentation, in point of importance, at once presents grave difficulties, as the point of view of the competitor may be quite different from that of the jury. Personally I consider the design much more important than the presentation. When I am a member of a jury (for we always have juries

The Elks National Memorial Headquarters.
The winning design. By Tracy and Swartout.



over here, and not a single assessor), when I am on a jury, I always try not to be influenced by the presentation. This is hard sometimes, for we have many able renderers and the general quality of the presentation is very high; and yet, as I look back on my jury judgments, the prize always went to the best scheme. But I'm sorry to say this does not always happen. I know of several large competitions recently where apparently the beauty of the rendering carried the jury off their feet. I strongly advocate a firm clause in the programme limiting the rendering to the simplest expression of the design. I'm not sure but that I would prefer no rendering at all, but a line presentation with the windows blocked in. If a design is really good it will stand up under that. A poor design or a faked scheme will fall.

Whether the plan is more important than the elevation



The George Washington Memorial Hall. The winning design. By Tracy and Swartout. Above, the front elevation. Below, the ground-floor plan.

depends, I think, for competition purposes, on the problem. (They are, of course, in actual practice of equal importance.) In a really good scheme they both are good. I think most of the competitions I have won were won on the plan, and I think most of my jury judgments were based on plan; but, on the other hand, I know of many competitions which were decided on the elevations. It depends on the make-up of the jury. In general I try to get a good scheme and a good elevation; every one tries to get that, of course, but by "scheme" I mean the big thing, the big idea, the feature; and I do not let, or try not to let, the details of the plan obscure that big idea. The average jury seldom goes into details. Generally one plan and one elevation does the trick, the other drawings are hardly looked at, and the labour of drawing them out and working them out is lost. I don't mean for a minute that I would, as a judge, premiate a scheme that did not fulfil the mandatory requirements of the programme, or which would not lend itself to a practical solution of the problem; but I would never let any fancied arrangement of practical utilities take precedence of a really good monumental scheme. As a general rule the winner finds all these things have to be rearranged anyway before the working drawings are made. And as the competition is generally decided on two or three drawings I strongly advocate the elimination of superfluous drawings in the programme; a plot plan at a very small scale, one elevation at $\frac{1}{16}$, one or, if necessary, two plans, and possibly an outline section are all that are really necessary.

Over here we seldom know the make-up of the jury until the drawings are finished—sometimes not until the award is announced. In some ways this is a good thing, but sometimes it is a decided handicap. If on the jury there is one dominant personality, he generally has his way, and with the best intentions in the world he will select a design in the general style in which he works. If, for example, the competition were for a church, and the late Bertie Goodhue were one of the jury, the design chosen would, perforce, be Gothic. If, on the other hand, good old Harry Bacon were alive and on the jury, the design chosen would, without any doubt, be Classic or Georgian. These are extreme cases, but such things happen often and are bound to happen. Personally I've never hit it off when I have tried to play up to the jury; my knowledge of the men was sound, but apparently my psychology was poor. I remember one case many years ago: I was in a competition for a post office in New Haven, and it was announced that Cass Gilbert was to be on the jury. Cass had just completed an excellent library on the same square, which was Georgian and small in scale. I knew he would never stand for a large scale in the post office, so I carefully worked up a design that went very well with his library, and then Cass went unexpectedly abroad, a new man was appointed, and the design selected had a ten-columned portico with a 45 ft. order! Since then I've let the galley drift.

I do not, in a general way, believe in such things as models, perspectives, bird's-eye views, faked photographs, and floor mosaic. If the problem is a large layout of many buildings the programme sometimes demands bird's-eye views. They do aid the layman to get an idea of the thing, but they are no assistance at all to the professional jury; and, as a matter of fact, they are generally faked anyway. The same goes for perspectives. They are seldom called for over here. Floor mosaic, or "gravy" colloquially, is customarily used to sweeten a poor plan. A good plan needs no such rubbish. With us it is now generally forbidden, the indication being limited to fixed furniture and one line around the perimeter of the room.

Almost invariably our programmes demand a monochrome presentation. I know of but one case, the Roosevelt Memorial competition in Washington, in which the method of presentation was optional. I took a chance and sent in a coloured rendering by the best mural painter in America, Eugene Savage, and I lost. It was my first and will be my only attempt.

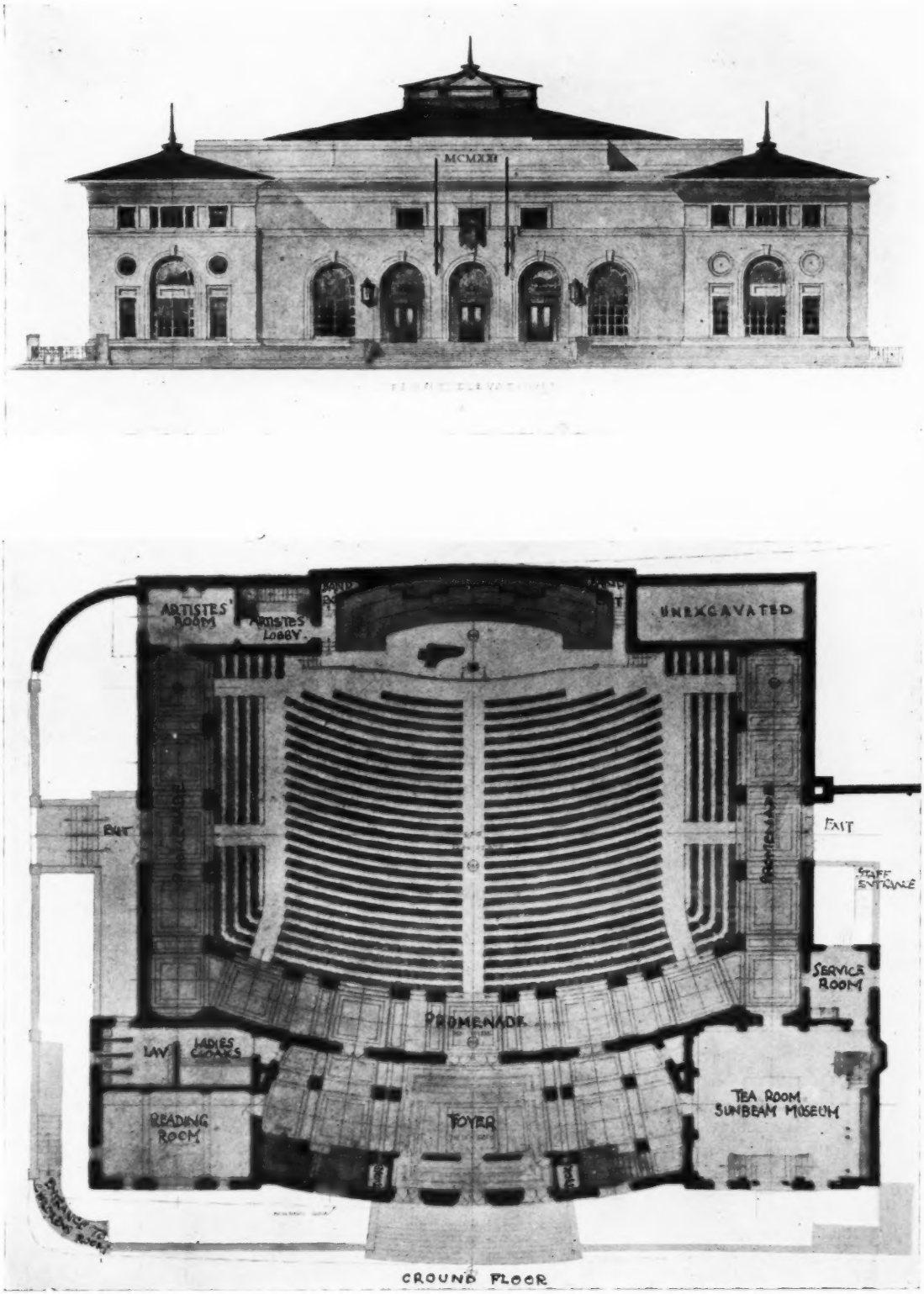
Our best win was—well, I really don't know. They all seem the best when you've won them. Our first big one was the most unexpected, and possibly the most welcome—the United States Post Office and Court House at Denver. I think we won on plan and the front elevation. The Elks National Memorial in Chicago was the most valuable perhaps, and was won on scheme; the Missouri State Capitol was, curiously enough, won on section, and the George Washington Memorial in Washington was won on plan. I'm inclined to think the last was the best, even though we haven't yet got farther than the actual foundations. The main feature of it was a large auditorium to seat 8,000, and we laid it out as an ellipse under the direction of the late Professor Sabine, the distinguished expert on acoustics. Sabine assured me that when built it would be the only perfect acoustical auditorium in the world. I can say this freely, for the scheme was his.

THE FALLACY OF GENERALIZATION

C. COWLES-VOYSEY.

IT is extremely difficult, upon the question of how best to achieve success in competitions, to make any remarks which are likely to be of much value to prospective entrants. In order to do so one would necessarily have to generalize to a very great extent, and this, in my opinion, it is not possible fairly to do. Each competition differs markedly from all others, and it is not possible to evolve any formula (or even series of formulæ) whose use is likely to bring any great measure of success in the aggregate. It is not possible, for instance, to recommend the use of colour as a rendering nor to advocate its avoidance in favour of line or monochrome; nor is it possible to decide whether or not there should be perspectives. It is not even possible to say, with any assurance, in what type or size of competition an entrant stands most chance of success. Each individual competition demands a certain treatment, but that treatment must vary with each competitor. Two different architects may decide to send in designs for a suburban art gallery: A decides that rendering in colour is undoubtedly needed, and acts accordingly; B does his drawings in line. They are both quite right, in all probability, from their own points of view and from those of their schemes; and yet a few months later a case may arise wherein A will rightly choose line and B colour.

Personally, I feel that questions of rendering are not very important. With a good design it does not matter much how the drawings are presented, but as one of the competitor's objects is to save himself from unnecessary work, I am inclined to disfavour the use of colour; at least, I consider it to be unnecessary. There are occasions on which the architect may have some time to spare before the sending in day; then by all means he may spend that time in producing pretty drawings, because a good presentation *may* serve to sway the balance in his favour; but,



The White Rock Pavilion, Hastings. The winning design. By C. Cowles-Voysey and the late Hugh T. Morgan. Above, the front elevation. Below, the ground-floor plan.

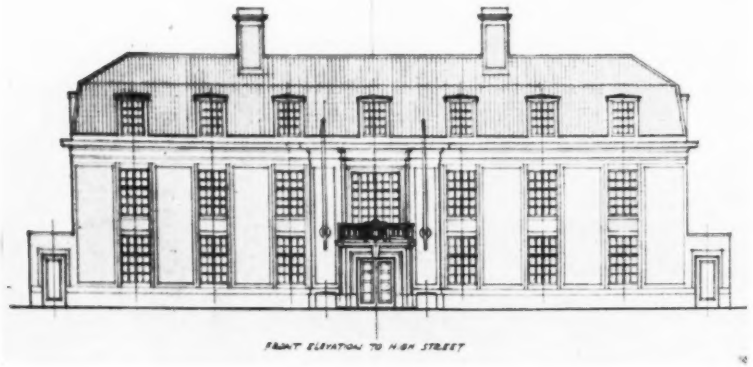
personally, I feel convinced that the scheme is the all-important factor and that little else matters.

By the word "scheme" I mean, of course, the plan. The elevation is of secondary importance, although it does play a very important part. I am strongly in favour of the axial and symmetrical plan wherever it is reasonably possible; in the majority of cases it immediately suggests itself, but often, even when I have had to stretch a point to achieve it, I have afterwards found it to be well worth while.

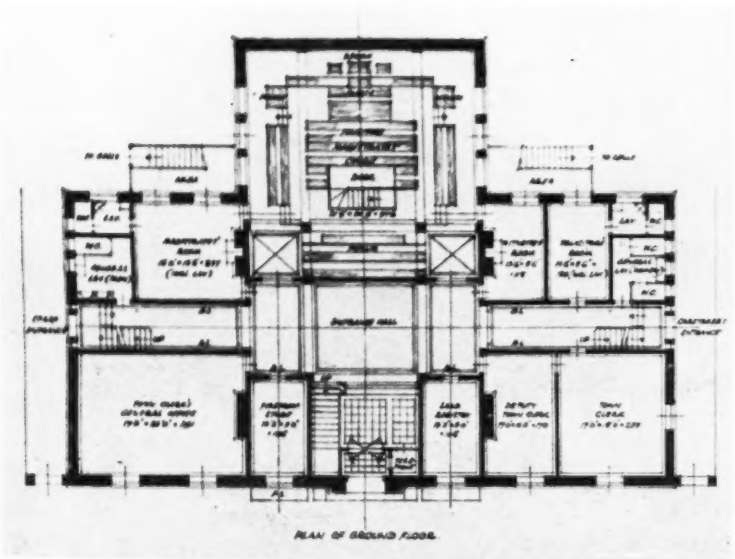
There are three big reasons for advocating the axial plan. First, that arrangement produces what is to my mind the most important qualification in competition work—an easily readable and orderly looking plan; second (which contributes to some extent to the first), the important elements will naturally fall on to the main axis (or into places governed or influenced by it), and thereby receive their due emphasis; third, that arrangement is, in the vast majority of cases, the most logical and satisfactory from the point of view of working efficiency. But of these reasons the first is by far the most important.

There is one point which I think should be mentioned, and which applies to all competitions, and that is one of familiarizing oneself with the site. I always make a point either of seeing the site for myself, or of getting some sort of idea of it, even if only from a picture postcard. There are, of course, cases where this is impossible, but an effort in this direction is always worth while. The contours of the site itself often suggest, or even demand, a certain type of design, and the approaches also tend to influence the elevations.

However well the programme may have been drawn up and however skilful the assessor, there is always a big element of chance in competitions, and I treat the whole question as a gamble. For this reason I seldom enter upon this type of work unless my office happens to be slack at the time; having once started, however, I find that my own time is very fully occupied, and I have to carry through the work myself up to a very late stage. I consider that the hazard is so great that I should never go in for a competition except when I felt that I had little better to do and "might as well have a shot."



FRONT ELEVATION TO HIGH STREET



PLAN OF GROUND FLOOR

The Council Offices, Bognor. The winning design. By C. Cowles-Voysey. Above, the front elevation. Below, the ground-floor plan.

WHERE ARE WE GOING?

[BY KARSHISH]

MOST of us are aware that the white ant is neither white nor an ant, but until M. Maeterlinck's book* I, for one, did not know that there are some fifteen hundred different species of these termites; nor that they entirely possess vast areas of the tropics; nor that the amazing civilization of the insect may have existed, substantially as it now is, for as many as one hundred million years, as is shown by the nests discovered in deep-lying strata. It is generally

M. Maurice Maeterlinck.

accepted that man reached a reasonable state of civilization about six thousand years ago, but the age of a civilization is more justly measured in generations rather than in years, and it may be said that while the civilization of the termite is perhaps a hundred million generations old, that of man is but two hundred. It will be understood, therefore, that M. Maeterlinck, in finding in the civilization of the termite the ultimate destiny of humanity, has time at his disposal and to spare. The imagination of any man who has reached middle life and observed the amazing discoveries of scientists in the last forty years may well quail at an attempt to picture the conditions of human life in, say, ten million years, although this is only looking forward as far as he is asked to look back when he views some of the remains of antediluvians at South Kensington. M. Maeterlinck, however, does not quail. His book is enthralling to anyone who, like myself, has a voracious curiosity, in the account it gives of the amazing facts of termite life which have been unravelled by experts; and it is most suggestive in the reflections it raises, and extremely provocative in its conclusions and in the methods the author employs in arriving at them. As the substance of his remarkable book is to display the social organization of the insect, which the author claims to touch on perfection and holds up as pre-figuring the ultimate state of human society, it is necessary to mention some of the main characteristics of the termite community.

Termites vary in size, according to species, from 12 mm. (that of the domestic bee) down to 3 mm. or less. They build nests of grains of sand cemented together with bodily secretions. Each species has its recognizable style of building—its architecture—and all favour the Gothic rather than the Classic principle. They also not only design from the inside, but build from the inside. These nests, or termitaries, may be as much as 20 ft. high and 40 ft. in circumference, they extend below ground a distance equal to their bulk above, of which the fabric can only be broken with an axe or conveniently removed with dynamite. Debris of termitaries is used to mend roads. Vast areas are covered with the termitaries, sometimes scattered, but, with certain species, grouped like villages. Each is perfectly ventilated, a thing none of our engineers with steam engines and electric fans could attempt, and, in some way not understood, not only the temperature, but the humidity of the nest, is exactly maintained in spite of sudden chills and parching droughts without. So much for their building; their social organization is even more remarkable.

Termites are blind, and never voluntarily face light. They travel by building round or, in some species, square tubes. They have completely solved the problem of nutrition. Their staple diet is their own excrement, which is stored away and dried, but nothing is wasted, and they eat their own dead. The original source of sustenance is wood, but a termite cannot digest cellulose. This difficulty is got over in two different ways, some species favouring one system, some the other. Some of the intestines are populated with parasites—protozoa—to the extent of one-quarter of the entire weight of the individual. The protozoa digest the wood swallowed by the termite, and as they, in the course of nature, die and give place to new generations, their bodies are digested by their host. Other species of termites make a hotbed of fragments of wood, in which it is believed fermentation is set up by a special secretion from the bodies of the gardeners, and on this bed "mushrooms" are grown. Vast "mushroom" beds are found in the appropriate vaults of certain termitaries, and two varieties of "mushroom" are known, but all laboratory attempts to cultivate them have failed.

All termites work, and do nothing but work. Each has his appointed duty and is perfectly equipped for the performance of that duty. In some species as many as fifteen different forms have been identified in each community. Soldiers are of different sizes and differently armed. The biggest kind may be eight times the size of the common worker and equipped with a huge armed head and plated thorax, like a nightmare lobster. The duty of this fine fellow is to thrust his head into any breach in the walls and repel invading ants, and, to discourage faint-heartedness, his abdomen is made soft like a maggot. This soldier has the best of reasons for not turning tail. Lesser soldiers or gendarmes are variously armed and their several equipments and duties are not understood, nor are those of many other variants from the common worker who composes the bulk of the population. The termite has also perfectly settled the great sex problem. Each community has one female only, and she the queen. Judging from a drawing

* *The Life of the White Ant.* By Maurice Maeterlinck. Translated by Alfred Sutro. George Allan and Upward, Ltd.

in the book she is relatively about the size of a small zeppelin, and is described as having the appearance of a sausage with a black-headed pin pushed home at one end to represent head and thorax. An army of attendants feed her at one end, another army receive at the other end a stream of eggs which fall at the rate of about one a second day and night—or thirty million a day for some three years on end, after which her energies flag, food is withheld, she dies, is devoured, and a new sovereign is installed.

These are the facts M. Maeterlinck lays before us, and he then invites us to contemplate the destiny of the termites, who for tens of millions of years—at the least—have existed as they are now and who will so remain for tens of millions to come. He invites us to contemplate the efficiency of the termite civilization, and passes on to find in the tendencies of human civilization an ultimate destiny for man analogous to that of the termite, in which each individual instinctively fulfils his purpose in service to a community which persists without hope or change in an automatic cycle of succeeding generations till the fires of the sun die out and all life ends. The brief statement of M. Maeterlinck's thesis which I am alone able to give here will suggest that the comparison is fantastic, and, for reasons I give below, I think that it is; but it is necessary to approach the subject without prejudice to realize that the lineaments of a termite present nothing more incredible to contemplate than the human nose, and that the whole civilization of the fifteen hundred different species produces nothing so preposterously beyond imagination or belief as a tall silk hat. M. Maeterlinck makes no such mistake as this. When the matter is viewed from an angle which sees man and the termite in the same perspective as common denizens of many planets revolving round one of innumerable suns, the analogy is disturbing. The mind, in the act of rebelling, is hushed in a kind of awe. How can we reasonably question, the author says, that an Almighty who has consented to purposeless waste of energy and eternal frustration in the termite, should hesitate to allot the same destiny to man.

The field for discussion is so vast that the subject can be touched upon merely, in an article of the limits of this one, and I shall be likely to do scant justice to the book in displaying what seem to me fundamental errors in the author's methods. In his introduction he notes that many scientific inquirers seem entirely unaware of the extraordinary nature of the insect they are studying. That is, of course, not their business; they are, in Carlyle's phrase, " but as a pair of spectacles behind which there is no eye." M. Maeterlinck's avowed purpose is to supply the missing eye, and those who have read *Monna Vanna*, *Pelleas and Melisande*, *The Treasures of the Humble*, and *The Life of the Bee* will consider that he is not ill-equipped for the task, for he is a thinker and a poet, and we do not forget Matthew Arnold's saying : " poetry is the finer essence and the spirit of all knowledge." What is startling to those who are familiar with the author's other work is the bleak pessimism which colours this one; but it soon appears that this pessimism is the result of the way he adjusts himself to his subject. In *The Life of the Bee* the dithyrambic note, if it was a little overdone in places, was not amiss; we were content to regard the bee as revelling in the sunshine and in the fragrance and nectar of flowers, even if we smiled at the rhapsody on the nuptial flight of the queen; the picture given was a picture of joyous, vigorous life; we did not notice that the author was attributing to the bee a human sense of light, warmth, honey, flowers, and the magic of flight. It is by making the same attribution to the termite that M. Maeterlinck is led into most of his errors. Because the termite has no eyes he is represented as afflicted with blindness; because he prefers to keep out of the light he is eternally condemned to the tomb and the dungeon; because he works instinctively and by habit he is enslaved, and so on. So might a dog commiserate the lot of the human kind which is cut off from all the entrancement of gamey smells. Yet I am unaware that any man has ever been oppressed with his inadequacy because he could not nose out where a rabbit had gone. Blindness is no hardship, nor even a limitation, where sight is unknown; perpetual entombment is bliss to creatures which desire no other state than to be under cover. M. Maeterlinck carries this principle farther still by assuming human consciousness and intelligence as the possession of termites, and implies that the termites have arrived at perfection through the exercise of intelligence. He describes them as far in advance of man in having not only mastered the problem of determination of sex, but in being able to produce zeppelin queens and lobster soldiers at will; they are great chemists because by diverse secretions they can untin and then corrode away the iron of food canisters; and because their spittle marvellously glues up the sand grains of their buildings he describes them as able to make a wonderful cement. M. Maeterlinck has, in fact, no justification for ascribing intelligence to insects at all. He ignores throughout his book the conclusions of Henri Fabre, who, after a lifetime of observation and experiment, found no evidence of any. M. Maeterlinck does, indeed, refer to Fabre's work at the end of his book, although he makes no mention of Lubbock or Samuel Butler, but he does so in such a way as to suggest to the reader that the volume had been written before he became aware of the naturalist's work. He claims for termites also morality, but it is tiresome to discuss the kind of morality—or adherence to what is customary—which can exist in all absence of intelligence. It is also a curious revelation of the author's attitude of mind to notice that while he claims superiority for the civilization of the termite over that of man, the thing which most excites his wonder and admiration is evidence of trivial parallelisms. Thus the mushroom growing is held up as a special mark of high development, and it is with regret that he admits a communal attack of St. Vitus, which he calls " dancing," to be associated with the yearly swarming and probably to have a sex origin. After all has been said for the superiority of the amenities of termite civilization, the list of what is lacking from it remains a formidable one. No religion, no medical or other science, no arts of poetry, painting, sculpture or music, or anything else except an art of architecture comparable to that which a cabbage might claim; no tools, books, cookery, laughter, song, recreations, advertisements, or, indeed, of anything which distinguishes the mind of man from the mind of a bullock.

The author puts forward the growing mechanicalization of modern civilization as evidence of the ultimate reduction of man to the automatic slavery of the termite. The picture he paints is not unlike that displayed in the film " Metropolis," which falsified every fact of human nature. At the very time the film was " released," the Federation of American Trades Unions issued a manifesto proclaiming that Mr. Henry Ford would be coerced by the Federation into employing only union men so that the Federation, and not Mr. Ford, should regulate the

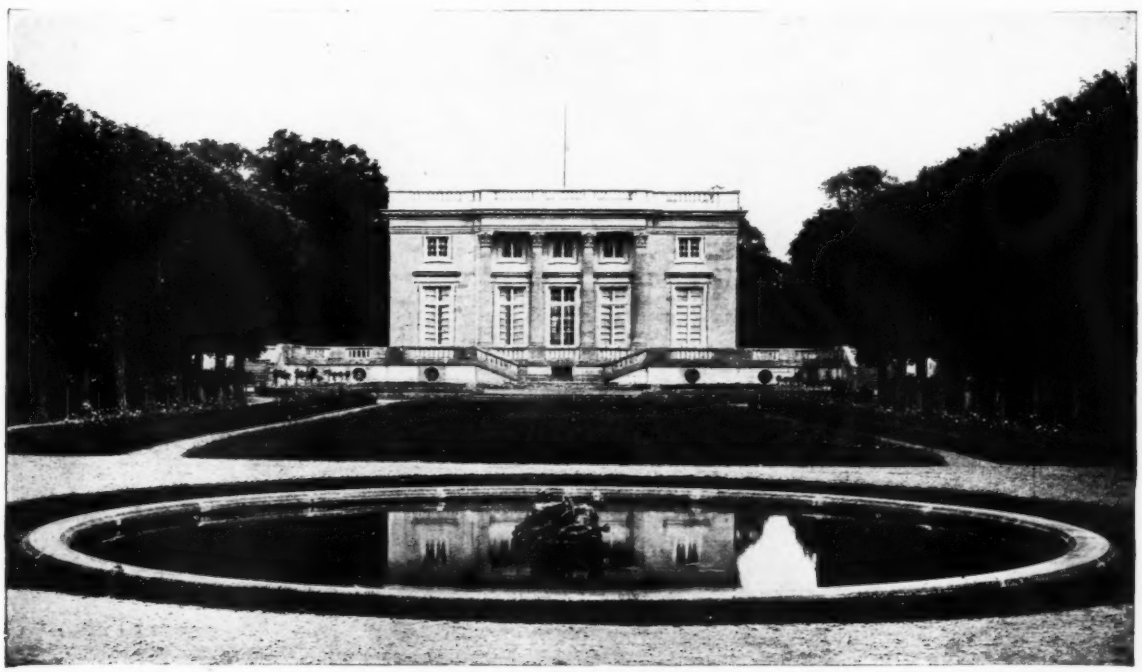
conduct of the famous works; and the reason for this action was stated to be *the spiritual enervation produced in the workers by Mr. Ford's methods.* The last century saw the recognition by the community of its responsibility for the material welfare of the individual; this century will perhaps see the acceptance of responsibility for his spiritual needs. Are we to suppose that impulses of this kind, the inspiration of Astley Cooper and of the poets who wrote "The Song of a Shirt" and "The Cry of the Children," once lived in the thorax of the termite and have been perfected out of his existence? Can the destiny of man, a creature concerned to reason about his own reasoning power, be pre-visaged in the destiny of a creature incapable of reasoning about anything whatever? The radical difference between man, who possesses the world, and the termite that crawls entombed in the dust of it, is that in the course of their evolutions—their creations—man has specialized in brains while the termite has specialized in spittle.

The matter goes deeper than this. When we read Knoler's account of his experiments on the intelligence of apes we may recognize ourselves; but there is one thing which the ape shows no vestige of, namely, the inhibition which in man acts against, or controls, his animal impulses. This inhibition is no deduction of psychology or philosophical inference. The physiologist has identified, and can display in dissection, the substance of the human brain in which that power dwells, and its counterpart exists in the brain of no ape nor of any other animal. There is one thing more yet to be said; a thing that has been said in various ways and written in innumerable books all the world over for the two hundred generations during which man is regarded as civilized. I will present that idea in a well-known legend from a well-known book, which tells why Adam and Eve were turned out of the Garden of Eden. It is a strange fact that not one person in twenty knows the reason; it is generally supposed that they were turned out because they had eaten of the fruit of a forbidden tree, the Tree of the Knowledge of Good and Evil; but the reason Adam and Eve were turned out of the garden was lest they should eat of the Tree of Life and become as gods. The legend is some thousands of years old, and yet, to this day, it probes deeply that mind consciousness of man which, whether he is aware of it or not, colours every thought and gives direction for every decision. What, pray, is the meaning of that, M. Maeterlinck?

BOOKS OF THE YEAR

[BY V. M. CHRISTY]

As the years move on, more and more barriers disappear from between hitherto separate realms. Sometimes these are artificial barriers which are deliberately thrown down; more often they are natural barriers which fall by reason of their own decay, or because of forces of growth and expansion within the territories they divide. This removal of barriers, acknowledged in regions of science, is equally evident in the arts, and not least in the particular fields whose borders impinge upon those of architecture. And so, in surveying the ground covered by some half-hundred books of the year 1927 bearing upon architecture, one is faced with an almost limitless range, where fences and

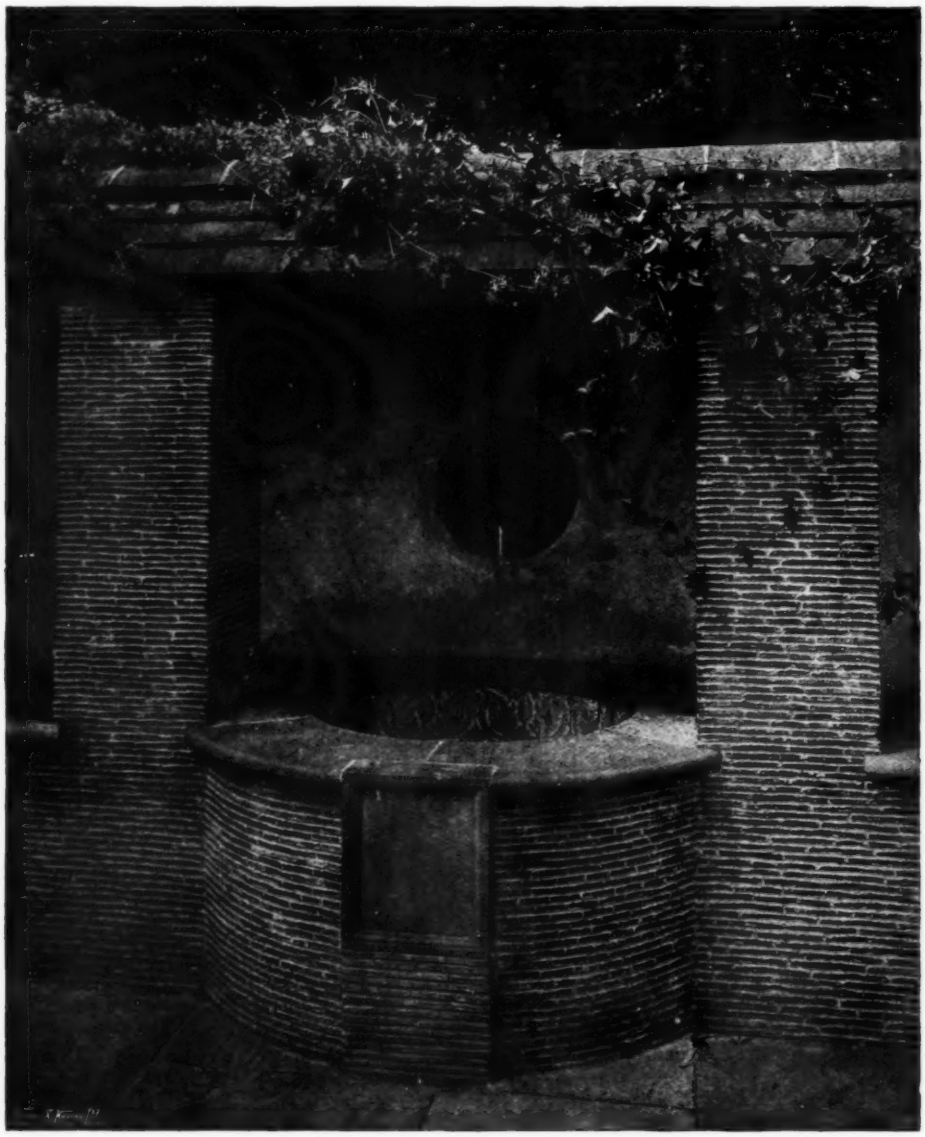


Versailles: Le Petit Trianon. [*From* Architecture., *by A. L. N. Russell.*]

boundary lines are ill-defined, sometimes altogether obliterated. Between spheres of "technical" and "popular," history and romance, ancient and modern, decoration and structure, theory and practice, barriers have worn very thin. Even, paradoxical though it may seem, the border-line between building and absence of building is already crumbling. For the scientific art known as town planning is concerned simultaneously to encourage and to restrain, even to forbid, building in areas where it operates. Captain Reiss has added a *Town Planning Handbook* to the literature of the subject, and three *Regional Planning Schemes*—Leeds and Bradford, Lancaster and Morecambe, and Chesterfield—have appeared, while *Site Planning at Welwyn Garden City* (de Soissons and Kenyon) shows theory in operation.

At one end of the vast area within our view stand technical works, but nowadays even books concerning structure and materials from the technical view-point are not limited in their appeal to architect and builder, engineer and surveyor. Barriers here have been razed since "damp-course" became a catchword in the ladies' papers, and concrete made its debut into the circles of garden ornament. One may venture, however, to place the *Concrete Year Book* in a definitely technical category, while the new and revised edition of F. Walker's manual on *Brickwork*, and *Modern Plasterwork Design*, by G. P. and G. E. Bankart, a series of a hundred large-scale drawings of plaster ceilings and their details, as well as *Elementary Building Science* (Everett) are alike designed for practical and educational purposes, as is also the second volume of *Architectural Construction* (Voss and Varney), which deals with wood construction, and *R's Method of Using Ordinary Set-squares in Drawing and Design* (H. W. Roberts).

Linking these with the still more numerous books treating of more abstract aspects, or the historical point of view, there is T. P. Bennett's *Architectural Design in Concrete*,



A tile-built fountain. By Sir Edwin Lutyens. [*From* Garden Ornament, *by Gertrude Jekyll and Christopher Hussey.*]

examining the great possibilities of the material for old and new forms, practical and æsthetic purposes, and for varying circumstances. *Reinforced Concrete Bridges*, by W. L. Scott, also makes an opportune appearance. The latter touches the general public closely, both as users of the highways and as lovers of the countryside, where much of the new bridge-building is inevitably taking place. Associated with problems of construction and materials is the study of *Earthquakes and Building Construction*, in which C. R. Ford, a competent citizen of realms of science and art, of engineering, architecture, geography, and seismography, reveals the interaction between them, and demonstrates some of the principles of harmonious accord. The alliance of science and art in regard to earthquake security is still far from consummation, however, just as architecture and acoustics have not yet come to a complete understanding.

During the past twelve months a sheaf of books have reminded us of the important fact that it is not alone the physical world in which buildings arise, nor even simply the material needs of mankind that affect them, but the spirit, creed, and social outlook of man are potent factors in the development of his arts and crafts. Each of these books contribute to the store of background knowledge without which art can be only incompletely understood. Some of the books have specific bearing on architecture; some are far broader in their range. Among the latter, Dr. Clapham's first volume of his *Economic History of Modern Britain* is limited in point of time to thirty years, but it throws considerable light, for example, on housing conditions and questions of transport of a century ago. Such questions are too often regarded alternatively as present-day novelties or as problems as old as humanity, and too seldom envisaged as part of a living chain of causes and effects. As a contrast to the early railway age in England may be set the translation of Fulop-Miller's study of *The Mind and Face of Bolshevism*, which reveals something, not only of tendencies and theories of modern Russian art defying established conventions and even natural laws, but principally giving an insight into the mind of a nation endeavouring to express itself in such forms. Wyndham Lewis's *Time and Western Man*, and other works revealing modern outlook from various view-points, may be mentioned here. An Austrian architect, R. J. Neutra, offers an answer to the question *Wie Baut Amerika?* Building expression is the principal symptom he examines, but here again the mentality of a people of a given time and place is indicated as the ultimate origin of forms, means, and methods. In *American Architecture of the Twentieth Century*, by Oliver Reagan, the American view-point is presented. A second edition has appeared of E. B. Havill's *Indian Architecture*, and it is noteworthy that its sub-title refers not only to structure and history, but to the "psychology" of the national types with which it is concerned. The falling barriers between east and west, and north and south are emphasized by the publication in Stockholm of *Imperial Palaces of Pekin*, by Osvald Siren. The book indicates not only how calamitous for Chinese art a too rapid westernizing may be, but also how lessons in good taste, harmony, and repose may be learnt from China by the modern western world, so ready to offer speed, social change, and constructional novelties to the Orient. An interesting light is thrown by W. H. Kilham's *Mexican Architecture of the Vice-regal Period* on the influence of that phase of severest autocracy upon modern democratic America, which cannot avoid contact with the progeny of two exuberant types of art, the Spanish and the native Mexican.

Sometimes a book treats of the arts considered as products consequent upon certain social and historical or geographical conditions. This line is followed in *Art in Greece*, by A. de Ridder and W. Deonna (one of the volumes in the "History of Civilization"), also in J. Pijoan's *History of Art*, an almost equally ambitious undertaking. In the same category may be placed several new editions of well-established works, such as Anderson and Spiers' *Architecture of Ancient*

Cologne: A restaurant built over the tower of the old port.
[*From* Architectural Design in Concrete, *by T. P. Bennett.*]

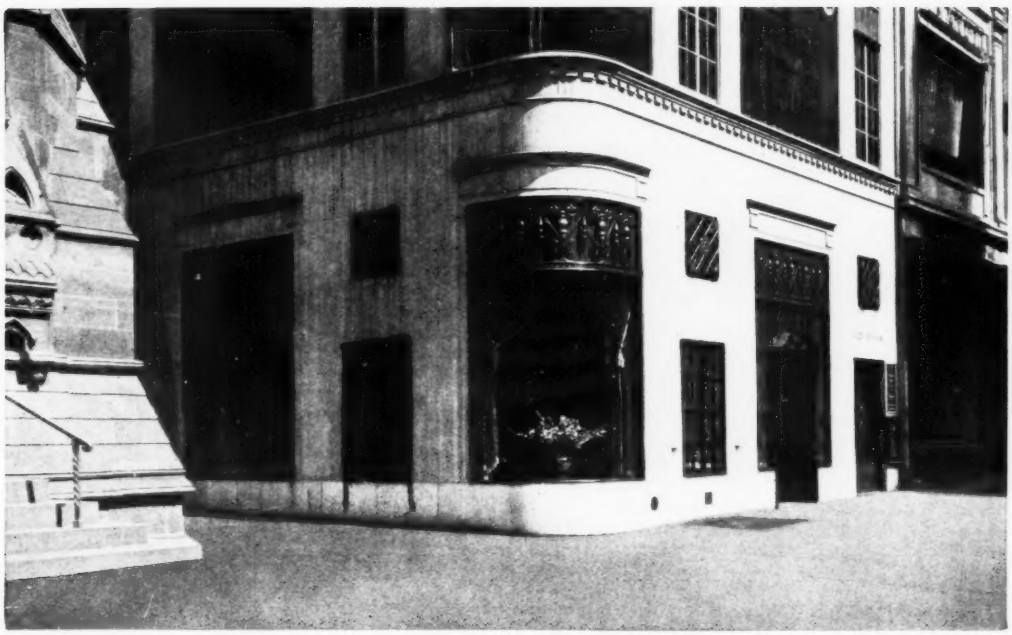
View of part of the remains of Pompeii from the south (from a model).
[*From* The Architecture of Ancient Rome, *by Anderson and Spiers.*]

Rome, Ward's *Renaissance in France*, and Anderson's *Renaissance in Italy*, as well as Statham's *Short Critical History of Architecture*. Sometimes, as in the case of *Home Life in History*, by John Gloag and C. Thompson Walker, the arts take a secondary place, but an inevitably important one as resulting from conditions and changes with which the book is primarily concerned. This is but one example of books, with a more popular appeal than some, contributing to the literature of the arts and crafts as part of a living whole. It is natural that the former of the two types of architectural history-book should predominate, since the artificial barriers between art and life in theory have stood so long that the notion of architecture and the allied arts as consequences, not as isolated facts, is a comparative novelty, and therefore calls forth more voluminous investigation today because of former neglect. Nevertheless, it is impossible to dispense with the detailed record and examination of certain aspects, periods, and manifestations; and so, although regard is had to the relation of parts to the whole, yet such parts receive due individual attention. For example, *English Homes*, by H. Avray Tipping, treats of one period and subject, while the new volume of the *Practical Exemplar of Architecture* continues to give detailed examples, mainly of the seventeenth and eighteenth centuries, together with measured drawings, under the editorship of Mervyn A. Macartney. *The Art and Craft of Garden Making* (T. H. and E. P. Mawson), of which a fifth edition has appeared, is an instance of how a book can provide simultaneously for enjoyment and for practical reference purposes.

Related to house and garden subjects in general are two records of particular experiments, one in *Over Frays*, in which Mrs. Naylor-Davidson describes certain original schemes and arrangements within the house; the other is *Das Haus in der Landschaft*, in which F. A. Breuhaus describes an experiment in making a particular house conform to the character of a particular landscape. Another German contribution to the literature of the dwelling-house is *Die Schöne Wohnung*, by Hermann Muthesius, in which the modern German interior is displayed with its note of simplicity, richness and occasionally bizarre originality. In addition mention must be made of *English Chimneypieces*, by G. C. Rothery, an interesting detail of domestic architectural detail; of *Norsk Prydkunst* (Arneberg and Bull), in which much of the fine craftsmanship embellishing common objects in peasant homes of Norway is attributed to the desire for self-expressive leisure occupation in the long dark evenings of the north; and of *Le Manufacture de Jouy*, by Henri C. Pouzet, dealing with fabrics for furnishing and clothing. Intimately concerned also with the home is H. P. Shapland's two volumes on the *Decoration of Furniture*, in which methods of embellishment are traced from the elaborate Oriental cabinet to the oak settle whose charm lies in its simple fitness for function.

Among English books on more abstract and analytical subjects appears *Architectural Style*, another of A. Trystan Edwards' characteristic books. The outstanding expression of modern thought on architectural tendencies is Le Corbusier's *Towards a New Architecture*, already widely read and discussed in the English version by Frederic Etchells; while *Die Proportion in Antike und Mittelalter*, by Moessel, with its ingenious application of analysis by mathematical formulæ to the beauties of buildings of the past, and Adler's volume, *Vom Wesen der Baukunst*, discussing architectural values, are equally indicative of phases of thought by which architectural subjects are being tested today.

The realization of present-day problems is no less evident than the presentation of theories and of past history. A timely work on *Shop Fronts*, edited by Frederick Chatterton, brings before public and practitioner a subject of immense



importance and interest to both. A third and enlarged edition of Sir Lawrence Weaver's *Cottages : Their Planning, Design and Materials,* includes the important developments since the war, and studies both town and country points of view.

Among other matters to which public attention has been drawn during the past year is the *Defective Condition of the Stonework at the Houses of Parliament*, and the *Memorandum* on the subject is of practical general application as well as stating a particular case and suggesting remedies. Canon

Above, a restaurant in Fifth Avenue at 46th Street, New York. By William Van Allan. [*From* Shop Fronts.] *Below, the Hofbibliothek, Vienna.* [*From* German Baroque Art, *by Sacheverell Sitwell.*]

Alexander's collection of addresses on *The Safety of St. Paul's* is of an entirely different character. The condition of the Cathedral makes appropriate the publication of *Drawings of St. Paul's*, by F. E. Poley, and the activity of the Wren Society is evidenced by the issue of their fourth volume, which contains drawings of *Hampton Court Palace* by Wren and Grinling Gibbons. A propos drawings as a means of expressing projected buildings and of recording details of existing ones, mention must be made of William Harvey's practical little handbook on *Models of Buildings*, in which the case for using models as a supplement to, and sometimes even a substitute for, architectural drawings is ably stated.

A book of small size but great practical worth and topical interest is M. S. Briggs' *Rusticus, or the Future of the Countryside*. The same author's weightier volume on *The Architect in History* is the result of much research and sympathetic approach to a subject of interest to architect and general reader, to whom the " human element," is of increasing appeal. Interest in artist as well as art is seen also in several studies of individuals, among them are books on *John Flaxman*, on *William Walcot*, and on *Dr. H. P. Berlage Bouwmeister*, a Dutch architect; while *Enrico Glichenstein e la Sua Arte* is a study of a versatile artist, primarily a sculptor, for whom barriers were non-existent between his primary art and those allied with it, yet for whom a common solvent of problems of art theories was still to seek. Among recent books demonstrating the essential unity of architecture and the other arts, while admitting an individual dignity to each, may be placed *Decorative Sculpture*, by Georg Kowalczyk; *The Art of Decorative Painting*, by Walter Bayes; and Eric Gill's lecture on *Architecture and Sculpture*. An American book on *Appreciation of Sculpture*, by Lorado Taft, and two books on particular phases of the subject—*Die Deutsche Bronzes Tatuetten der Renaissance*, by Simon Meller, and *English Gothic Foliage Sculpture*, by Samuel Gardner—offer useful aids to better understanding and appreciation.

Of the books relating to particular localities, one of the most prominent is Beresford Chancellor's *Disappearing London*; while, on a smaller scale, *Georgian Norwich*, by S. Wearing, is an example of the increasing study of local features. Ian Gordon Lindsay breaks new ground in *Cathedrals of Scotland*, and Mackay Mackenzie in *Medieval Castles in Scotland*. *Architektur und Kunstwerbe in Alt Holland* is one of a series of outlines concerning arts and crafts in various lands, while *Stained Glass Tours in Germany, Austria and the Rhinelands*, by T. H. Sherrill, concentrates on one subject in a wide area, as does also *Gotische und Barocke Holzkirchen in den Karpathenlandern*, by W. R. Zaloziecky, on a little-known element in the development of mid-European building.

This survey would be incomplete without a comment on the significant fact that not only the newspaper but also the modern novel finds a place for architecture. It would seem to herald the ultimate fall of the remaining barriers between art and life.

MODERN DECORATION

[BY G. G. WORNUM]

As artists we are interested in the art of the whole world, and with our easy facilities for travel, photography, journalism, and research we find, perhaps, our greatest impetus in studying the other man's art from our point of view. But there are dangers in this which we do not always avoid. The most highly developed centre of touch, in a baby, lies in its mouth, hence its irresistible impulse to bring everything to it, regardless of the object being edible or not. We, too, confuse ourselves in what we can assimilate, and what we cannot, upon our first coming in contact with unfamiliar ideas.

Claude Debussy once remarked to a friend, that the perfectly sensitized artist should be able to hear a rose and smell a song. Debussy was enlarging on Berlioz' dictum that a musician should be able to hear the orchestra and visualize the score at the same time, recalling a dual function also expected of the architect in conceiving plan and realizing elevations of his building. Though a trifle far-fetched, Debussy's remark embodies a valuable suggestion. We should be careful to submit any work of art to more than one of our senses. Unfortunately, many of us merely submit a new idea to our sense of novelty, and if that is pleased we are satisfied. But a new idea to be good must do more than that, it must suitably serve a purpose, as well as give pleasure. And the danger with a great many modern forms is that they are attractive for their difference, rather than for their improvement in serving a specified purpose.

The above are extracts from a lantern lecture before the Architectural Association on Monday, January 2.

Art has many mysterious qualifications, which have produced volumes of definitions throughout the ages, but it would appear that whatever art is, it must be representational of something. I suggest that these representational ideas are the chief basis for classifying styles, nationalities, and historical periods. A medieval chalice, for instance, may be found to be decorated with all the emblems of stone vault, buttress, and pinnacle, though made of thin metal, or it may assume the form of a vase surrounded by realistically modelled saints. In each case there is a representational idea, though one of sentiment only. We can find an antique vase, on the other hand, based entirely on abstract geometrical forms springing from the religious mysteries associated with those symbols. Its counterpart today would be a design of somewhat similar abstract forms, but springing from the geometric parts of machinery which are more and more dominating our thoughts. But bear in mind that though these two vases may be abstract in design they are both representational art, and though they are similar in appearance the sources of inspiration are entirely different.

In this use of geometrical abstract forms, the modern West is not only meeting the Ancient East in one common language of æsthetics, but it is finding its most modern expression in the most archaic forms.

At the same time ours is an age when the middle classes dominate the world, and the greatest output of our arts is to serve the tastes and purposes of comparatively small and unimportant people, either individually or as whole communities. Any important developments, therefore, exist

REPRINTED FROM "THE TIMES," DECEMBER 15.

BENHAM AND SONS, LTD.

136TH YEAR OF THE BUSINESS

A RECORD NET PROFIT

PROFIT-SHARING RESULTS

The ANNUAL GENERAL MEETING of Benham and Sons, Limited, was held yesterday at the registered offices, 66 Wigmore Street, W.

Mr. STANLEY J. BENHAM (managing director) presided.

The following is the official report:

The CHAIRMAN said: It will be a source of gratification to all of us that in this, the 136th year of our business, at a time when the general trade of the country has been distinctly bad, and when the first half of the year was affected by the coal strike, our net profit has beaten all previous records. Our turnover is £30,000 up on last year, and more than 50 per cent. higher than four years ago.

SUCCESSFUL ESTIMATES

We are fortunate in two things—the great advance in the adoption of central heating in recent years, and the increase in the hotel and restaurant habits of all classes. So far as we are concerned, both cooking and heating have been, and still are, on the increase, and owing to the keenness and efficiency of our staff we have been able to reduce our costs to figures at which we are successful in a large proportion of our estimates, at the same time maintaining our reputation for high-class work.

It is interesting to note that although some years ago we adopted profit-sharing, mainly, if not entirely, in the interests of our employees, our profits have considerably increased since we did so, and although we raised the basic rates of wages in our works in September 1926 entirely in the interests of the men, the works this year show better figures than ever before. These may be coincidences, but I do not think they are. It must be borne in mind that many of our men have been with us since they were boys, and others for a good long time, and they are very loyal and keen on the prosperity of the company.

I think there is no doubt that while we have maintained our regular connexion the great advance in our business is mainly due to the large increase of our clientele in the architectural profession, and this applies equally to cooking and heating apparatus. We have between 200 and 300 architects who come to us for schemes for one or both of these classes of work, and these include many of the leading members of the profession.

Dealing with the different departments, heating and cooking are so often joined in one contract that it is quite impossible to say which has made the greater progress. During the year we have opened an office at Manchester, and our representative there covers the whole of the North of England, mainly in the interests of cooking apparatus. During the year we have completed three very large kitchens—the Park Lane Hotel, Piccadilly, the Café Royal, Regent Street, and Messrs. Reece's Café at Liverpool, and I think I can claim that not only are all three installations entirely successful, but they are probably the finest in the country.

GAS AND ELECTRICITY

Comparing this year with pre-war, I should say that while coal cooking apparatus has receded, steam, gas, and electric fittings have all increased immensely. There is absolutely no comparison between our output of gas and electric cooking fittings now and the best year we had before the war, or even five years ago. I am glad to say that we have fitted up far more private house kitchens this year, and I think that the French competition, to which I referred last year, is decreasing. As I said then, if we can only get a fair chance we can almost always beat any foreign competitor.

We always have had plenty of private house heating, and we have had no lack of it this year. During the year we have obtained complete patent rights for our new "Panelite" system of invisible heating, which we have already installed very successfully in several houses. The system can be worked by either coke boilers, gas, oil fuel, or electricity, and possesses the advantage that it can be worked from an ordinary central heating installation and does not require special thermostatic control. With a growing demand for electricity as a heating agent, we can also now offer invisible electrically heated panels with withdrawable and renewable electric elements.

Our electrical department has made substantial progress, and the sales of our patent "Electro-Vapour" radiators and electric cooking apparatus are up nearly 20 per cent.

We have also made great progress in mechanical ventilation of all classes of buildings, and this has become quite a useful branch.

PENSION SCHEME

The directors have for some time had various pension schemes under consideration with a view to providing for the old age of our employees, and they are now putting a definite scheme forward for your acceptance today. This will provide pensions for all contributors at sixty-five, and the company's contributions will be limited to those years in which the net profit exceeds 8 per cent. of the capital. We, however, make an initial contribution for every contributor of forty years or more who has been in our employment for ten years. In this connexion it is interesting to recall that last year the works appointed the six senior men to express thanks for the profit bonus, and their average service worked out at forty-six years each. Five of the six had worked for us without a break, and the sixth was only away for a few months; all six are still working for us.

DIVIDEND

The directors propose to declare the usual final dividend of 6 per cent., less tax, making 10 per cent. for the year, and to add £6,000 to the reserve fund. This is now the nineteenth year in succession that we have paid the same dividend, with one trifling variation, and during the same period we have built up a reserve fund of £36,000. We propose, however, on this occasion to add a bonus of 6d. per share, less tax, to the dividend to celebrate our record year.

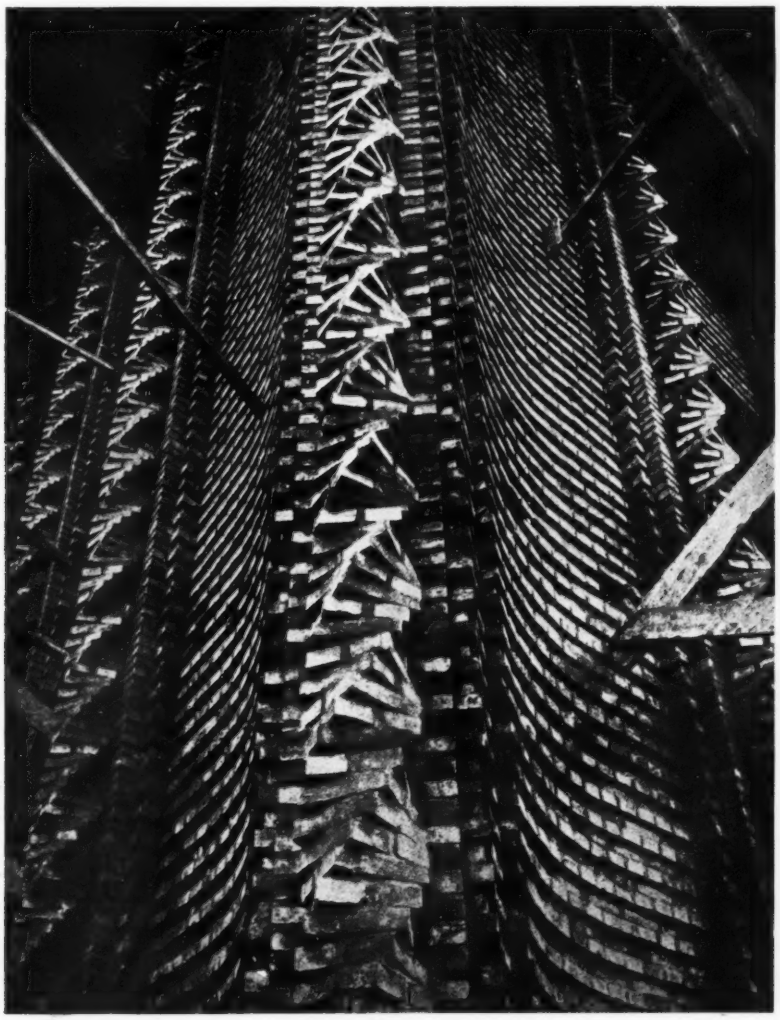
The profit-sharing scheme will this year absorb about £3,000, the start of the pension fund may cost £1,500, and the balance will be carried forward.

only in so far as democratic governments and ideals allow. One might take two examples of concerted democratic effort that are exerting considerable influence on our time. The first example is that of Sweden, whose city hall in Stockholm is one of the greatest buildings of today and has given fresh life to all the arts and crafts of the country. Sweden's ideals being national, its new-found sources of inspiration are chiefly in the revival of its long buried traditions. The democratic ideals of modern Russia, on the contrary, are in an exactly opposite direction. These ideals are to break entirely with national tradition and to start where the people find themselves now. I think that both these countries are a little too conscious of their aspirations, and that in each case the force exerted is a little too much for the load involved.

Whatever it may achieve, such tremendous vital force is the world's great requirement today. The drivers of the transports may know little of the roads, but we must offer ourselves as passengers, for we have got to start moving. These allegorical drivers of communal transport, so long as they do not wreck their machines, are the real rulers of our æsthetic life. Why it is essential for us to start moving is very easily realized. The background of tradition is so crowded in on us as to allow neither thought nor vision, and we must escape to some more open space where we can do some real straight thinking.

We have got to think out the many altered conditions of human life today. We have got new problems to face with our buildings for which no ready-made tradition lies at hand. We have to design large buildings comprising many small and diverse units: buildings on sites limited for light, air, and space, and entirely strange buildings demanded by modern industry and machinery. In actual building material and appliances we have food for straight thinking. We have at our disposal a wealth whose structural and decorative possibilities are bounded only by our imagination, and by the typical autocrat of our times, economy, who is as often as not a great encourager of invention.

Following I outline some of the factors in our mode of life today confining these more or less to their domestic influence: Reduction of servant labour; smaller meals, smaller



A detail of the rough brick construction in a factory at Hamburg. By Fritz Hoger.

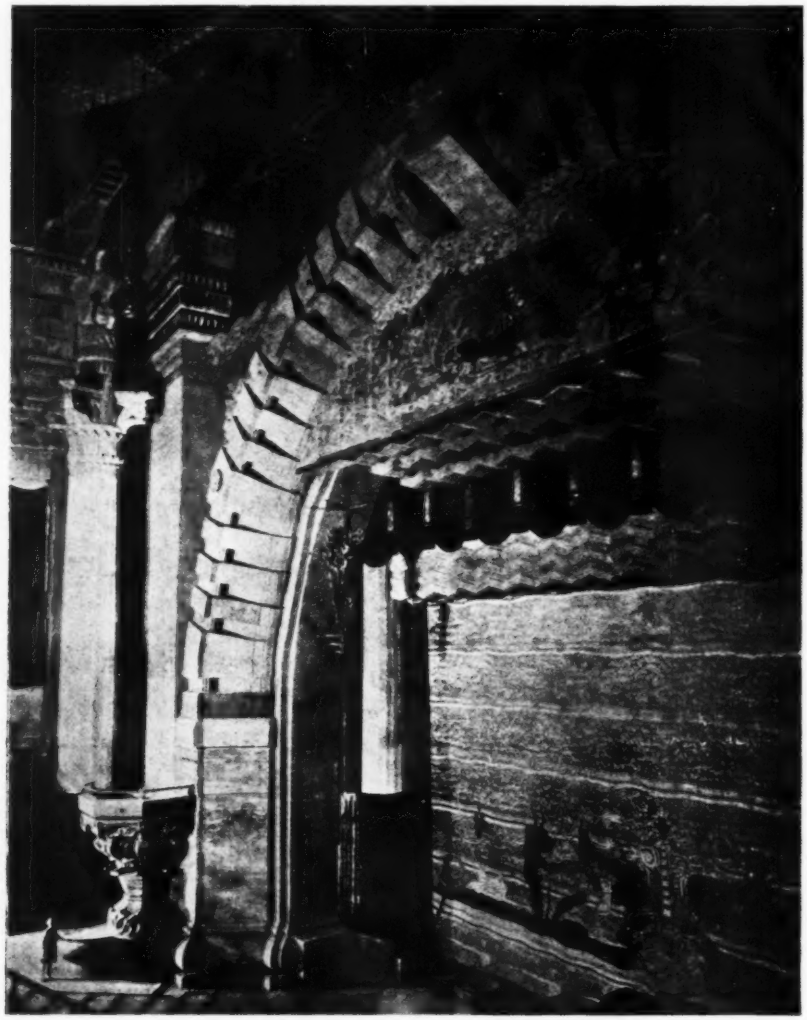
kitchens, smaller homes; larger open spaces; more daylight, better night light; better heating, ventilation, sanitation; discredit of dust-collecting features; improved fire prevention; more freedom of the sexes; drawing-room accessible to all, for smoking, drinking, and recreation; dining-room solely an eating-room; generally a more communal sense, less desire for privacy; abolition of heavily-curtained windows, high garden walls, and long, useless corridors. Then there is the strain of living itself: more noise, more speed, more mechanical occupation.

These factors create a desire for as little burden of possession as possible. They demand the dramatic for diversion, and the extremely simple for repose. Though these remarks might preface an article on modern building, it must be realized that they apply quite as pertinently to modern decoration. Decoration is a form of finish put on an object, but the less elaborate the decoration, the more decorative must be the structural form of the object itself. Structural form today, therefore, claims the attention of the decorative sense quite as much as its finish does. And this outer shell when finished again claims special attributes in the design of its furniture, fabrics, accessories, lighting, etc.

Work reproductive of old styles hardly interests most of us today except, perhaps, for the exercise of ingenuity involved in using imitative materials, confining electric light into small candle fittings, hiding the wireless set, the telephone, the radiator, the passenger lift, and the sanitary fittings, graining our plaster to look like wood, casing our steel to look like marble. This reproductive work has got to be discouraged. The desire of a man or woman to retire at times into an old-world atmosphere is understandable and not unreasonable, but many people choose such an environment through indolence of thought.

We owe the duty to each other as architects, and also to our friend the painter, sculptor, and craftsman, to try and free our public from the anæsthetic that is daily administered to them. I believe that a surrounding of clean, clear thought must help to produce clean, clear thought; and a surrounding of crowded unrelated forms can only produce muddled thought and muddled life.

I want to trot out for a minute our friend the observer



The proscenium arch, Grauman's Metropolitan Theatre, Los Angeles. By William Lee Woollett.

marked in perspective treatises as the point "C". Now there exists today a vigorous group of philosophers known as animists. Animism holds that the observer referred to as point "C" is anything but a nonentity—he is a soul with powers of intervention that actually enable him to alter the course of observed events: much as the owner of an automatic piano may either listen to its playing or play on it himself.

For the architect, too, the potentiality of the observer is very much overlooked. His psychology and reaction should be very carefully studied.

It is positively childish to imagine that all the language, say, of a Renaissance building can convey its full meaning to the mind of an untrained observer. According to the rules of its grammar, pilasters are placed to echo columns, but the observer may merely find them annoying obstructions. The niceties of classic architecture are in an unknown tongue to the modern public, and if the architect is really to give the service due from him he has got to talk in his client's language, or his art will have no life. The shrine or temple covering a worshipped god was the one parent of architecture, and the fortress wall was the other. Every conceivable combination of the two are found in traditional architecture, and buildings were more often than not tortured into serving these traditions, and in their inefficiency they were tortured uselessly.

The interior decoration was in most cases a representation of the exterior features, the portico and roof cornices being faithfully copied. Neither shrine nor fortress mean much to our æsthetic sense today, nor for that matter much in our daily life. Our worship is not of images, and we leave the matter of fortresses to the Government and the League of Nations.

The walls of our cities are smeared with writing in a dead tongue, and furrows are being made for our footsteps to follow in the path of our ancestors; but, to borrow a mixed metaphor from a friend, we must throw up the plough and put our hand to the sponge!

DISTRICT SURVEYORS IN LONDON

The following list of district surveyors in London will be found useful if kept for office reference:

DISTRICT.	SURVEYOR AND OFFICE.	TELEPHONE NUMBER.
Battersea	Horace Cubitt, 233 Lavender Hill, S.W.11	Battersea 4218
Bermondsey ..	A. C. Meston, Bank Chambers, Tower Bridge, S.E.1	Hop 0558
Bethnal Green ..	F. E. Mennie, 311 Cambridge Road, E.2	Avenue 3187
Camberwell ..	A. P. Stokes, 173 Herne Hill, S.E.24	Brixton 3445
Chelsea	T. S. Hosking, 4 Sydney Street, S.W.3	Kensington 2115
City of London, East and West	John Todd, 7 Camomile Street, E.C.3	Avenue 8711
Clapham	W. Grellier, 188a High Street, S.W.4	Holborn 5523
Deptford	A. E. Mayhew, 329 New Cross Road, S.E.14	New Cross 0890
Finsbury	John Dovaston, 379 St. John Street, E.C.1	Clerkenwell 9232
Fulham	W. H. Rogers, Broadway House, The Broadway, S.W.6	Western 2390
Greenwich ..	A. A. Fillary, Borough Hall, Royal Hill, S.E.10	Greenwich 0155
Hackney East ..	H. R. Chanter, Westminster Bank Chambers, 20 Amhurst Road, E.8	Clissold 7302
Hackney West ..	W. G. Whincop, Westminster Bank Chambers, 20 Amhurst Road, E.8	Clissold 7685
Hammersmith ..	A. L. Woodward, 18 Queen Street, W.6	Riverside 1922
Hampstead ..	J. E. Mundell, 305 Finchley Road, N.W.3	Hampstead 8794
Holborn	W. G. Perkins, 11 Gray's Inn Sq., W.C.1	
Islington	E. W. Lees, 407 Holloway Road, N.7	North 1561
Kensington North	G. Tolley (Interim), 96 Westbourne Grove, W.2	Park 2799
Kensington South	H. A. Legge, 113 Earl's Court Rd., S.W.5	Frobisher 4739
Lambeth North ..	P. J. Black, 69 Kennington Oval, S.E.11	Reliance 2185
Lambeth South ..	F. P. Watson, 365 Norwood Road, S.E.27	Streatham 6370
Lewisham East ..	E. A. Young, 155 Rushey Green, S.E.6	Lee Green 1507
Lewisham West ..	A. H. Verstage, 1 Waldram Road, Forest Hill, S.E.23	Sydenham 1938
Paddington ..	G. Tolley, 96 Westbourne Grove, W.2	Park 2799
Poplar	C. Kennard, 135 Bow Road, E.3	East 5051
St. Marylebone East	H. Greig, 1 Newman Street, W.1	Museum 0681
St. Marylebone West	H. T. Bromley, 117 Crawford Street, W.1	Ambassadors 9777
St. Pancras North	H. E. Watkinson, 272 Kentish Town Road, N.W.5	Hampstead 1626
St. Pancras South	H. H. Young, 14 Percy Street, W.1	Museum 1867
Shoreditch ..	C. C. Knowles, 124 Shoreditch High Street, E.1	Central 1455
Southwark ..	R. H. J. Mayhew, 14-16 New Kent Rd., S.E.1	Rodney 3393
Stepney East ..	H. N. Kerr, 1 West Arbour Street, Commercial Road, E.1	East 1109
Stepney West ..	F. W. C. Barker, 130 Whitechapel High Street, E.1	Avenue 7480
Stoke Newington	W. G. Whincop (Interim) 171 Church Street, N.16	
Wandsworth East	A. G. Morrice, 1 Drewstead Road, S.W.16	Streatham 1186
Wandsworth West	P. Ion Elton, 85 High Street, S.W.18	Battersea 4537
Westminster East	O. C. Hills, 60 Haymarket, S.W.1	Gerrard 4553
Westminster West	C. W. Surrey, 9 Woodstock Street, W.1	Grosvenor 3088
Westminster South	L. A. D. Shiner, 34 Buckingham Palace Road, S.W.1	Victoria 5386
Woolwich North	T. P. Tinslay, 21 William Street, S.E.18	Woolwich 1364
Woolwich South	E. A. Young (Interim), 21 William Street, S.E.18	Woolwich 1364

LAW REPORTS

DISPUTE AS TO LIGHT

Forster v. *Smith. Chancery Division. Before Mr. Justice Russell*

This action concerned a dispute as to the extent to which a screen erected to secure privacy deprived an adjoining occupier of light. Mr. H. Forster, the plaintiff, resides at The Cottage, Royal Lane, Hillingdon, Middlesex, and he brought his action against Mr. A. V. Smith, the defendant, an adjoining resident, for an injunction to restrain him from causing an obstruction to the light on the north side of plaintiff's house, The Cottage.

Mr. G. B. Hurst, K.C., for the plaintiff, said his client's premises were an old cottage, which contained a little room originally used as a china pantry which had a small window. Col. Finnis, landlord, made considerable alterations and renovations in The Cottage, and the pantry was converted into a scullery. The smaller pantry window was now included in the larger scullery window. The defendant had business premises with a back sitting-room, and the plaintiff's ground of complaint was that the defendant had erected an asbestos screen with iron frame close to the window, which blocked out the light and deprived the plaintiff of the light he was entitled to.

Plaintiff gave evidence in support of his case, and Mr. O. Cockerill, M.B.S.A., was called as his expert witness.

Mr. Owen Thompson, K.C., for the defendant, said his case was that the old pantry window was not included in the new window. With regard to the screen, the defendant erected it in order to secure a certain amount of privacy, as when the defendant's window was open the plaintiff could hear all that was said in defendant's room. His client also set up an agreement with regard to the screen, viz. that it was to be kept down when the plaintiff's window was shut.

Defendant gave evidence, and Mr. W. L. Hughes, F.R.I.B.A., was called on his behalf.

His lordship said he came to the conclusion that the screen caused an obstruction to the plaintiff's premises and deprived him of light and air. He granted plaintiff his injunction, with costs.

DI PUTED RIGHT OF WAY

Taylor v. *Hyde. Chancery Division. Before Mr. Justice Clauson*

This was an action over an alleged right of way over vacant land at Great Bridge Street, West Bromwich. The plaintiff, Miss E. Taylor, said she was the owner of the land, and alleged that the defendants, Mr. R. A. Hyde and his wife, had no right over it, and she asked the Court for a declaration that she was the owner of the land and that the defendants had no right of way over it.

Mr. Jolly, K.C., for the plaintiff, said his client's complaint was that the defendant, Mr. Hyde, had been taking a motor lorry to a gap in the garden wall and going over the land. The only right of way which existed was to cottages at the rear of the gap which used to be filled up with old pots. Plaintiff's case was that the public had obtained no right of way over the land.

Mr. Byrne, for the defendants, said his case was that Mrs. Hyde's predecessors in title had used the right of way to the gateway for upwards of forty years.

Mr. C. E. M. Fillmore, A.R.I.B.A., gave evidence for the defence.

His lordship dismissed the action, with costs. He had examined the deed, and to his mind plaintiff had no title to the open space. So far as he could see, the conveyance to her predecessors gave her no title, but it was alleged that by acts of ownership of her predecessors they had acquired not only possession of it but ownership. In January last, just before the action, there was a conveyance to the plaintiff from other members of her family which professed to convey the ownership of the open space, but he took no notice of it. He held that the defendants had established long enjoyment of the right of way they claimed. As to the possession point, he was far from convinced that plaintiff ever had possession, although perhaps she claimed a general right over it, more than any other neighbour.

CORRESPONDENCE

BUILDERS AS CLIENTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I have been interested in reading your leading article on "Builders as Clients." The suggestion you put forward is worth careful consideration.

The facts are these: On the one hand, there are being built, all over the country, in increasing numbers, houses and bungalows which, to put it mildly, are no credit to any one concerned, without reference to any properly considered layout plan or amenity. Beautiful estates and fine sites are being ruined for want of a little intelligence, foresight, and good taste, and in many districts the charm of rural England is being destroyed for all time. On the other hand, we have a well-trained body of qualified men and women in the architectural profession ready and willing to assist in the preparation of schemes which would give much greater satisfaction to builders, purchasers, and the public. The problem is, how to convince those who build that it is worth while to employ an expert; how to bring together those capable of doing the work and the work which needs to be done.

As you say, the hands of qualified architects are tied; and rightly, so individual action will not meet the case. The alternative is obviously collective action. I agree with you in thinking the time has arrived for a definite pronouncement to be made and a scheme formulated and that the whole subject should be given the widest publicity. It is not denied that the conditions attaching to a large proportion of the building development in this country are very unsatisfactory. If it is not the architect's business to call attention to these facts, whose responsibility is it?

H. C. LANDER

THE HOUSE WE LIVE IN

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I was very interested in Karshish's advocacy of making the front door and stairs open direct into the living-room of a small house, as for eight years I lived in a cottage (designed by a well-known architect) that was planned exactly as he describes, even to the "projecting gable."

We found the direct front door very objectionable indeed, because many people come to the front of a house that do not wish to come in, and yet a short conversation with them is necessary. This means standing with the door open, which is very unpleasant for other people in the room if the weather happens to be cold or windy. I think the next condition—i.e. for a house to be really labour-saving all meals ought to be taken in the kitchen—is right, for if food, crockery, etc., have to be moved from one room to another three or four times a day, no system of trolleys or double-fronted cupboards can avoid more than a fraction of the labour involved in serving meals.

J. C. TICKLE

THE BUILDINGS ILLUSTRATED

Following are the names of the contractors and some of the sub-contractors of some of the English buildings illustrated in this issue:

147-8 Leadenhall Street, E.C., for Messrs. Grace Bros. & Co., Ltd. (page 41). Ashby and Horner, Ltd., general contractors, who were also responsible for the excavation, tiles, stoves, stair-treads, and plaster; Power's and Deane Ransomes, Ltd., structural steel; G.E.C., electric light fixtures; John Bolding and Sons, Ltd., sanitary fittings; Fenning & Co., marble; Express Lift Co., lifts.

Head Offices of the Midland Bank, Ltd. (page 38). Holland and Hannen and Cubitt, Ltd., building managers; Rice and Son, builders; Redpath Brown & Co., Ltd., constructional steelwork; Automatic Sprinkler Co., fire alarms and hydrants; Chatwood Safe Co., Ltd., strong-rooms; Ruston and Hornsby, Ltd., boilers; B.R.C. Co., designing and supplying reinforcement; Docker Brothers, Ltd., finishing of floors; Higgins and

Griffiths, Ltd., electric installation; H. T. Jenkins and Sons, Ltd., marble work; Henry Hope and Sons, Ltd., steel and bronze windows; G. Jackson and Sons, Ltd., fibrous plastering; Express Lift Co., lifts (major portion); Medway's Safety Lift Co., Ltd., book lift; A. and P. Steven, Ltd., lorry lift; May Construction Co., Cabot quilt ceilings; W. Nicholson and Son (Leeds), Ltd., internal joinery; J. Whitehead and Sons, Ltd., marble structural work; H. H. Martyn & Co., Ltd., tapestry on board-room and entrance gates; Benham and Sons, Ltd., kitchen plant; Luxfer Co., copper light glazing.

Charterhouse War Memorial School Chapel (page 59). Trussed Concrete Steel Co., Ltd., reinforced concrete engineers; Ames and Finnis, roofing tiles; Guildford Glassworks, lead light glazing; Grierson, Ltd., electrical installation; Osler and Faraday, Ltd., electric light fittings; John Daymond and Son, Ltd., stone carving; J. Whitehead and Sons, marble portion of reredos.

Friends' House, Euston Road (page 60). Grace and Marsh, Ltd., general contractors; Dorman Long, Ltd., steelwork; Patent Impervious Stone and Construction Co., granitic cast stone and paving; Claridge's Patent Asphalt Co., Ltd., asphalt; British Thomson-Houston Co., Ltd., electric fittings; Gilbert Allom, large meeting-house lighting; George Wragge, Ltd., steel windows; Adamsez, Ltd., sanitary goods; Drytone, Ltd., joinery; May Construction Co., Ltd., acoustic plaster; seats and gallery panelled in British Columbia pine (Drytone process); A. E. Davis, door furniture; London Brick Co. and Forders, Ltd., bricks.

Scottish National War Memorial (page 61). Stuart's Granolithic Co., reinforced concrete; figure of St. Michael carved by W. and A. Clow; J. W. Singer and Sons, processional frieze.

Eleventh Church of Christ Scientist, London (page 62). Dove Bros., Ltd., general contractors, who were also responsible for the oak pew seating; May Construction Co., acoustic plaster, Cabot quilting, installation to floors and ventilating ducts; Dorking Brick Co., bricks; Bath Artcraft, Ltd., and E. G. Garton, electric fittings; Bell's United Asbestos Co., rubber tiling floor; Bath Artcraft, readers' desks and chairs; Benham and Sons, Ltd., heating and ventilating; Comyn Ching & Co., Ltd., ironmongery; Express Lift Co., lift; Williams Gamon & Co. (Kaleyards), Ltd., metal casements; Hopton Wood Stone Firms, Ltd., stone paving; Burke & Co., marble paving; Ames and Finnis, roofing tiles.

Building for Messrs. Atkinson, Ltd., 24 Old Bond Street, W. (page 63). Roome & Co., general contractors, who were also responsible for the demolition, excavation, foundations, and office fittings; A. D. Dawnay and Sons, Ltd., structural steelwork; Luxfer Co., patent glazing; Hetley & Co., glass; Norman and Underwood, cast lead; Grierson, Ltd., electric wiring; G. Jackson and Sons, decorative plaster; Waygood-Otis, Ltd., lifts.

Wrigley's Factory, Wembley (page 65). A. Roberts & Co., Ltd., contractors; Henry Hope & Co., sashes; Trussed Concrete Steel Co., Ltd., reinforced concrete engineers; Haywards, Ltd., castings.

Carlton Theatre, Haymarket (page 67). Arthur Vigor, Ltd., general contractors; F. H. Pride, lay lights; Expanded Metal Co., Expamet work; J. W. Gray & Co., lightning conductors; Thomas Faldo & Co., asphalt; Novocrete and Cement Products, steppings to Royal circle; Davey Paxman & Co., boilers; Berkeley Electrical Engineering Co., electric wiring and electric light fixtures; General Electric Company, cyclorama and Schwabe-Hasait lighting apparatus; Carrier Engineering Co., ventilation; A. Grant and Sons, plumbing; John Bolding and Sons, sanitary fittings; J. A. King & Co., pavement lights; G. Jackson and Sons, decorative plaster; Fenning & Co., marble; Waring and Gillow, textiles and furniture; Pollard & Co., pay-boxes; Waygood-Otis, Ltd., lifts.

Glasgow Herald Building, 56-57 Fleet Street, E.C. (page 67). Bovis, Ltd., general contractors, who were also responsible for the oak panelling and other joinery; James Gibbons, Ltd., bronze work and door furniture; G. and A. Brown, Ltd., and Cashmore Art Workers, decorative plaster; Fenning & Co., Ltd., marble work to exterior, entrance and staircase, and cast lead lettering; British Thomson-Houston Co., Ltd., electric light fittings and floodlight equipment; J. W. Singer and Sons, Ltd., bronze floodlight brackets; Stevens and Adams, oak block flooring; John Elbo, cork tile flooring; Glasgow Engineers, Ltd., electric lift; A. D. Dawnay and Sons, Ltd., constructional steelwork; Fred. L. McGhee & Co., electric lighting; May Construction Co., Ltd., Cabot's quilt ceiling to wire room; Prince's Electrical Clocks, Ltd., electric clocks; Lamson Pneumatic Co., Ltd., automatic carrier.

TRADE NOTES

The Davis cinema (Mr. R. Cromie, F.R.I.B.A., architect), now in course of construction in High Street, Croydon, will be the largest cinema in Europe. Cast stone is being used for the major portion of the front elevation. It seems that the precedent created by Messrs. Granger and Leathart, who used cast stone in their Kensington cinema (drawings of which were recently exhibited at the Royal Academy), is now becoming part of modern architectural practice. This is also shown by the adoption of high-class cast stone in the front of the new Empire cinema in Leicester Square, by Mr. Lamb of New York. In each case the cast stone was supplied by the Patent Impervious Stone Co. of Lea Bridge Road.

There was an increase of over 1,000 patent applications last year beyond those of 1926. It is the best year since 1922. Messrs. Rayner & Co., the London patent agents, also inform us that electrical inventions are largely in evidence, due no doubt to the Government scheme for electrification of the country. The building trades are well represented by improvements, both as to utility and reduction of prices.

"Science and the necessities of modern times," runs the foreword to Messrs. O'Brien, Thomas's new catalogue, "have revolutionized the hearth fire, but we have endeavoured to show how unnecessary it is to sacrifice beauty upon the altar of efficiency." Everyone knows the fireplace that looks very handsome but fills the room with smoke, or the fireplace that does not fill the room with smoke but looks primitive from the point of view of appearance. Messrs. O'Brien, Thomas give us illustrations of the handsome *and* the smokeless fireplace. In the same catalogue are included examples of the baths and bathroom arrangements which can be seen in wider range in their well-known showrooms, 17 and 18 Upper Thames Street, London.

A fireplace suite. By O'Brien, Thomas & Co.

THE WEEK'S BUILDING NEWS

The L.C.C. is to prepare plans for the extension of the Manor Asylum, EPSOM, to accommodate an additional 180 patients.

*

The L.C.C. has voted £50,000 for the acquisition of property for the clearance of the slum areas of Basing Place and Blue Anchor Lane, CAMBERWELL.

*

The BERMONDSEY B.C. has obtained sanction to a loan of £13,750 for extensions at the central library in Spa Road.

*

The WEST HAM Corporation has under consideration proposals for the extension of the Goodmayes asylum.

*

The GLASGOW Education Committee has acquired sites at Possilpark, Ruchill and Knightswood for the erection of three elementary schools.

*

Plans passed by the WEYMOUTH Corporation: Extensions, type foundry, St. Nicholas Street, for Messrs. S. Jackson and Sons; house, Preston Road, for Universal Housing Co., Ltd.; shop and house, Lennox Street, for Messrs. Andrews and Andrews; sixteen garages, Hardwick Street, for Mr. G. Brantingham.

*

The POPLAR B.C. has discussed with the Ministry of Health the proposal for the erection of a further 108 cottages at Millwall at a cost of about £60,000, and favourable consideration is anticipated.

The POPLAR B.C. hopes shortly to be able to submit plans and estimates for the new baths and washhouses at Weston Street, Bromley, to the Ministry of Health for approval.

*

Plans passed by the POPLAR B.C.: Hall, Usher Road, for Messrs. J. Smith and Son; additions, King's Yard, Carpenter's Road, for Mr. P. C. Howison.

*

The BATTERSEA B.C. has approved plans for adapting part of the Southlands Training College for a public laundry at a cost of £13,992.

*

Plans passed by the SHOREDITCH B.C.: New buildings, site of 3-11 Hoxton Street and 39a Hoxton Square, lavatory accommodation, St. Saviour's Priory, Great Cambridge Street.

*

Messrs. Tilley have prepared a scheme for the erection of buildings on land at the rear of the Hotel Burdon, WEYMOUTH.

*

The WOOLWICH B.C. is by direct labour to erect 186 houses on the Eltham estate.

*

Plans passed by the NEWPORT (I. o. W.) Corporation: Stores and workshops, for Messrs. Wadham and Sons, Ltd., in St. James Square, for Messrs. Stratton and Millgate, architects; timber shed, West Street, for Messrs. H. W. Morey and Sons, Ltd.; bungalow, Cypress Road, for Mr. G. F. Quinton.

The SWANSEA Corporation has instructed the borough architect to prepare plans for the erection of another 100 houses on the Mayhill housing estate.

*

The YORK Corporation has agreed to co-operate with the county authority in the provision of a joint institution for mental defectives.

*

Plans passed by the WOODFORD U.D.C.: Convent school in Mornington Road; eight houses, King's Avenue; garages and stables, Prospect Road.

*

The Prime Minister of Northern Ireland (Viscount Craigavon), members of the Government and of both Houses inspected the progress made in the construction of Ulster's New Parliament Buildings at Stormont, BELFAST. The visitors were received and afterwards conducted over the building by Mr. Wm. J. Stewart, principal of Messrs. J. and W. Stewart, contractors, and by Mr. Thornely, F.R.I.B.A., architect. The New Parliament Buildings stand on 1½ acres of land, and when completed will have a floor space of approximately 6 acres. After the inspection the Prime Minister congratulated the architect for giving Ulster a building worthy of that important part of the British Empire. He also paid a high tribute to Messrs. J. and W. Stewart upon the excellence of their work. The Speaker, the Rt. Hon. Hugh O'Neill, M.P., also expressed appreciation of the work which they had viewed.

Ulster's New Parliament Buildings, Stormont, Belfast.

The YORK Corporation is obtaining property for the Hope Street unhealthy area clearance scheme.

*

The NEWPORT (I. o. W.) Corporation has purchased a site at Staplers for the erection of houses.

*

The SWANSEA Corporation is seeking sanction to grant another 200 housing subsidies.

*

The SWANSEA Education Committee has instructed the borough architect to prepare plans for the erection of the first block of the new technical college.

*

Plans passed by the GUILDFORD Corporation: Six cottages, Old Farm Road, for Mr. H. T. Chalcraft; extensions, Royal Surrey County Hospital, Ludlow Road, for Governors; alterations and additions, Prince of Wales Hotel, Woodbridge Road, for Messrs. Watney, Combe, Reid & Co., Ltd.; two shops and houses, Madrid Road, for Mr. H. Ashenden; club, Commercial Road, for Conservative Club; additions, Grenville Hostel, Mount Street, for Mr. A. J. Sullings.

*

Plans passed by BEDFORD Corporation: Two houses, Hurst Grove, for Mr. E. H. C. Inskip; two houses, Shakespeare Road, for Mr. E. H. C. Inskip; elevator shed, Caudwell Walk, for Firtree Firelighter Co., Ltd.

*

Plans passed by the TYNEMOUTH Corporation: Three shops and flats, Chirton Green, for Messrs. F. R. N. Haswell and Son; six houses, Foxton Avenue, for Mr. J. R. Wallace; eighteen houses, St. George's Road, for Messrs. H. D. Burton, Ltd.; shop, Front Street, for Mr. J. Cowper.

*

Plans passed by ST. PANCRAS B.C.: New building, rear of 2 Southampton Street and 44 Maple Street; factory, for St. Dunstan's, Raglan Street.

*

The borough engineer of SMETHWICK has prepared a layout of the Old Chapel estate providing for the erection of 494 houses, and he has been instructed to proceed with the erection of 135 by direct labour.

*

The ILFORD Education Committee has obtained the approval of the Board of Education to the plans of the elementary school to be erected at the Gearies side, at an estimated cost of £48,000, and tenders are now to be invited.

*

The ILFORD Education Committee has acquired a site in Ley Street for the erection of a central school.

*

The borough engineer of ILFORD is to prepare plans for the erection of 120 non-parlour houses on the Tomshill estate.

The ILFORD Corporation has forwarded plans for the proposed new swimming baths to the Ministry of Health for approval.

*

Plans passed by the ILFORD Corporation: Six houses, Hamilton Avenue, for Mr. H. W. Christophers; additions, 796-8 Green Lane, for Messrs. F. W. Romain and Son; ten houses, Bute Road, for Messrs. Wakeling and Smith; club room, Baptist Church, Kinfauns Road, for Messrs. Goddard; extensions, Ship Carbon Company's factory, Grove Road, for Messrs. J. T. Luton and Son; classroom, Victoria Hall, Victoria Road, for Mr. T. Anders; ten shops and houses, Eastern Avenue, for Suburban Developments, Ltd.; fourteen houses, Grove Gardens, for Mr. E. Meredith; twenty-six houses, King's Gardens, for Messrs. Haines and Warwick; church hall, Balfour Road, for Messrs. C. J. Dawson and Allardyce; eight houses, Windermere Gardens, for Mr. F. B. Harrison; six houses, Plough Cottages, for Mr. S. A. S. Yeo; eight shops and houses, Newbury Parade, for Suburban Developments, Ltd.; public-house, Newbury Park, Eastern Avenue, for Messrs. Barclay Perkins & Co.

*

The Ministry of Health has held an inquiry into the proposal of the Essex C.C. to erect new county offices at CHELMSFORD, at a cost of £91,570.

*

The BOLTON Corporation Housing Committee expresses the opinion that by way of experiment a number of houses should be erected by direct labour.

*

The borough engineer of CHELMSFORD has prepared plans for the erection of fifty-six houses in Tennyson Road, at an estimated cost of £23,000.

*

The CHELMSFORD Education Committee has instructed the borough engineer to proceed as quickly as possible with the preparation of plans for a new elementary school at Lady Lane.

*

The Board of Trade has agreed to the proposal of the MORECAMBE Corporation to construct a swimming pool in accordance with the plans prepared by Messrs. A. W. S. and K. M. B. Cross, architects.

*

The MORECAMBE Corporation is negotiating for a site of 5 acres for housing purposes.

*

Plans passed by the MORECAMBE Corporation: Alterations, shops, Albert Road and Claremont Road, for Mr. W. Geldert; two houses, Westminster Avenue, for Messrs. Huddleston and Stevens; shop and house, Euston Road, for Mr. P. Waring.

*

The CHORLEY Corporation has obtained sanction to grant a further 150 housing subsidies.

Plans passed by the UXBRIDGE U.D.C.: Shop and three houses, Cleveland Road, for Mr. W. E. Black; alterations, "White Horse," Belmont Road, for Messrs. Watney Combe, Reid & Co.; bungalow, Harefield Road, for Mr. W. E. Black.

*

The borough engineer of CHORLEY is to prepare plans for the erection of fifty houses on the Marlborough estate.

*

Messrs. J. R. Lee, Ltd., have in view the erection of thirty houses in Letchworth Drive, CHORLEY.

*

Plans passed by the CHORLEY Corporation: Ninety houses, estate off Pilling Lane, for Mr. C. W. Norris; two houses, Walgarth Drive, for Messrs. J. W. Lee, Ltd.; rebuilding, "Joiners' Arms," Market Street, for Messrs. J. Mercer, Ltd.

*

The SMETHWICK Education Committee is to build an elementary school for 1,500 children on the Old Chapel estate.

*

The SMETHWICK Corporation is purchasing 15 acres at Halford Lane for the erection of houses.

*

Plans passed by the SMETHWICK Corporation: Eleven houses, Marion Road, for Messrs. Strong Bros.; two shops, High Street, for Birmingham Co-operative Society, Ltd.; grocery stores, High Park Road, for Birmingham Co-operative Society, Ltd.; seven garages, St. Paul's Road, for Mr. E. E. Brown; workshop, Ballot Street, for Idoson Motor Cylinder Company; office extensions, Dartmouth Road, for Birmingham Aluminium Casting Co., Ltd.; alterations, Majestic Picture House, Bearwood Road, for Mr. E. Hewitson; eight houses, Woodlands Road, for Mr. J. Reece.

*

The Essex C.C. has passed plans for the erection of a nurses' home at the BRENTWOOD Mental Hospital, at an estimated cost of £21,250.

*

The NORTHAMPTON Corporation is to invite tenders for the erection of twenty-eight houses on the Baring Road site in accordance with plans prepared by the borough engineer.

*

The NORTHAMPTON Education Committee is to seek more suitable office accommodation.

*

The BOLTON Corporation has asked Messrs. Wilson Bros. to examine the timbers attacked by the wood-boring beetle at Hall-in-the-Wood.

*

The borough engineer of BOLTON has been asked to prepare plans and estimates for the erection of a branch library at Tonge Moor, utilizing the stonework from Moorfield House.

The BOLTON Corporation has obtained sanction to borrow £150,000 for further housing advances.

*

The BOLTON Corporation Markets Committee has considered the acquisition of land for market purposes in substitution for the present wholesale market place and the fish market, and asked the borough engineer to prepare plans showing the possibilities of the layout of land in the vicinity of Bessemers site for such purpose.

*

The BOLTON Corporation is obtaining 7 acres at Paulham Street for a housing scheme.

*

Plans passed by the DUDLEY Corporation: Five houses, Dudley Wood Road, for Messrs. Smith and Easthope; four houses, St. James' Road, for Messrs. A. J. Crump and Sons; alterations, 209-210 High Street, for Messrs. Montague Burton, Ltd.; institute, Mushroom Green, for Netherton Conservative Association.

*

The MANCHESTER Education Committee has purchased land for the extension o the Whalley Grange High School for Girls f

*

The MANCHESTER Education Committee has prepared plans for the open-air school at Middleton Road, Crumpsall. Provision is made for 240 scholars, and the cost is estimated at £24,000. This will be the first school of a type to provide education and treatment for delicate children suffering from certain physical defects under conditions conducive to their restoration to normal health.

*

The MANCHESTER Corporation is considering reports as to the provision of institutional accommodation for patients suffering from surgical tuberculosis.

*

The city architect of MANCHESTER is to prepare plans for the erection of a bus garage to accommodate forty-five vehicles at the Princess Road depot.

*

The Miners' Welfare Committee has agreed upon a provisional allocation of £10,000 for the scheme of the MANCHESTER Education Committee for the extension of the Technical College.

*

In order to continue the scheme for the erection of houses by direct labour, the MANCHESTER Corporation is acquiring another housing site of 33 acres east of Burnage Lane.

*

Plans passed by the LEEDS Corporation: Six houses, Upland Grove, for Messrs. Bailey Bros.; eighteen houses, Woodside Avenue, Kirkstall, for Messrs. Thomas and Hedley Johnson; four houses, Stanmore Crescent, for Mr. Joseph Greenwood.

Messrs. Walter Ripley and Sons, Ltd., have a scheme for the development of an estate off St. Anne's Lane and Kirkstall Hill, LEEDS.

*

The LEEDS Corporation has approved the layout plan submitted by Mr. G. W. Atkinson of the proposed shop sites at the junction of Horsforth Lane and Otley Road.

*

The LEEDS Corporation is considering plans of Sir Reginald Blomfield showing the elevations of buildings to be erected along the new street from Vicar Lane to St. Peter's Street.

*

The city architect of LEEDS is to prepare plans and estimates for the erection of a branch library at Hunslet.

*

The LEICESTER Corporation has purchased property in Cossington Street so that a scheme for the improvement of the baths may be undertaken.

*

The city engineer of LEICESTER has prepared a scheme for laying out land in the vicinity of Castle Street, at a cost of £10,000. Provision is made for a road, recreation ground, and conveniences.

*

The LEICESTER Corporation recommends the extension of the museum in accordance with plans prepared by Mr. Albert Herbert, F.R.I.B.A.

*

Plans passed by the SHEFFIELD Corporation: Two hundred houses, Longley estate, for Corporation Estates Committee; three bungalows, Daleview Road, for Mr. J. V. Auckland; four houses, Richmond Road, for Mr. A. Owen; eight shops and houses, Infirmary Road, for Messrs. J. H. S. Randall, Ltd.; five houses, Endcliffe Vale, for Messrs. Reeves, Charlesworth, Ltd.; six houses, Dalewood Avenue, for Mr. J. W. Bailey; three houses, Norton Lees Road, for Mr. W. C. Mander; five shops and houses, Marlcliffe Road, for Mr. A. Lonsdale; six houses, Pringle Road, for Mr. J. W. Ardern; three shops and houses, Longley estate, for Messrs. Shepherd, Lowe and Ash.

*

The city architect of SHEFFIELD has prepared plans for the erection of a branch library at Firth Park, the cost being estimated at £20,000. The Corporation Libraries Committee has expressed appreciation of the design.

*

The SALFORD Corporation Electricity Committee is to borrow £36,658 for the provision of plant, etc., at Agecroft power station and the erection and equipment of substations in Salford and the urban district of Prestwich.

*

The SALFORD Corporation is to erect a maternity and child welfare centre at Markendale Street.

The WALTHAMSTOW Education Committee is to erect an elementary school for 400 children in Billet Road.

*

The Essex Education Committee has approved sketch plans for the erection at HAROLD WOOD of an elementary school for 200 children.

*

The Essex Education Committee has acquired a site at Heathway, DAGENHAM, for the erection of an intermediate school.

*

In view of the development by the L.C.C. of the final section of the BECONTREE housing estate, the Essex Education Committee has prepared the completion of the school programme, which provides for the erection of six new elementary schools, at an estimated cost of £32,000 each.

*

The Essex Education Committee has purchased land in Perry Street, BUTTSBURY, for the erection of an elementary school.

*

The Essex Education Committee has approved plans for the erection of an elementary school at Silver End, RIVENHALL, for 300 children, at an estimated cost of £10,000.

*

Mr. D. W. Thomas, architect, has prepared plans for the reconstruction of the Theatre Royal, BOLTON, on behalf of the Bolton Theatre and Entertainments Co., Ltd.

*

The Yorkshire Council for Agricultural Education is to erect a farm institute at ASKHAM BRYAN.

*

The Essex Education Committee has approved sketch plans for the erection of a high school for girls at LOUGHTON, at an estimated cost of £18,000.

*

The Essex Education Committee has approved sketch plans for the erection of an elementary school at Chapel Hill, BRAINTREE.

*

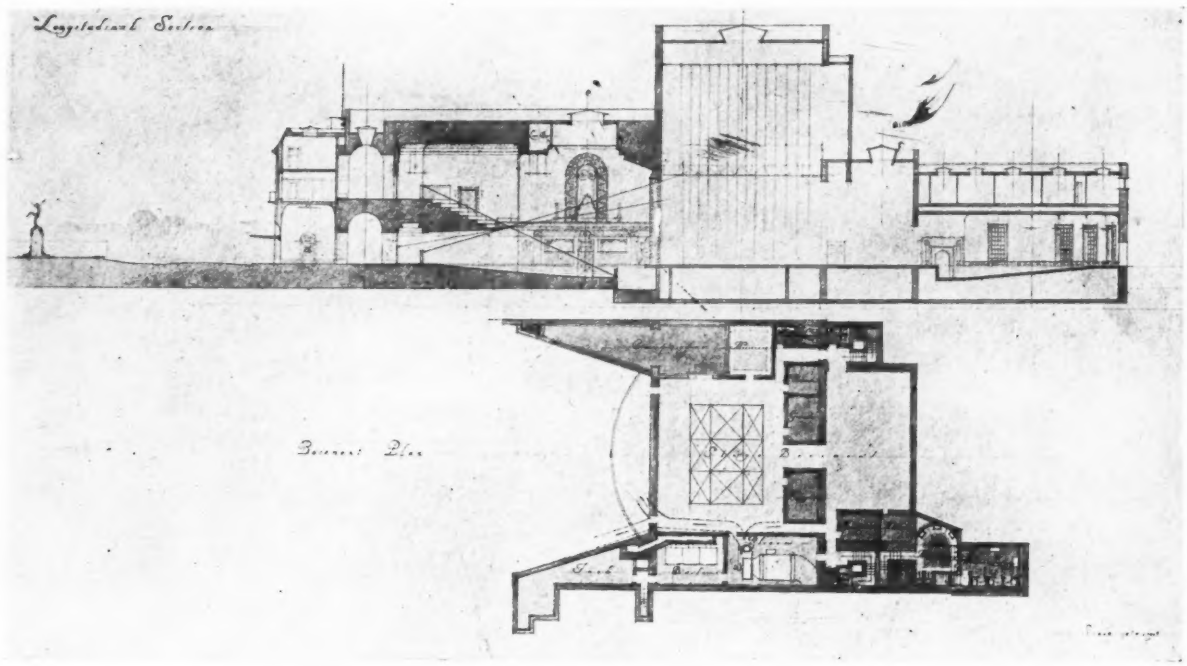
The Essex Education Committee has passed revised plans for the erection of a girls' school at GRAYS, with accommodation for 350, at an estimated cost of £39,000.

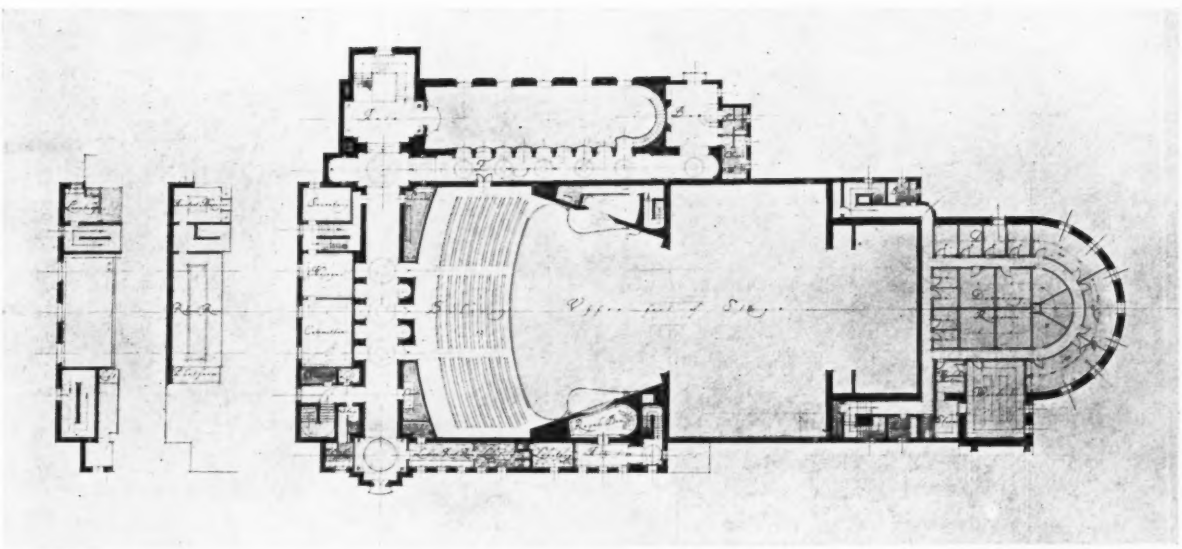
*

Plans passed by the BARKING TOWN U.D.C.: Sheds, offices, etc., West Bank, for Russian Oil Products, Ltd.; additions, Catholic Church, Linton Road, for Rev. J. Van Meenen; nine garages, Eldred Road, for Mr. J. Graffy; two houses, Longridge Road for Mr. F. Leftley.

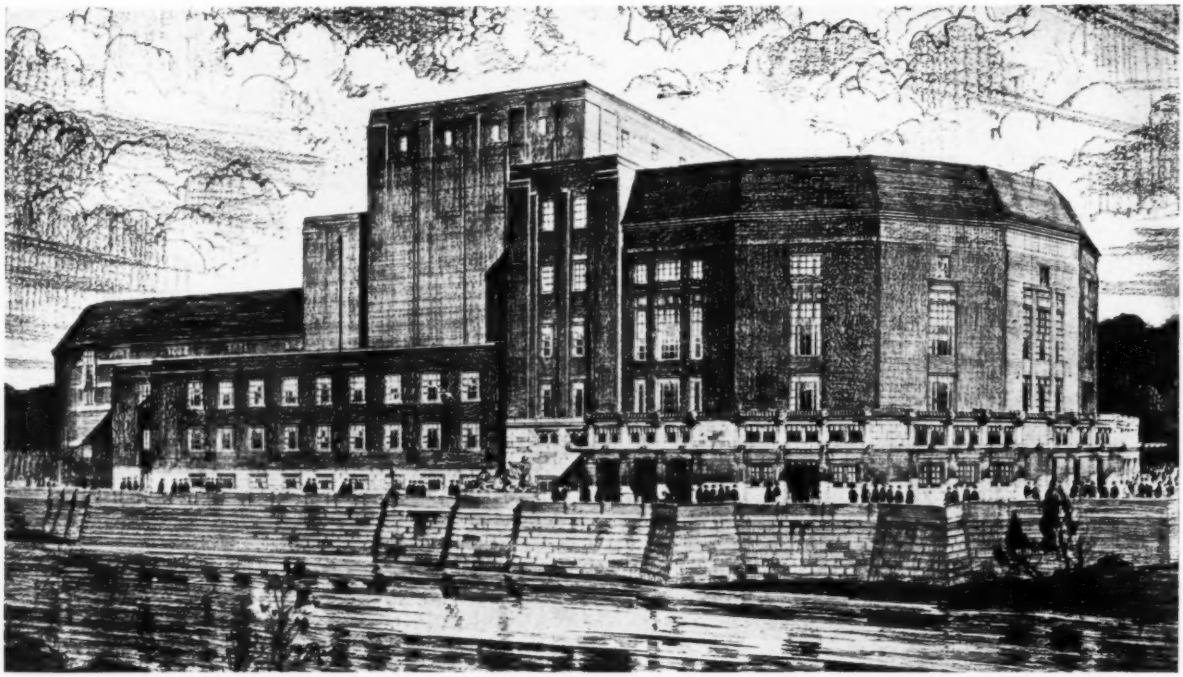
*

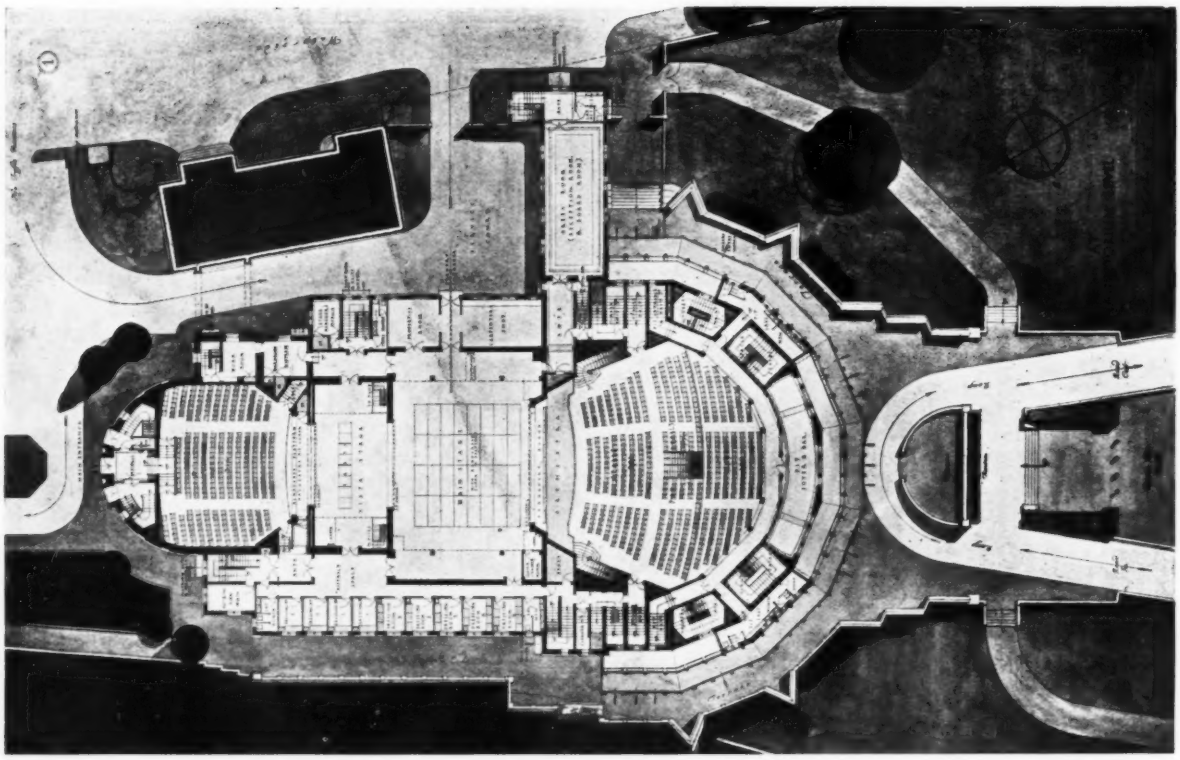
Plans passed by the OXFORD Corporation: Two houses, Glanville Road, for Mr. F. Organ; chemical stores, South Park Road, for Curators of the University Chest; house, Abingdon Road, for Mr. E. C. Leaver.



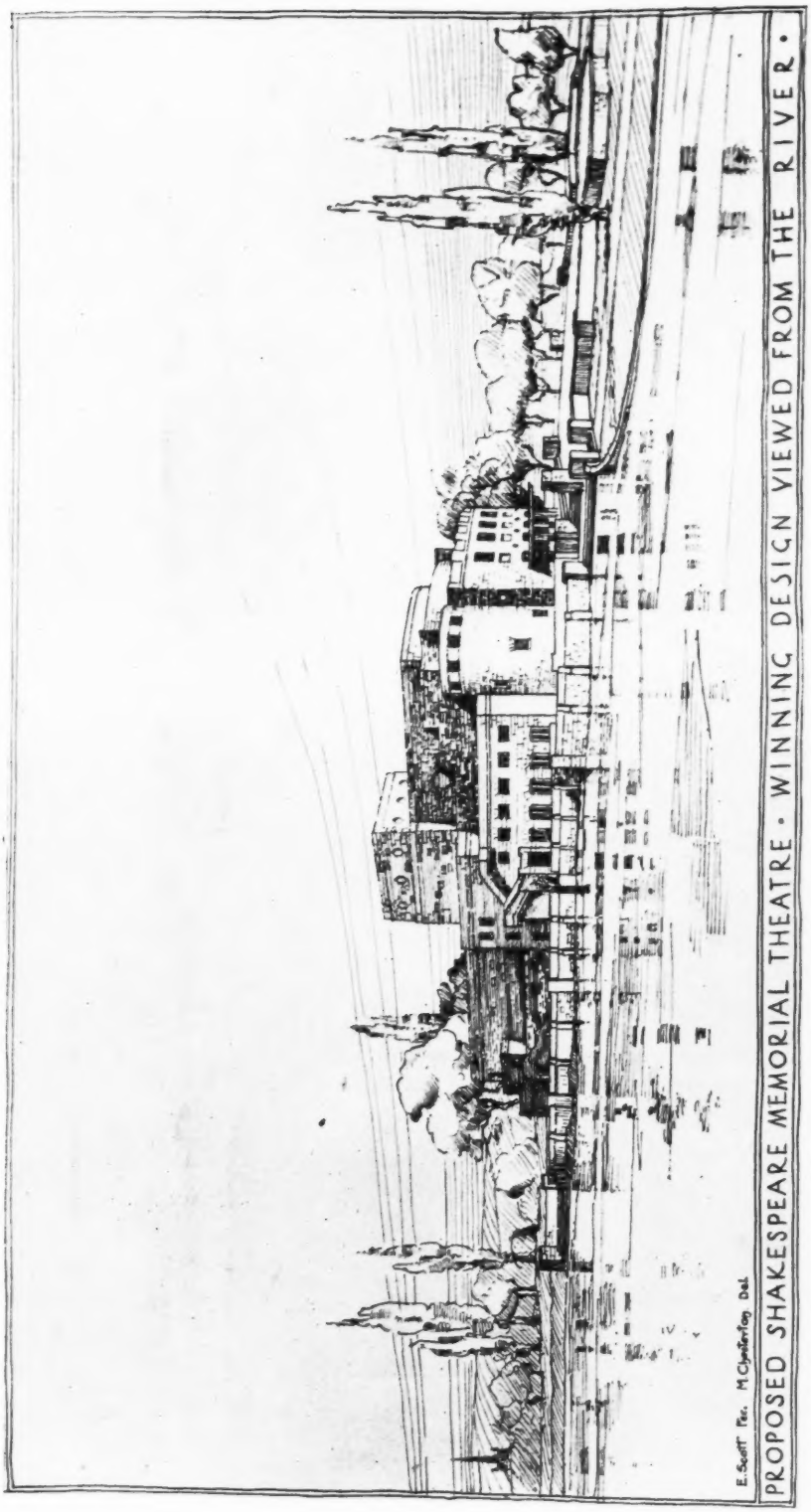


The Shakespeare Memorial Theatre Competition. The design by D. F. Martin-Smith. Above, the longitudinal section and basement plan. Below, the plan at balcony level.

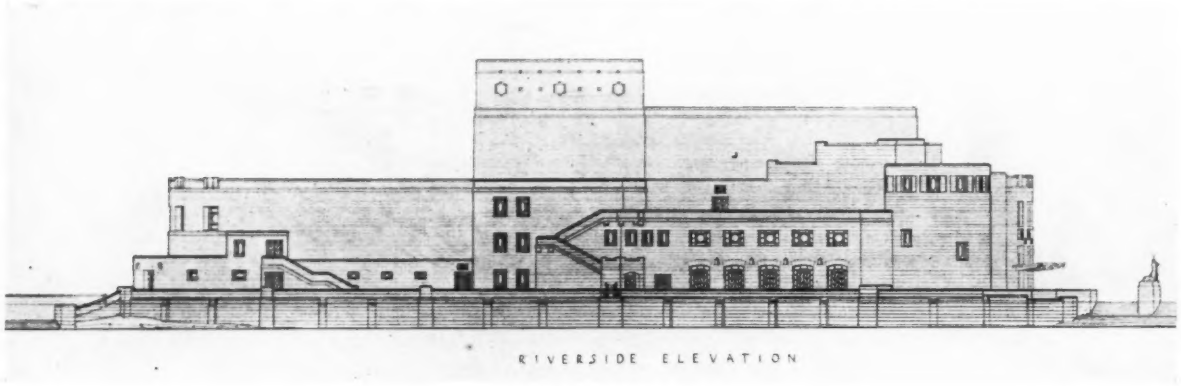




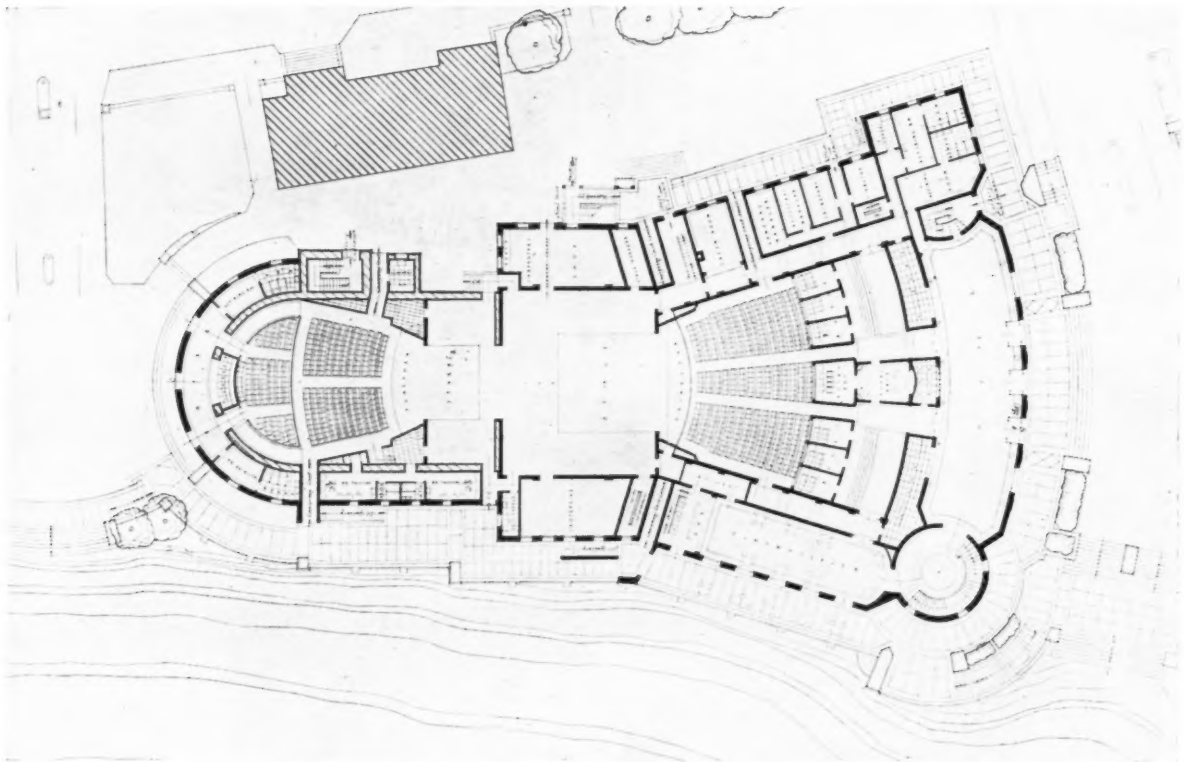
The Shakespeare Memorial Theatre Competition. The design by Percy Tubbs, Son and Duncan and S. Rowland Pierce, associated architects. Above, the perspective view. Below, the plan at auditorium level.

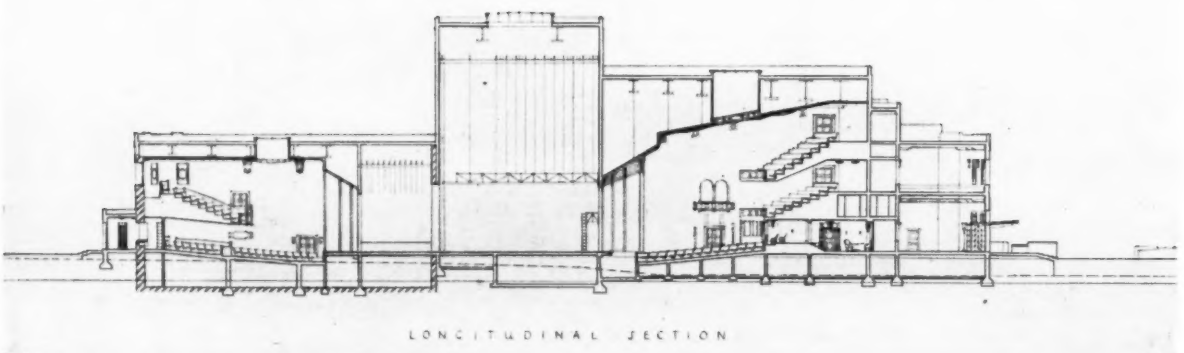


The Shakespeare Memorial Theatre Competition. The winning design. By Miss Elisabeth Scott. The perspective view.



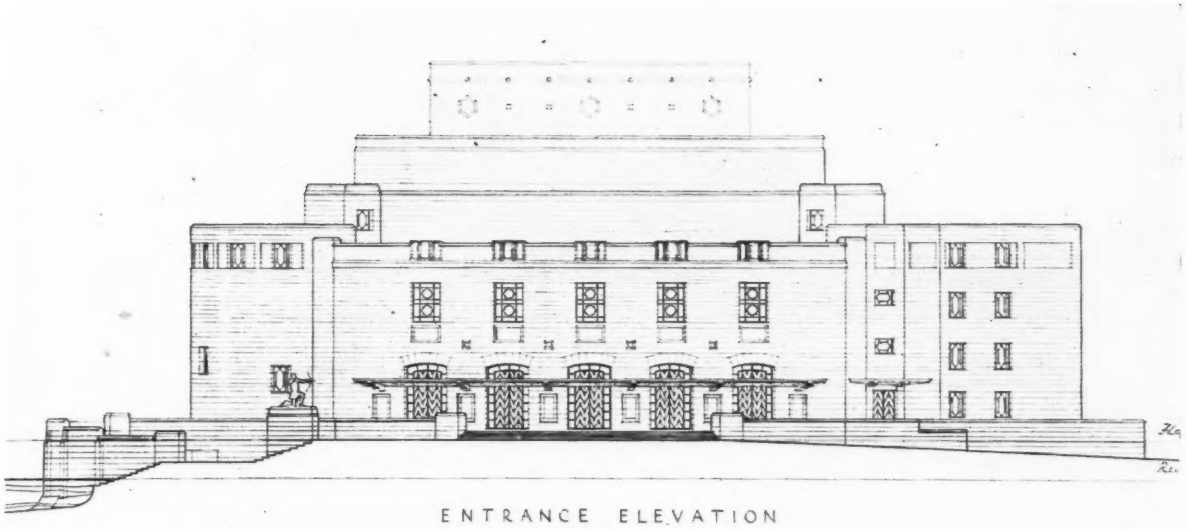
RIVERSIDE ELEVATION



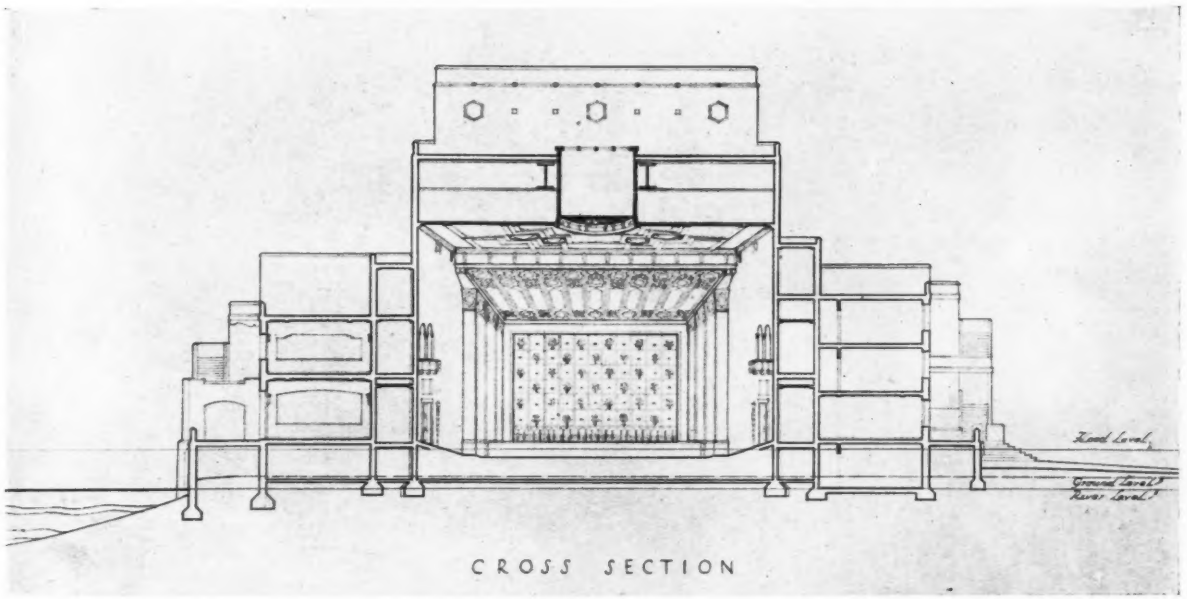


LONGITUDINAL SECTION

The Shakespeare Memorial Theatre Competition. The winning design. By Miss Elisabeth Scott. Above, the riverside elevation. Centre, the plan at auditorium level. Below, the longitudinal section.

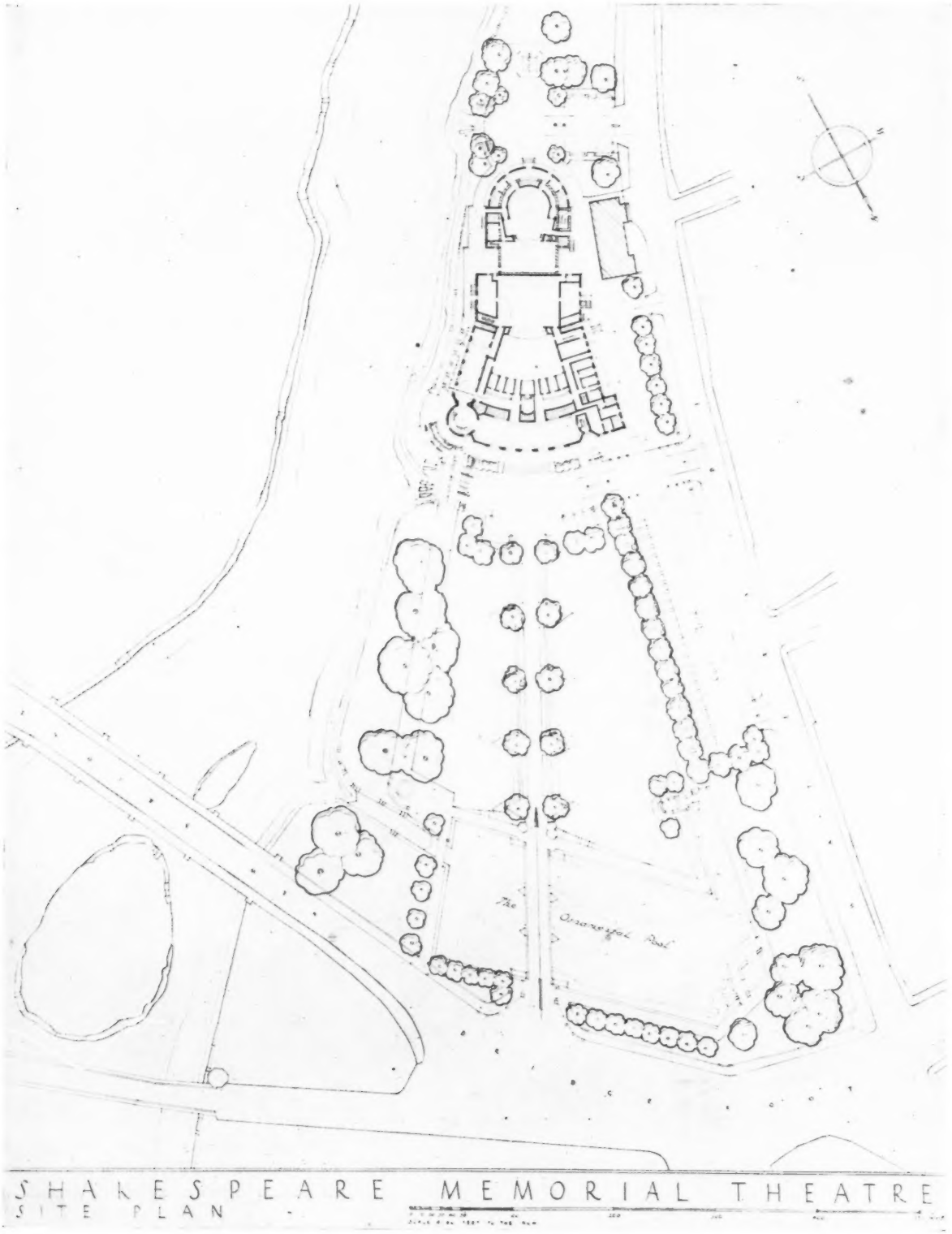


ENTRANCE ELEVATION

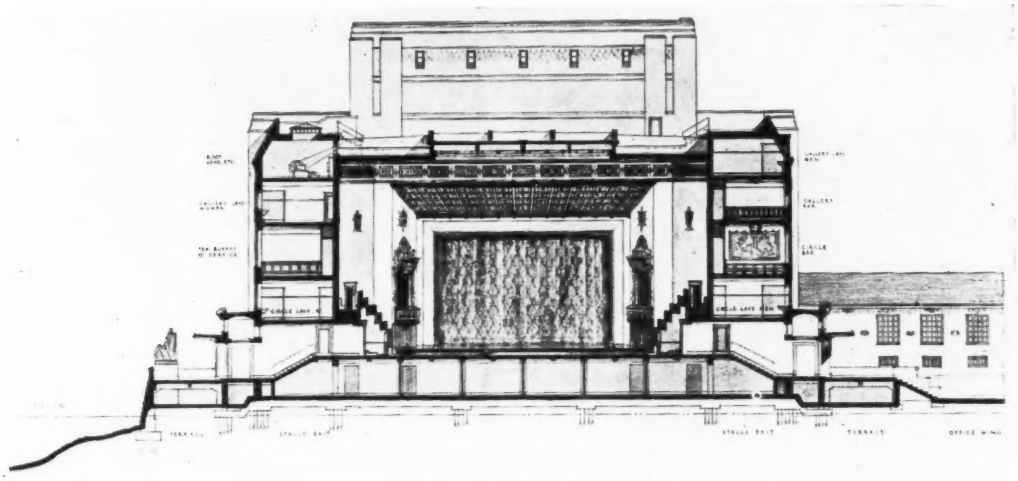


CROSS SECTION

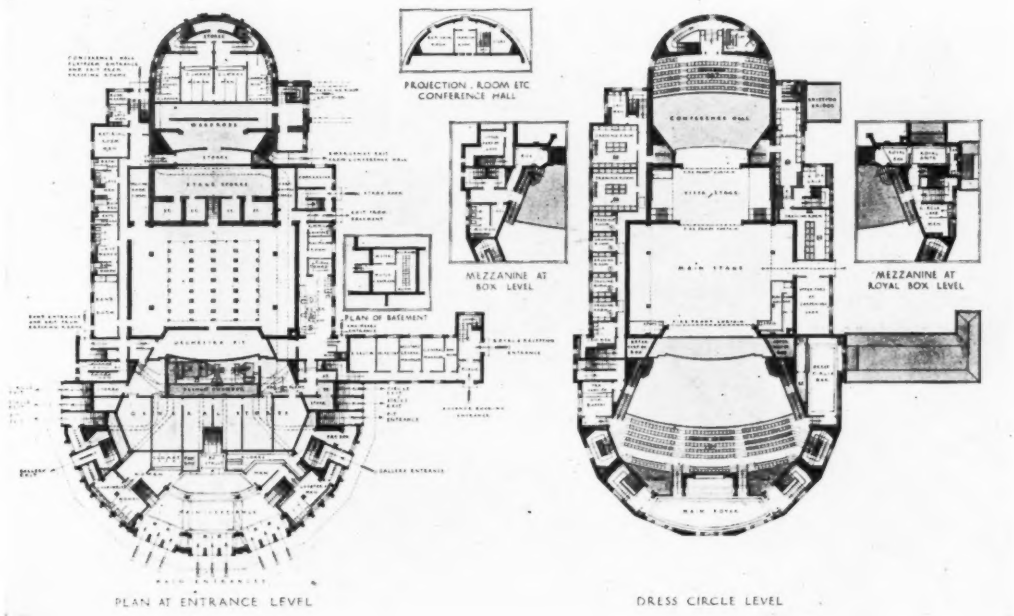
The Shakespeare Memorial Theatre Competition. The winning design. By Miss Elisabeth Scott. Above, the entrance elevation. Below, the cross-section.

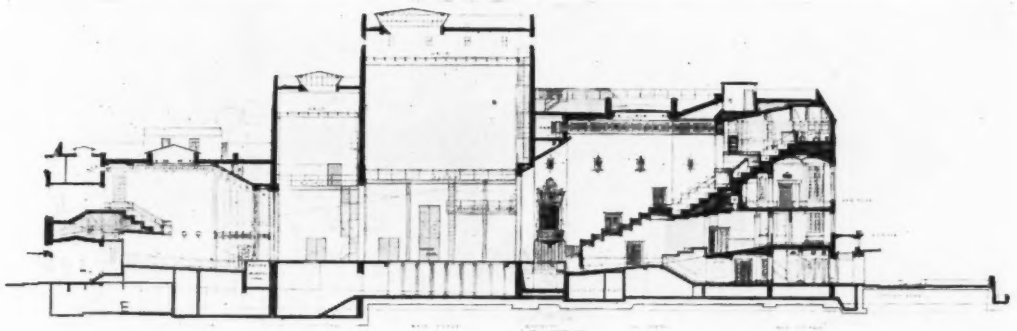


The Shakespeare Memorial Theatre Competition. The winning design. By Miss Elisabeth Scott. The site and lay-out plan.



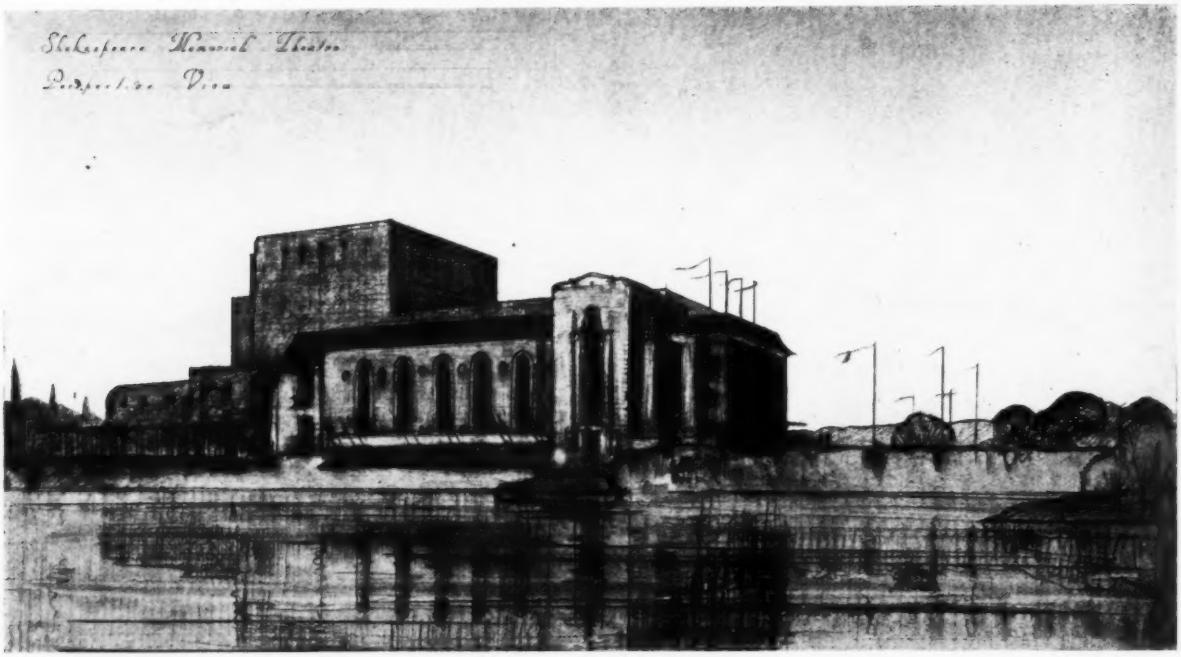
CROSS SECTION

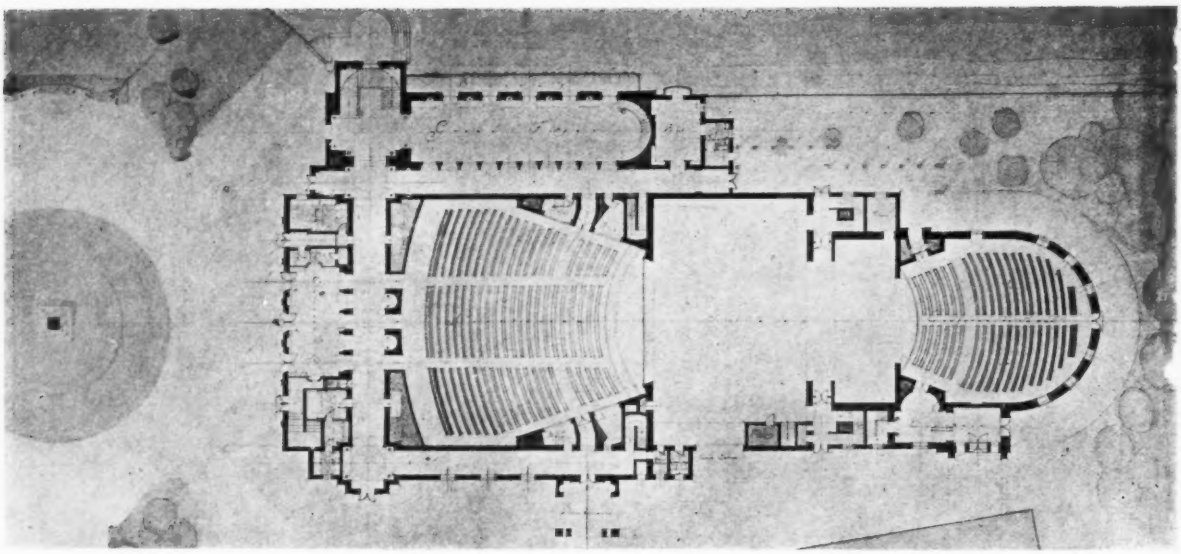




LONGITUDINAL SECTION

The Shakespeare Memorial Theatre Competition. The design by Percy Tubbs, Son and Duncan and S. Rowland Pierce, associated architects. Above, the cross-section. Centre, the plans at entrance and dress-circle levels. Below, the longitudinal section.





The Shakespeare Memorial Theatre Competition. The design by D. F. Martin-Smith. Above, the perspective view. Below, the plan at the auditorium level.

THE ARCHITECTS' JOURNAL CALENDAR

USEFUL DIMENSIONS

		LENGTH	WIDTH	HEIGHT	DEPTH OR PROJECTION
ASSOCIATION FOOTBALL					
Full size field.	Maximum	100 yds.	60 yds.	—	—
	Minimum	90 yds.	55 yds.	—	—
Minimum for schools		85 yds.	55 yds.	—	—
BADMINTON					
Court		44′ 0″	20′ 0″	—	—
Lawn or pitch; minimum		56′ 0″	26′ 0″	—	—
BATHS					
(Widely variable)	Maximum	6′ 6″	2′ 10″	—	—
	Minimum	4′ 6″	2′ 5″	—	—
BEDS					
Single	Small	6′ 6″	2′ 6″	—	—
	Medium (most usual)	6′ 9″	3′ 0″	—	—
	Large	6′ 9″	3′ 6″	—	—
Double	Small (most usual)..	6′ 9″	4′ 6″	—	—
	Medium	6′ 9″	5′ 0″	—	—
	Large	7′ 3″	5′ 6″	—	—
BILLIARDS TABLES					
Full size		12′ 6″	6′ 7″	—	—
Half size		6′ 4″	3′ 4″	—	—
BOOK SHELVES					
A good average		3′ 0″	—	—	8″ to 10″
BOWLING GREENS					
Ideal		42 yds.	42 yds.	—	—
CHURCH SITTINGS					
Pews	Per person	1′ 8″	—	—	—
	Greatest total length ..	20′ 0″	—	—	—
	Minimum distance between rows (centre to centre)	—	—	—	2′ 10½″
	Ideal distance between rows (centre to centre)	—	—	—	3′ 0″
Chairs. (As for pews)		—	—	—	—
COW STALLS					
Standing; maximum		5′ 6″	4′ 6″	—	—
Standing; minimum		4′ 10″	3′ 4″	—	—
Manger		—	—	—	3′ 10″
Rear channel		—	2′ 0″	—	—
Rear gangway..		—	4′ 0″	—	—
FIVES COURTS					
Eton type..		25′ 0″	18′ 0″	—	—
Rugby type		31′ 0″	19′ 6″	—	—
GAS COOKERS					
Single Oven	Small ..	—	1′ 8″	2′ 10″	1′ 6″
	Medium ..	—	2′ 1″	2′ 10″	1′ 8″
	Large ..	—	3′ 0″	2′ 10″	2′ 9″
	Very large ..	—	3′ 0″	3′ 3″	2′ 9″
Double Oven	Small.. ..	—	4′ 5″	2′ 10″	2′ 2″
	Large.. ..	—	5′ 7″	2′ 10″	2′ 9″
GRANDSTANDS					

UNITS OF SPACE

		SQ. FT.	CU. FT.
BALLROOMS:			
Per couple ..		8 to 12	—
CATTLE SHELTERS:			
Per large cow ..		60	—
Per small cow ..		40	—
CHURCHES (inclusive)			
Per sitting ..		5 to 7	—
COAL STORES:			
Per ton		—	40 to 45
COKE STOVES:			
Per ton		—	80 to 90
COW HOUSES:			
Per cow		100	1,000
HOSPITAL WARDS:			
Per bed	Maximum	112	1,344
	Minimum	88	1,056
HOTEL LOUNGES:			
Per bedroom in the hotel ..		4 to 6	—
ICE HOUSES:			
Per cwt.		—	6
NURSES' HOMES:			
Each bedroom ..		108	864
PIG SHELTERS:			
Per pig		10	—
RESTAURANTS:			
Per diner	Dining-rm.	16	—
	Grill-room	12	—
SCHOOL CLASSROOMS:			
Per pupil	Elementary (under 11)	10	120
	(over 11)	12	144
	Secondary	16	192
SHEEP SHELTERS:			
Per sheep ..		10	—
STABLES:			
Per horse ..		120	1,320

LAVATORIES

FOR OFFICES AND SIMILAR BUILDINGS

WOMEN	LAVATORY BASINS	W.C.'s

USEFUL DIMENSIONS

		LENGTH	WIDTH	HEIGHT	DEPTH OR PROJECTION
LAVATORY BASINS					
(Widely variable)	Maximum	—	1′ 11″	—	2′ 6″
	Minimum	—	1′ 4″	—	1′ 10″
LAWN TENNIS					
Court		78′ 0″	36′ 0″	—	—
Lawn; minimum		96′ 0″	42′ 0″	—	—
LOOSE-BOXES					
Ideal size		14′ 0″	10′ 0″	—	—
Minimum		12′ 0″	10′ 0″	—	—
MOTOR-CARS Length and width of chassis with heights of saloon :					
Daimler "Double-Six" ..		18′ 6″	6′ 4″	6′ 11″	—
Rolls-Royce, 40–50 h.p. ..		17′ 9″	6′ 2″	7′ 0″	—
Daimler, 35–120 h.p.		17′ 9″	6′ 4″	6′ 11″	—
Sunbeam, 25 h.p. ..		15′ 7½″	6′ 0½″	6′ 2″	—
		15′ 1½″	6′ 0½″	6′ 2″	—
Austin, 20 h.p.		16′ 2″	5′ 9″	6′ 6″	—
Austin, 12 h.p.		13′ 6″	6′ 4″	6′ 4″	—
Morris Cowley		12′ 1″	5′ 8″	5′ 10″	—
Austin, 7 H.P.		9′ 2″	3′ 10″	5′ 4″	—
MOTOR CAR PARKS					
Distance between lines of cars :		—	—	—	30′ 0″
Space per car parked in line ..		18′ 0″	7′ 6″	—	—
Space per car parked diagonally.					
Maximum		25′ 0″	7′ 6″	—	—
Minimum		20′ 0″	7′ 6″	—	—
NURSES' HOMES Minimum size of rooms (c. to c. of partitions) ..		12′ 0″	9′ 0″	8′ 0″	—
PERAMBULATORS. Approximately :					
Small		4′ 1″	2′ 0″	—	—
Medium		4′ 6″	2′ 4½″	—	—
Large..		4′ 11″	2′ 5″	—	—
PIANOS Approximately :					
Upright		—	5′ 0″	4′ 6″	2′ 6″
Grand	Small	5′ 6″	5′ 0″	—	—
	Medium	6′ 0″	5′ 0″	—	—
	Large..	7′ to 9′	5′ to 5′ 2″	—	—
RUGBY FOOTBALL FIELDS					
Minimum..		110 yds.	75 yds.	—	—
Goal line to dead ball line		—	—	—	25 yds.
SCHOOL CLASSROOMS Window sills from floor ..		—	—	4′ 0″	—
Benches	Total length; max.	12′ 0″	—	—	—
	Per pupil Senior ..	—	1′ 10″	—	—
	Per pupil Junior	—	1′ 6″	—	—

GAS COOKERS					
Single Oven	Small	—	1′ 8″	2′ 10″	1′ 6″
	Medium	—	2′ 1″	2′ 10″	1′ 8″
	Large	—	3′ 0″	2′ 10″	2′ 9″
	Very large	—	3′ 0″	3′ 3″	2′ 9″
Double Oven	Small	—	4′ 5″	2′ 10″	2′ 2″
	Large	—	5′ 7″	2′ 10″	2′ 9″
GRANDSTANDS					
Standing Room	Each step:				
	Maximum	—	—	10″	1′ 4″
	Minimum	—	—	9″	1′ 4″
	Per person	—	1′ 6″	—	—
Seating (Chairs and Benches)	Each step:				
	Maximum	—	—	10″	3′ 0″
	Minimum	—	—	9″	2′ 8″
	Per person	—	1′ 8″	—	—
HOCKEY					
Full size field	Maximum	100 yds.	60 yds.	—	—
	Minimum	90 yds.	55 yds.	—	—
Minimum for schools		85 yds.	55 yds.	—	—
HORSE STALLS					
Minimum		9′ 0″	6′ 0″	—	—
HOSPITAL WARDS					
Each bed		6′ 6″	3′ 0″	—	—
Usual space between beds, c. to c.		—	8′ 0″	—	—
Space between bed and wall		—	—	—	6″
Gangway between ends of beds, minimum		—	8′ 0″	—	—

LAVATORIES

FOR OFFICES AND SIMILAR BUILDINGS

WOMEN	LAVATORY BASINS	W.C.'s
1 to 12	1	1
13 to 20	2	2
21 to 40	3	3
41 to 60	4	4
61 to 80	5	5
81 to 100	6	6
MEN		
1 to 15	1	1
16 to 30	2	2
31 to 65	3	3
66 to 100	4	4

MEN	URINALS
1 to 6	0
7 to 20	1
21 to 45	2
46 to 70	3
71 to 100	4

RUGBY FOOTBALL FIELDS				
Minimum	110 yds.	75 yds.	—	—
Goal line to dead ball line	—	—	—	25 yds.
SCHOOL CLASSROOMS				
Window sills from floor	—	—	4′ 0″	—
Benches: Total length; max.	12′ 0″	—	—	—
Benches: Per pupil — Senior	—	1′ 10″	—	—
Benches: Per pupil — Junior	—	1′ 6″	—	—
SINKS				
Approximately	—	1′ 6″ to 3′ 0″	—	1′ 3″ to 1′ 9″
SQUASH RACKETS COURTS	32′ 0″	21′ 0″	—	—
STOCKROOM AISLES				
Minimum distance between book stacks	—	1′ 0″	—	—
THEATRE SEATS				
Per person: Maximum	—	1′ 10½″	—	—
Per person: Minimum	—	1′ 7″	—	—
Minimum distance between rows (centre to centre)	—	—	—	2′ 7″
TOWER CLOCKS				
Good average diameter of clock face for every 10 feet of height of tower	—	1′ 0″	—	—
URINALS				
Approximately	—	2′ 0″	—	10½″ to 1′ 8½″

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	..	..	..

MARCH

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..

MAY

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

JUNE

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..
..	..	..	..	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	..	..	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..
..	..	..	..	..	..	..

NOVEMBER

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

ELECTRICAL DATA

The VOLT is the unit of electrical pressure.

The AMPERE is the unit of electrical current, or flow.

The WATT is the product of the volt × ampere, and is the unit of energy or power.

The OHM is the unit of resistance offered to the passage of an electric current. (The resistance of a circuit determines the amperage, or current, in that circuit.)

$$C \text{ (current in amperes)} = \frac{V \text{ (voltage)}}{R \text{ (resistance in ohms)}}.$$

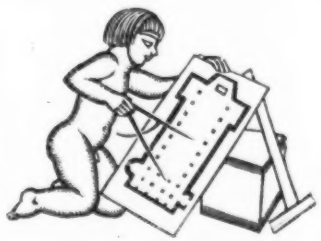
$V \times C = W$ (energy in watts).

1,000 watts = 1 KW. (kilowatt).

1 KW. for 1 hour = 1 B.O.T. Unit (Board of Trade Unit of Electricity).

$$W = C \text{ (current flowing)}.$$
$$V$$

746 watts = 1 H.P. (horse-power). N.B. When estimating the number of watts required by electric motors it is advisable to allow 1,000 watts per h.p.

19  28

ELECTRICAL DATA

LAMPS. In the calculation of the wattage of lamps allow not less than 1 watt per square foot of floor of room to be lit.

STOVES. For general purposes allow 1 watt per cubic foot to be heated.

For temporary demands, such as in bedrooms, allow 0·5 watt per cubic foot.

PLANTS FOR PRIVATE LIGHTING. *The Generator.* The size of the generator required may be obtained approximately by taking the total of the watts allowed at each lighting point throughout the building.

The Battery. The capacity of the battery depends upon charging periods. For instance: with a total load of 1,500 watts (or 1½ KW.) supplied at a voltage of 50, the ampere-hour capacity of the battery would be $\frac{1{,}500 \times \text{period of use}}{50}$

e.g. $\frac{1{,}500 \times 3 \text{ days}}{50} = \frac{4{,}500}{50} = 90$ ampere hours (capacity of battery).

THE ARCHITECTURAL PRESS, 9 QUEEN ANNE'S GATE, WESTMINSTER.