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EXAMPLE OF BRONZE SCREEN WITH GLASS PANELS.

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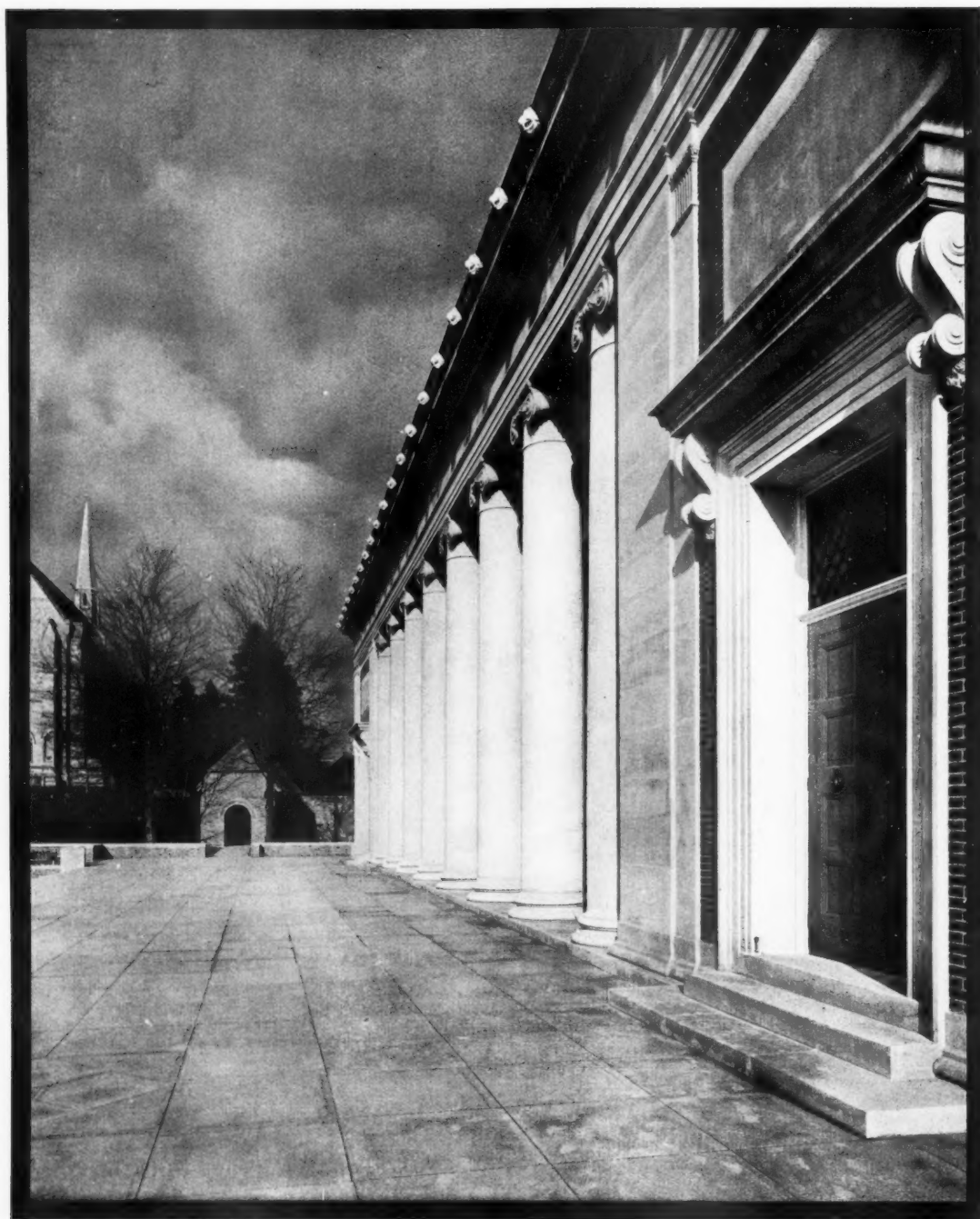


Plate I.

June 1925.

MARLBOROUGH COLLEGE WAR MEMORIAL.

W. G. Newton, Architect.

In the Train to Milano.

IT rather appealed to me as a traveller; even to one who travels merely for the sake of the journey, it was decidedly entertaining. And as I had only been asked to inspect and report on *possible* tumble-downs, I should be earning my ten thousand a year without any discomfort, without going a mile out of my usual rounds.

The two men had got in at Bologna and, after one hour and one minute, out at Reggio. I was alone to think it over. It had been one of the strangest of meetings.

I was only once in America—I had stayed there for about a year, and during the time had met my friend, T. O. R., whom we will call Thomas Oregon Rood. That is not his real name, but, until the whole matter about which I am writing is settled and signed and the legal business arranged, I cannot disclose names.

The moment T. O. R. got into the train he saw me: he came straight into my second-class compartment, bringing a friend, a co-worker, and we chatted for a few moments like two parrots. T. O. R. is one of the very best fellows I know; he had lived in Paris for five or six years managing one of the big stores there, and it was only by chance that he was in America when, in 1913, I happened to be called over there. And here we were once more together. And this is what he said:—

"Look-a-here, Francois, my next shunt is Modena: I can't stay in this little train longer than one hour, but in that hour we can strike a glide." (You know American, of course, so I needn't stop to translate.) He shouldered towards his companion and went on. "This wannaper here has the contracts, and you can sign one of them, or not, as you like before I get out, or later, and send on. It's a clucker-bag ramp, anyhow. Dead sure, as the English say."

"What is it?" I asked.

"It's this," he said. "My company has a capital of one hundred and forty-five million dollars. Its business is an art. Its art is to restore, preserve, and rehabilitate the ancient monuments of Europe—and Asia," he added.

"By monuments we do not feature the statues, but buildings which are monumental. Something of the Italian meaning—national monuments—St. Peter's—St. Paul's"—he looked at me and glowed, then cocked his head and clinched his jaw. "You take me up with some wash," he went on, looking at me sadly for a moment. I had never heard the word "wash" used in that sense; in fact, I wasn't sure what sense was implied, but that could pass.

"St. Peter's is one of our first jobs."

"How do you mean?" I asked, knowing what he meant.

"Why, look-a-here—here's Rome—was there yesterday. At St. Peter's. Will Blam had sent us a report on its insecurity (J. L. Blam the journalist—you remember Blam)—he fixed up a meeting with Cardinal X. Swift, and in less than an hour after my little chat in the sagrestio, I quitted

the dangerous place, leaving behind me a blessed contract for them and for all true Catholics.

"It will take eighteen million dollars to prevent that crypt from collapsing, and the dome from cracking in nine places. Well, so much for Rome. I got to Bologna this morning by seven o'clock. I saw the Sindaco about the leaning tower and St. Petronio. The cathedral is to have its missing parts added or the entire side near the Vignola arcade will fall out, and the tower will be made straight: it's a small city, we shan't bite them for more than two and a half million dollars.

"Our company is the United ZOZ Reinforced Concrete Co., chief offices Cincinnati, with branches in Paris and Leipzig.

"We have accepted only eight hundred orders so far, and these orders will bring us in a profit of over seventy-five million dollars.

"Our bee-line objectives are *Cologne Cathedral* entirely re-spined; *Rheims* to be enclosed in a concrete case with special lighting to reproduce the old sun effects of light and shadow. *St. Peter's* as I told you. *St. Sophia* at Constantinople—that's to be made floating so as to go to the infidels who won't come to her. *The Alhambra*—no, not the chip in your city, the thing in Spain. Its life's hanging on a thread; it's to be propped and overlaid, bundle-dried, and you'll not know the place. That makes five. The four other large works are the *Quirinale*, Roma; *Milan Cathedral*, and *Bologna Tower* and the *Leaning Tower of Pisa*, which I have just settled to save, and I thank God for it."

"What about the Parthenon?" I asked.

"Ah, you've hit it!" cried T. O. R. "The Parthenon is finished, done for, and a dam disgrace it is that two hundred years ago we Americans didn't do what we are doing now: we were asleep, we were trampleising.

"Still, better late than never, and if the eighty thousand monuments which God has given mankind, and which are still bright, can be saved we intend to do it. Do you follow me?"

"Not quite; but you are going to reconstruct all our monuments?"

"No, laddie, not that. To reconstruct is to brutalize—barbarous methods we'll have no truck with. When we've done our work your treasures won't look a wisp other than they do now. We are going to save 'em for you—clinch 'em with concrete.

"Of the eighty thousand monuments we have as yet only reports on seven thousand three hundred of them, and eight hundred orders. Not one of these eight hundred monuments can possibly be standing in 1929 unless they are reinforced, rehabilitated, and receive a treatment of underpin-concretion. We plan to get the work done by 1927."

"What work?" I asked.

"The eight hundred orders, and an outline of another eight hundred. And now we come to you.

"There is a bunch of fifty-nine national theatres on our books. I've no time to inspect theatres, and I want you to do that. You shall have the list, letters of entré and habilitation—passes to all the owners. You must inspect 'em for me—no hurry—theatres are small stuff—get twenty-five of the theatres by August and it'll do.

"Your fee \$50,000 a year, for three years. Inspect, report, visualize the weak points; all else is flo-push, take it from me. Snobble the danger points—chandelier, roof, balconies, and the four exterior walls.

"Our price for an underpin-concretation of a theatre—national theatres, no others, mind you—is two million and a half dollars. That'll establish the old jewel for another thousand years." He looked fine and grave.

"But even in a hundred years," I said, "perhaps mankind will not want its 1925 or its 1830 theatres: in three hundred years, maybe, many of its fifteen hundred cathedrals, even when pinned-under, will be in the way."

"That's all been calculated—that's part of the sacrifice we are making," he answered. "When a work is a good work—a real bully, straight-to-God work—no fear of sacrifice must embarrass the work.

"If in five hundred years St. Peter's is off the track as an old pray-place, we shall have the rights—the first refusals, mind you—of using it in our European visiting line of progress and culture. As an historical landpoint on our horizon-vista it comes along a clear first on our list."

The brakes were working, the station reached.

"We get out here; come along, Doc. Good-bye, Francois, the thing is fixed up all right. You'll take it on—here's the contract—sign it and write me—American Express, Paris. Say, but it was bully to have had all this time with you, hearing all your news. It's been great."

He went. I was left alone. I am alone now. I am nearing Milano. I begin to think that the New Scala *must* need underpin-concretating if thousands are not to perish.

FRANÇOIS M. FLORIAN.



FUNCHAL CATHEDRAL, MADEIRA.

From a pen drawing by Keith Murray.

Studies in Madeira.

THE town of Funchal on the Portuguese island of Madeira, so well known to those wise people who go South to avoid the European winter, has been overlooked almost entirely by the architectural historian. Probably there is little there to attract serious attention in any important work, with the exception of the cathedral (described shortly by Baedeker as "insignificant"), which is discussed by Walter Crum Watson in his "Portuguese Architecture."

But the wandering visitor is struck by some few small buildings and occasional details which seem worthy of notice. Unfortunately, in the short time at one's disposal, one was unable to find anybody among the local residents who could give any information at all about these matters—dates and so forth—and the guide-books were useless, so one had to be content to sketch what attracted attention, and leave it at that.

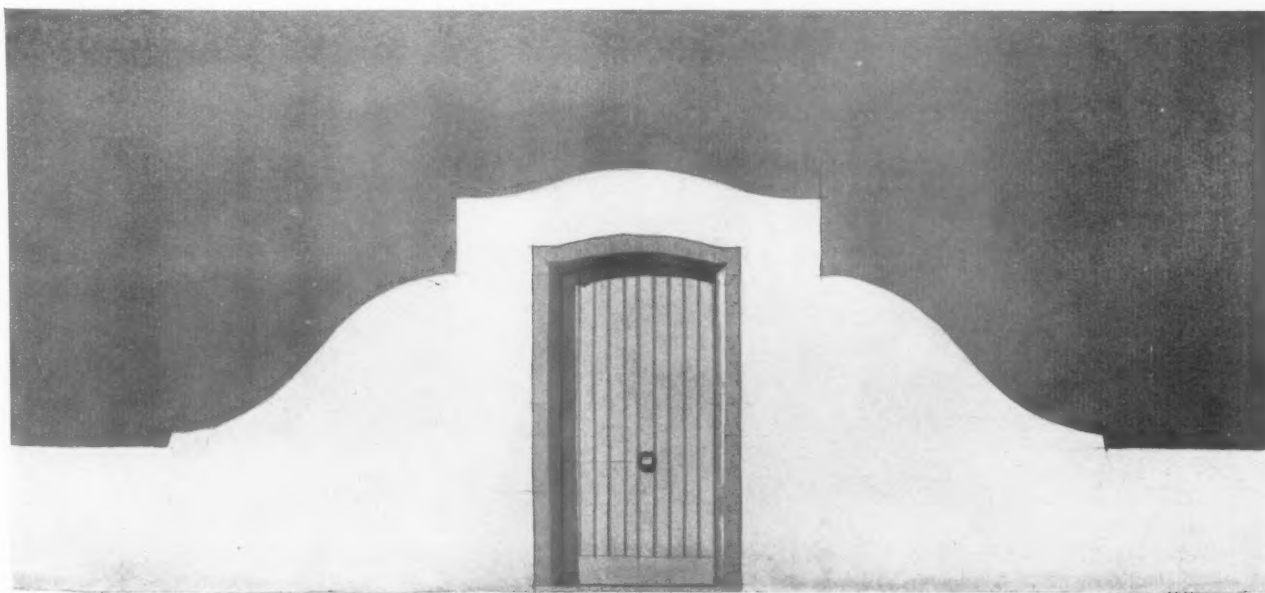
At the first sight of Funchal from the harbour one is struck by the strong contrast of glaring plaster wall surfaces, accented by hard, black lines of decoration, and on closer examination it is found that all facings are made of the local hard, black basalt, which forms the steep shingle beach in front of the town.



FUNCHAL CATHEDRAL.

The chief building of this picturesque town is the cathedral, of which two sketches are shown. It was built between 1485 and 1514. One is repelled at the first sight of the west front, painted a flat dark red, probably the worst Gothic elevation in existence, but the other elevations, however, are attractive in their plainness, and have the distinctive local character of plain white wall and black markings. The small round-headed clerestory windows are placed in an unusual manner over the piers instead of over the arches. There is a large tower by the north transept, with a square tile-covered spire; and the small eastern chapels have an elaborate cresting and tall twisted sugar-candy pinnacles.

The chief feature of the interior is the exceptionally fine roof to the nave and transepts, of Moorish design, similar to that at Caminha. This roof is of cedar, and is in three divisions—two sloping sides and the flat centre under the collar ties, with the rafters knotted together in great elaboration, and the flat part entirely covered with interlacing strips in intricate pattern—the whole being decorated in colour. The reredos and choir stalls are of considerable interest. The stone details of



A FARM GATEWAY AT FUNCHAL.

From a drawing by Keith Murray.

piers, arch mouldings, etc., are thin and poor in quality.

The several smaller Renaissance churches and chapels in Funchal seem to divide into two groups—one of simple character, with very crude and immature detail—the other of pronouncedly baroque type, and of much more sophisticated detail; the usual plain plaster walls and black basalt facings being common to all of them.

Drawings of two of the latter type are shown, the church of V. M. of Carmo, and the chapel of the Conception, the former of simple proportions, but rather thin in detail. The chapel of the Conception (which is not mentioned in any guide-book)—a tiny building about 18 ft. wide situated in a street so narrow that a good photograph of the front is impossible—shows character and detail which is a great advance on the earlier seventeenth-century work in the town. The mouldings are of good design, and are perfectly cut, the hard,



A STREET IN FUNCHAL.

black stone showing perfect arrises. This is the best example of the type in Funchal; the proportions being good, and the elaborate curves of the main cornice, and of the linked door and window, unusual.

Another doorway, dated 1619, from the ex-convent behind the church of the Collegio, now used as a barrack, is much earlier in character as compared with the two churches shown, and has a curiously Elizabethan feeling in its simple detail.

Gateways to farms and villas are found during walks around the steep, cobbled paths on the hills at the back of the town. Many farmhouses are surrounded by high walls, and the entrance is often given prominence by lifting the wall in heavy baroque curves over the doorway. The villas themselves are of the plainest description, and are of no architectural interest. A drawing of one farm gateway from Funchal is illustrated on

page 223.

KEITH MURRAY.



THE CHAPEL OF THE CONCEPTION.

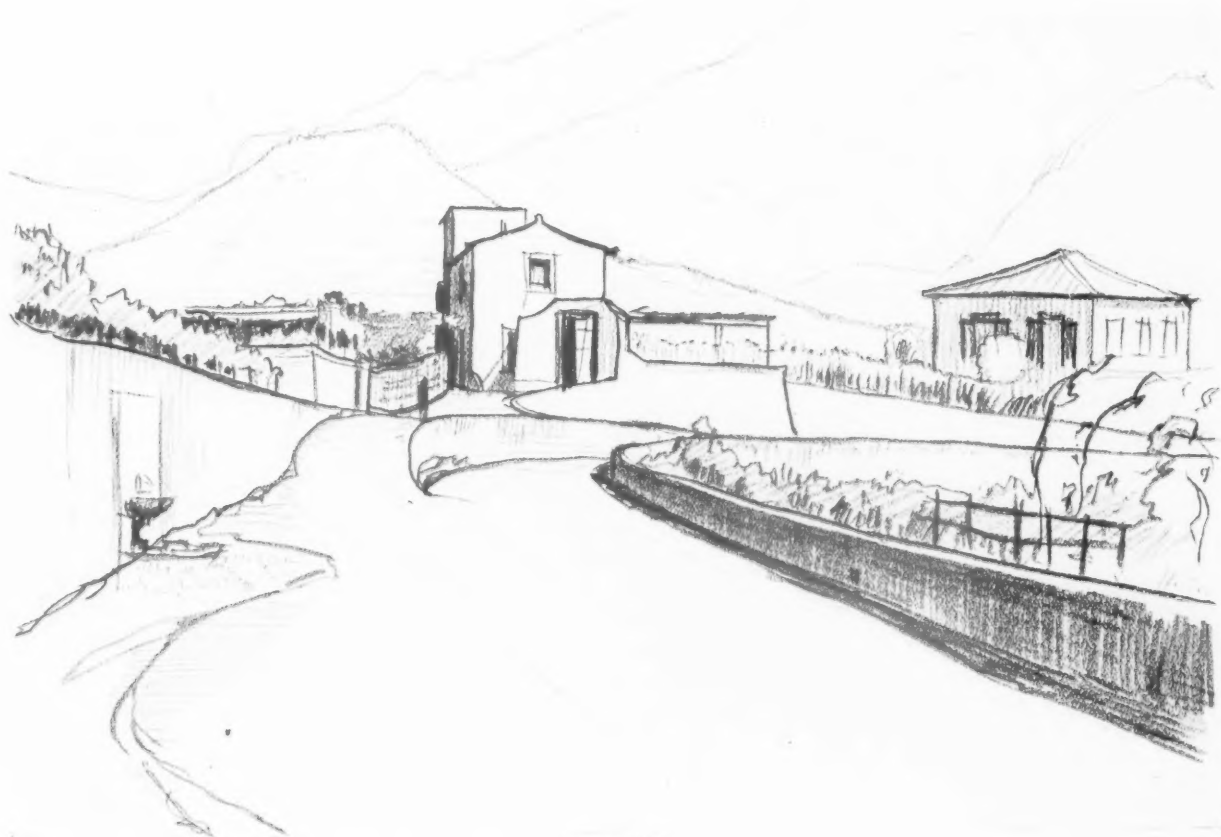


A CHURCH IN FUNCHAL.



Funchal.

FUNCHAL.



FUNCHAL.

From pencil drawings by Keith Murray.



THE CHURCH OF V. M. OF CARMO.

From a drawing by Keith Murray.

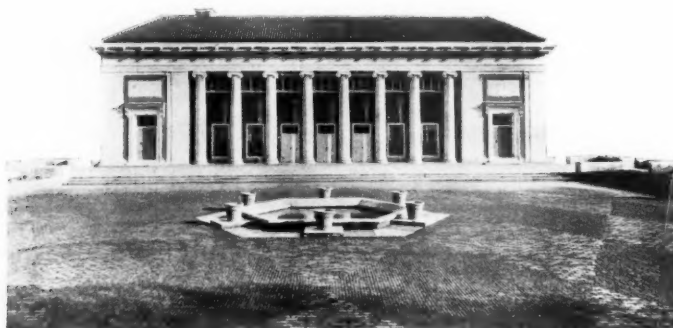


THE CHAPEL OF THE CONCEPTION.

From a drawing by Keith Murray.

Marlborough College War Memorial.

Designed by W. G. Newton.



THE new War Memorial Hall at Marlborough is the work of Mr. W. G. Newton. It was won by him about four years ago in a competition open only to old Marlburians and, like many other good buildings before it, has undergone considerable modification since its first conception as a prize-winning design. Lack of funds, and not second thoughts, prevented the architect from seeing his original dreams carried out; whether or no this was a fortunate circumstance it is difficult to say, and in any case at this juncture an unprofitable one to discuss. It is, however, of some importance and great interest to examine closely the first design, for without doing so a true appreciation of the building as it came eventually to be carried out cannot well be arrived at. The first design was not scrapped, and a fresh project made, but rather was it skilfully whittled down. This must have been a heart-breaking business, and it speaks volumes for the architect's pluck that there is no trace to be seen of his pruning-knife.

The site chosen by the College authorities was a water-meadow with its northern boundary lying along the Bath Road. To the east, but on considerably higher ground, stands the school chapel, a lofty stone structure and a fine example of Bodley in his best Gothic vein. It bears singularly little relation to any of the other school buildings adjoining it, all of which are brick. That, however, is not uncommon with religious edifices. The desire was to make a processional way from the west doors of the chapel to the new Memorial Hall, the primary uses of which were to be as a speech-room and concert hall big enough to hold the entire assembled school. The questions to consider then were, firstly, should the new building be in stone, and wear the mantle of Gothic, and so play a polite second fiddle to the chapel (as it most certainly would have done), or, on the other hand, should it take no notice of the chapel? Should it say: "You, most excellent chapel, being an ecclesiastic building, very properly and proudly raise a Gothic head serenely to the skies, whereas I, being for different uses, shall not attempt to copy you either in shape, material, or style."

It was not, of course, a difficult question to answer,

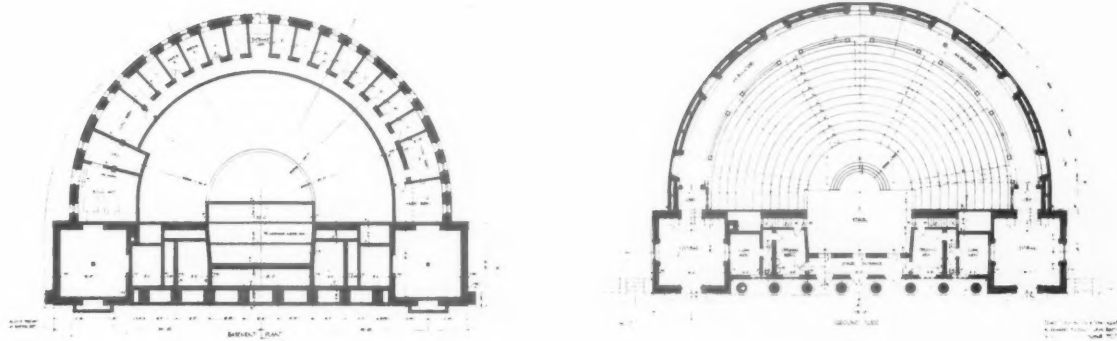
bearing in mind the requirements of the College. Mr. Newton, anyhow, adopted the second alternative, which was, I think, the one most architects of to-day would have followed, and there is but little doubt he was right in so doing.

The second question of where to site the new building was a much more difficult one to determine. At first glance it looked as though it ought to be on an axial line through the west doors of the chapel on the other and far end of the site. This would have given a square-on view of the Memorial Hall from the chapel, certainly a very important consideration, when it is remembered that a processional way from that building was demanded. There were, however, other and more cogent reasons for not taking this course. The Bath Road had to be thought of for one thing. If the main façade had been placed so as to face the chapel doors the building would have presented its back for a long distance to anyone approaching Marlborough from the west, and could never have been seen at its best from this very important highway. Further, it would have faced east and west, which, for reasons to be discussed later, would not have suited its plan at all; and, lastly, fronting the chapel, as it would have done, it might have provoked an unseemly challenge with that fine Gothic edifice, and would in any case have obstructed the beautiful view from the chapel over the water-meadows.

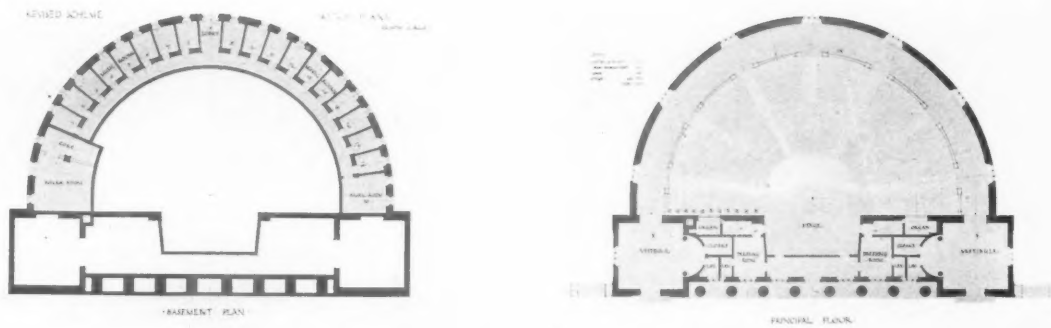
Mr. Newton then, in consideration presumably of these reasons, put his hall directly facing the Bath Road, and well set back. In this way he got the compass points he wanted, viz., north and south; he made no challenge with the chapel, indeed, he very delicately gives way to it, and, lastly, he ensured his principal or, rather, his only façade, being seen from the highway.

The decision he took, now that it has been made, looks an obvious one, but for all that the lure of having the front of a sparkling new building burst upon the eye as one left the sombre depths of the chapel must have been tempting.

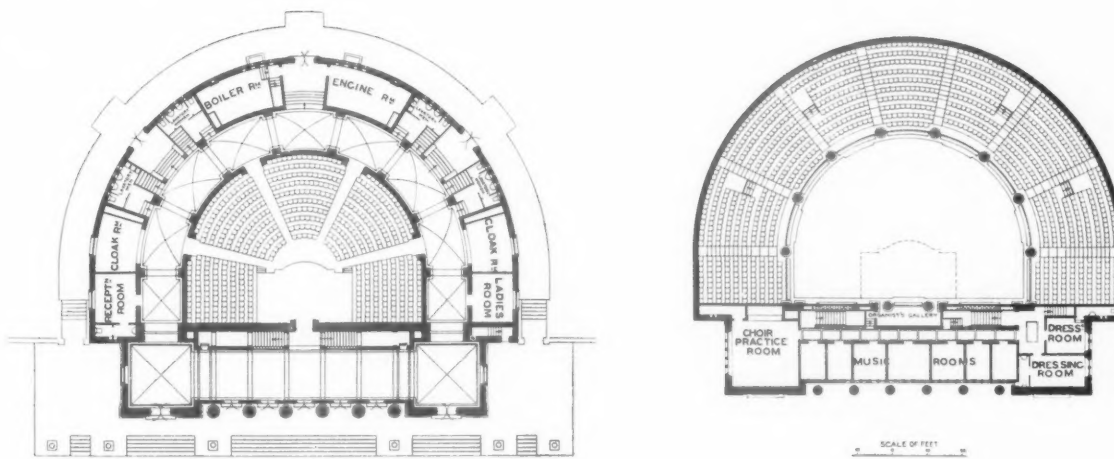
The drawings of the first scheme are dated April, 1921. The plan adopted was a long, rectangular entrance hall block, three floors high, behind which and slightly higher rose the main body of the auditorium which was to be



The Final Plan.



The Second Plan.

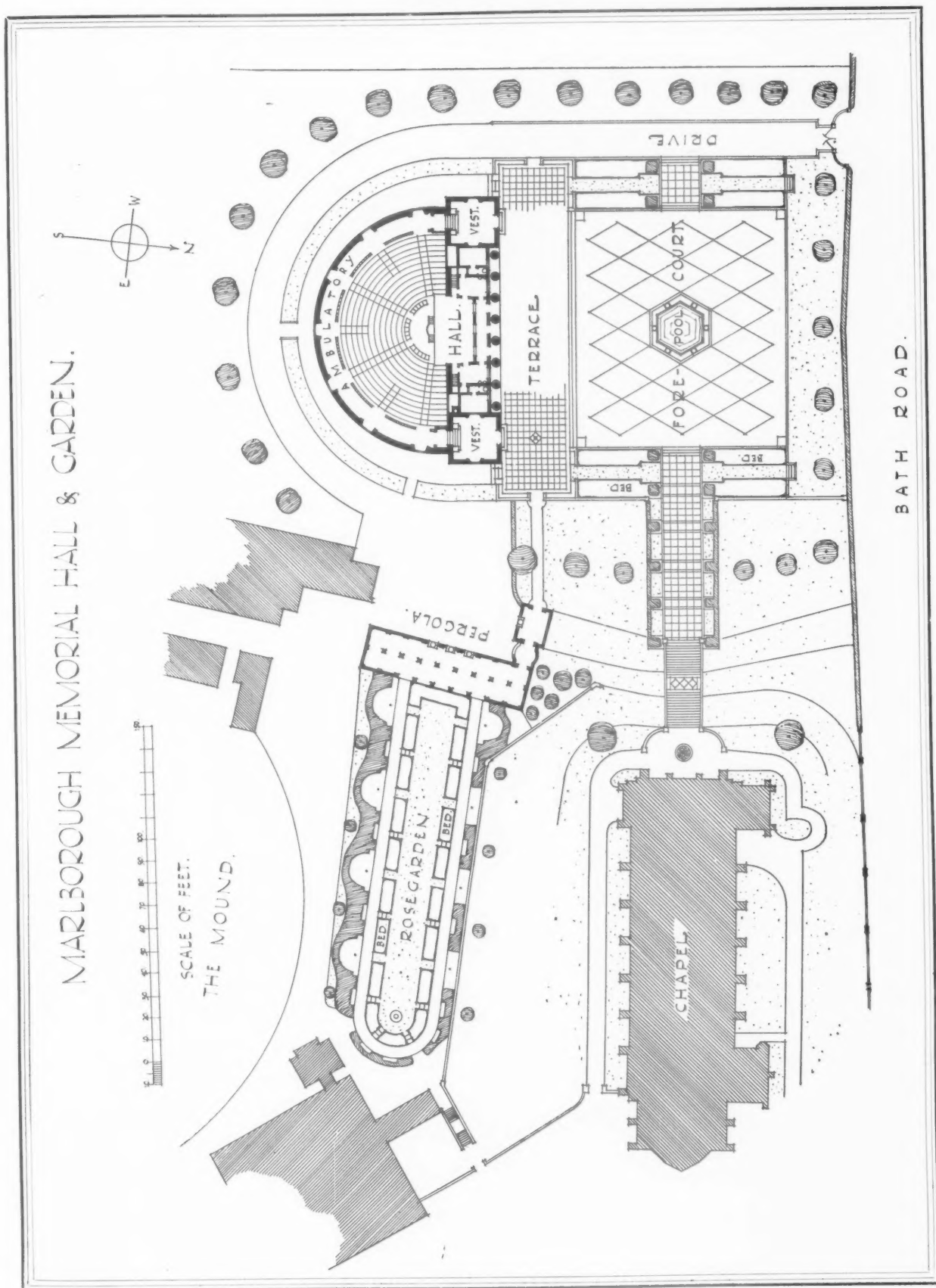


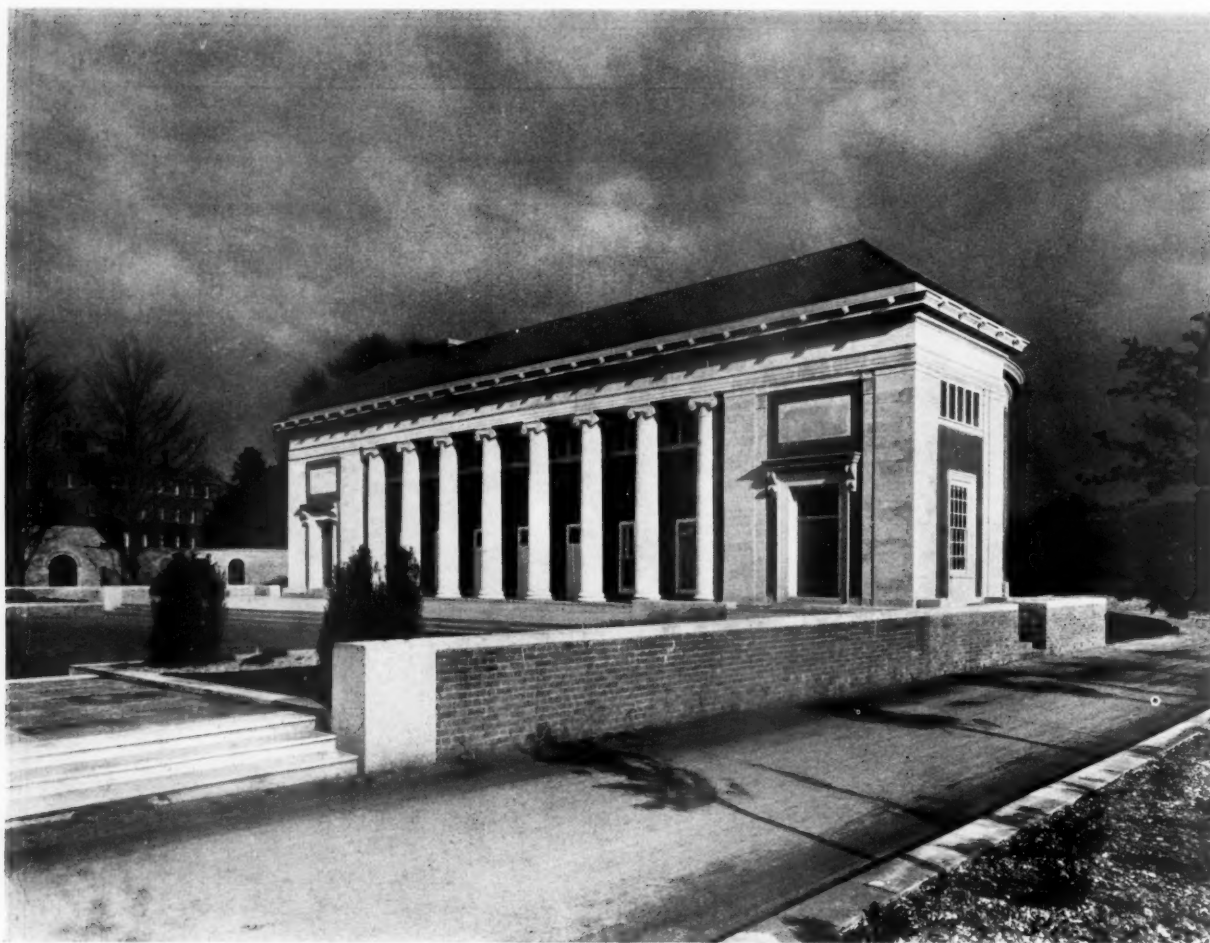
The First Plan.

THE FIRST, SECOND, AND FINAL PLANS FOR THE HALL.



THE MAIN FRONT, FROM THE FORECOURT.





THE HALL, FROM THE DRIVE.

semi-circular in shape, and just wide enough to make its form felt when seen from in front.

At this time, it must be understood, there was no demand on the part of the College authorities for theatrical performances to be considered. Consequently the necessity for a proper stage behind a proscenium opening had not to be faced, a fact which materially influenced the plan. The whole of the ground-floor space of the rectangular hall is occupied as an entrance foyer to the auditorium behind. The audience enter the main body of the building from this foyer through doors to the right and left, while a central door gives straight on to the back of the concert platform, which is projected its whole depth into the body of the hall. On each side of this central door, staircases lead up from the foyer to two floors above which are used for choir practice rooms, and such-like, and a part of which holds the organ. Thus it will be seen that audience and players enter the auditorium from the same side, an ingenious, if somewhat unusual, arrangement.

When the audience leave the foyer to gain admittance into the hall, they do not enter it direct but find themselves in a semi-circular access corridor which runs right round the building. On the outside of this corridor between it and the outer main wall come a series of cloak-rooms, emergency exits, and staircases. On the inner side is the semi-circular auditorium with its seats arranged in gently sloping tiers. These stop against the inner wall of the corridor, which is

made to act as a base to a row of fine columns which support a main cornice with a clerestory running immediately above. Behind these columns there rises a further and quite separate tier of seats which are supported on the roof of the corridor, and these in their turn run back to the outer walls. They are reached by the staircases which open off the access corridor. This portion of the building is top-lit while the centre gets its light from the clerestory windows, which do not open direct into the outer air, but borrow their light very ingeniously. Reference to the section published makes this clear. The building is flat-roofed, and on the outside divided into seven radial bays by means of great beams which run like the spokes of a wheel, with two parallel-sided bays tilting the semi-circle on to the rectangle of the entrance hall.

There is little doubt that the lighting of the auditorium would have been very impressive. It is easy to picture the fine columns delicately gilded here and there with shafts of sunlight from the top-lit spaces behind them, while above a band of subdued light from the clerestory fills the upper levels of the chamber itself.

Such, then, is a rough outline of the main features in Mr. Newton's first scheme. Excessive cost forbade its execution, and the architect found himself faced with the old but none the less bitter problem of having to cut down his design and in no uncertain manner. This was not all, for he was requested to arrange the planning of a stage to hold theatrical



THE HALL, FROM THE NORTH-EAST.



THE AUDITORIUM, FROM THE SOUTH.



THE MUSIC-ROOM ENTRANCE.



THE FORECOURT AND WATER-MEADOWS, FROM THE STEPS OF THE CHAPEL.

The Hall was not built when this photograph was taken. The site can be seen on the left, whence it now faces across the forecourt to the Bath Road on the right.

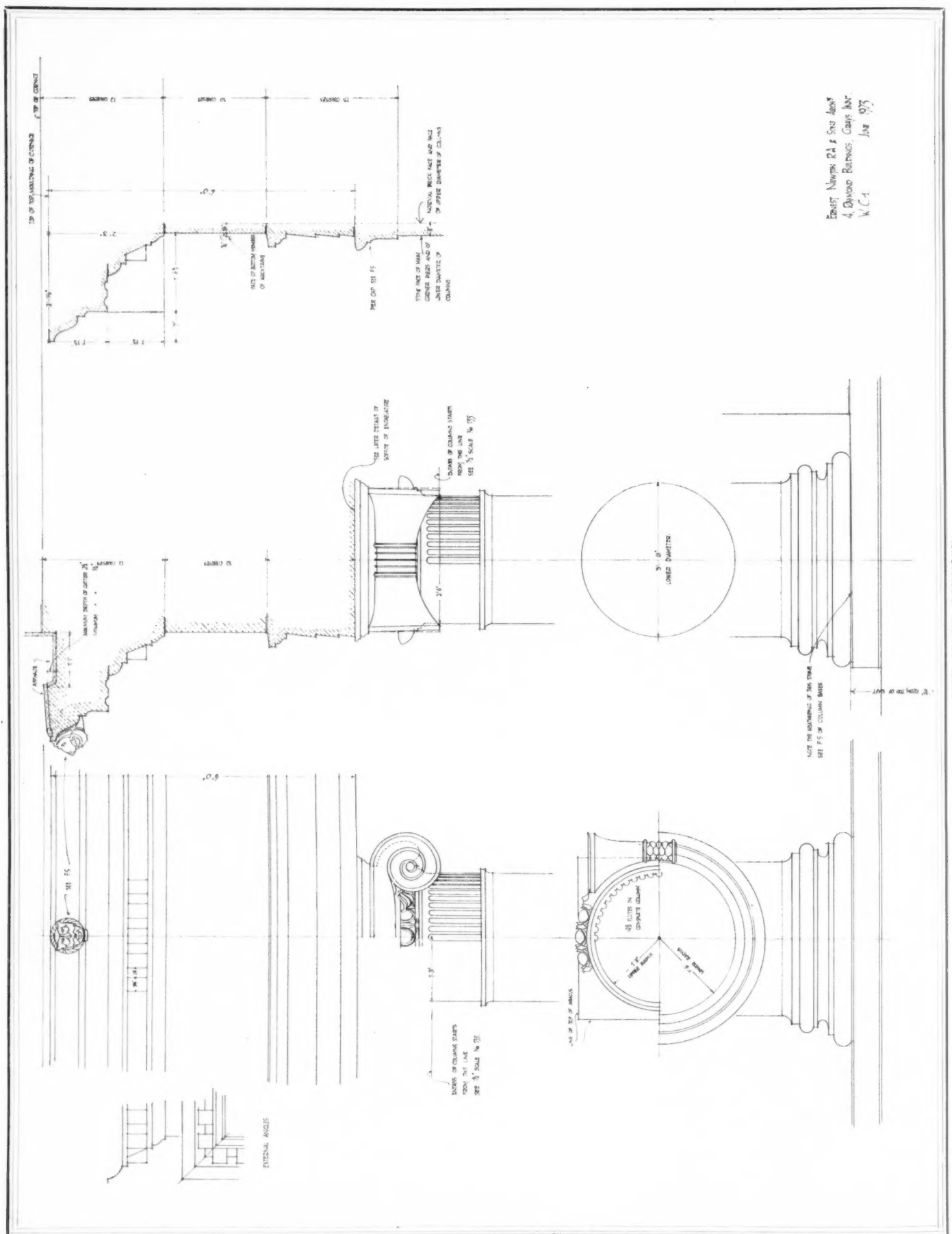
performances. The plans had got to be altered in any case. It was a golden opportunity to reconsider the requirements. A transitional stage between the first scheme and the one that was finally carried out was then arrived at. Here we see the semi-circular auditorium still adhered to, but much reduced; the ceiled access corridor is gone and with it are the columns (a bitter blow) and the arrangement of the seats on two levels. The stage is pushed back for about two-thirds of its depth, out of the body of the auditorium and into the foyer behind. Two separate vestibules are made, one at each end, and the spaces between them and that occupied by the stage are used for cloak-rooms and dressing-rooms for audience and players respectively.

A flight of steps leads up from each of the vestibules to land in a semi-circular gangway running round the top of the auditorium, whence all seats are approached. The elevation of the main rectangular façade is not much altered. It is slightly lengthened, one or two more columns added to the shallow colonnade. The real difference is, that this time the semi-circular auditorium is completely masked by the rectangle of the block, and is not felt at all when the building is viewed from in front. The whole structure is reduced in height, the front block now being only two stories high, instead of three, the auditorium no longer rising above its roof line.

Now we come to the final design as it has been built. It

differs very slightly in plan, not at all in any important detail. The entrance vestibules are different in shape, the semi-circular apses are gone; the back of the stage is differently arranged. The entrance vestibules do not lead straight into the gangway, but the approach from one to the other is now broken by two charmingly designed little pavilions. Otherwise no serious change has taken place.

The best way to approach the new building is from the chapel. A long flight of stone steps leads down to a great brick-paved court with a shallow pool in its centre, a pool of brilliant blue and gold. If you come this way the memorial hall is on your left. It stands on a broad stone terrace raised slightly above the level of the forecourt. As you stand outside the chapel doors on the top of the staircase the semi-circular auditorium is seen curving away behind the main façade, then it gradually disappears as the steps are descended and a fuller view of the front is obtained. The first impression is one of complete assurance and considerable dignity. A row of splendid Ionic columns, rather massive for their "order," with many white-painted openings set in red brickwork behind them; on each side startlingly vivid green-painted doors obviously mark the entrances to the two vestibules; above the doors plain oblong panels in stone which, strangely enough, Mr. Newton refuses to have inscribed. On approaching closely to the building one is soon impressed with the scholarship and technique of the detail.



Every surface shadow and line has been carefully and ably handled. The main cornice, of which a drawing is published, is notably successful. I am not sure but that the green painted doors are a thought too clamorous, and that either bronze or lead might well have been preferred, even if they were a more obvious choice. However, that is but a petty criticism of what is really a fine and most successful façade.

Once inside the entrance vestibules one is pleasantly dominated by a silence that, while being in no way oppressive, at the same time succeeds in being a sympathetic one. The severe, but not too severe, doorways leading into the auditorium are executed in Hopton wood, the legend "Remember" carved over their lintels. The vestibules are ceiled with very flat saucer domes in white plaster, so flat as scarcely to be considered domical at all.

Once past the threshold of the entrances into the auditorium, the effect both on eye and ear is harmonious and delightful. An unexpected silence reigns over the chamber. The floor of the ambulatory is paved in cork, stained down and waxed. Round the outer walls there hangs in loose folds a continuous line of richly-toned arras, broken only by the long sash-barred windows which light the room. The arras is hung in shallow recesses so that its folds shall not break in front of the planes of the window architraves. This device of hanging arras round the walls is to be commended for two good reasons; principally it helps the acoustics of the room enormously, and secondly it gives a welcome line of colour round the walls of the building, which otherwise might have looked too cold and bare. The arras is not carried right down to the floor line, but is stopped about 5 ft. short of it, so that a dado of ancaster stone can be carried round the ambulatory. It is on this dado that the names of the dead are inscribed.

The seats which are approached from the ambulatory by radial paths cut through them are set on wide concrete steps and arranged in the shape of curved benches without arms. Made of Indian grey wood, they are a cool mauve-grey in colour and very becoming to see in a mass.

The proscenium opening which is square headed, is simply treated. A fine wide moulding in polished plaster with beautiful subtle contours is all that marks it save for a richly modelled keystone, the work of Mr. Esmond Burton (another Old Marlburian) at his best. The curtains are of royal blue, with the arms of the college worked in heraldic tinctures on each side.

Behind the proscenium opening all is as bare as a bone. The back wall, left in dead-white with a number of oak doors



THE KEYSTONE TO THE PROSCENIUM OPENING.
By Esmond Burton.

in it, is not carried up the whole height of the opening, but left short, so that a cross gallery can be made use of; it is in fact merely intended to be viewed as a background for scenery, for those occasions when there is no scenery. The seven stage openings are furnished with curtains hanging in heavy folds of gold and black. On each side of the proscenium opening are two gilded plaques, which serve as an excuse for concealed lights. Their main purpose, however, is to break up a rather bare expanse of wall. If not too closely examined they represent the art of Phœbe Stabler very pleasantly.

The auditorium is lighted from large gilded wood lanterns hanging from the ceiling, while a subsidiary row of standard lamps is placed round the ambulatory. One has a feeling that here are the pale ghosts of the columns of the first scheme.

Under the ambulatory the space is used for music rooms. When I visited them there were about twenty boys playing twenty different airs, one in each room. With the door shut, Mr. Newton turned to me with a smile of triumph. We could not hear a sound.

Out into the sunshine once again, we strolled round the curved back of the building and entered into a newly-finished rose garden built on the site of the old school laundry. It lies there under the shadow of the chapel bank. Here in fact is a holy precinct. The chapel on its mound, the quiet garden, the empty space of the great brick forecourt, the memorial hall itself, all combine for one purpose. They are monuments to youth not death. They do not deter, they are not awe inspiring but are bright, kindly things. It is because he has struck this note that much of the success of Mr. Newton's scheme is achieved. Departing from that frightful "Onward-Christian-Soldiers" spirit that so permeated nineteenth-century "scholastic" architecture, he has gone for his inspiration to the "Castle-inn" of old Marlboro. That famous building is now one of the school houses. It was originally the home of a fine lady and is an enchanting example of all that was good in seventeenth-century architecture. He has done just the same thing in his treatment of the interior of the memorial hall, the ghastly anæmic polychromy we all know too well is not to be found there, but rich colour is used in huge splashes. A gilded faun with his pipe takes the place of St. George, a fat, bare cherub holds the mitre of the school arms, and lastly there are no texts from Ezekiel painted anywhere. A benefactor has presented the water meadow on the far side of the hall so that one day a winter garden may be carried out. This will prolong the axis from the chapel and complete the whole scheme.

DARCY BRADDELL.



THE MAIN ENTRANCE.

MARLBOROUGH COLLEGE WAR MEMORIAL.



Plate II.

June 1925.

IN THE VESTIBULE.

A view taken immediately inside the Main Entrance door illustrated on the opposite page.



IN THE VESTIBULE.

Looking through the Main Entrance door to the Terrace and the Forecourt. A photograph taken from the top of the steps shown in Plate II.



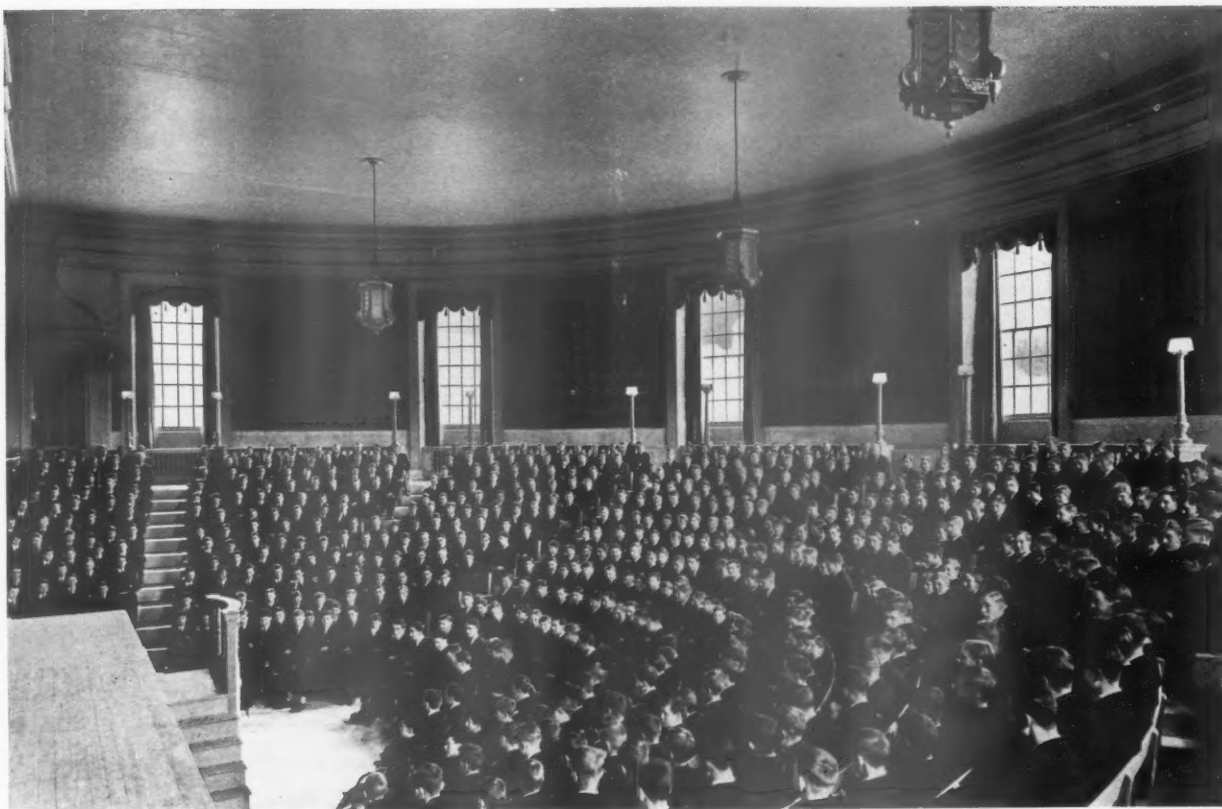
THE PORCH CONNECTING THE VESTIBULE WITH THE AMBULATORY.



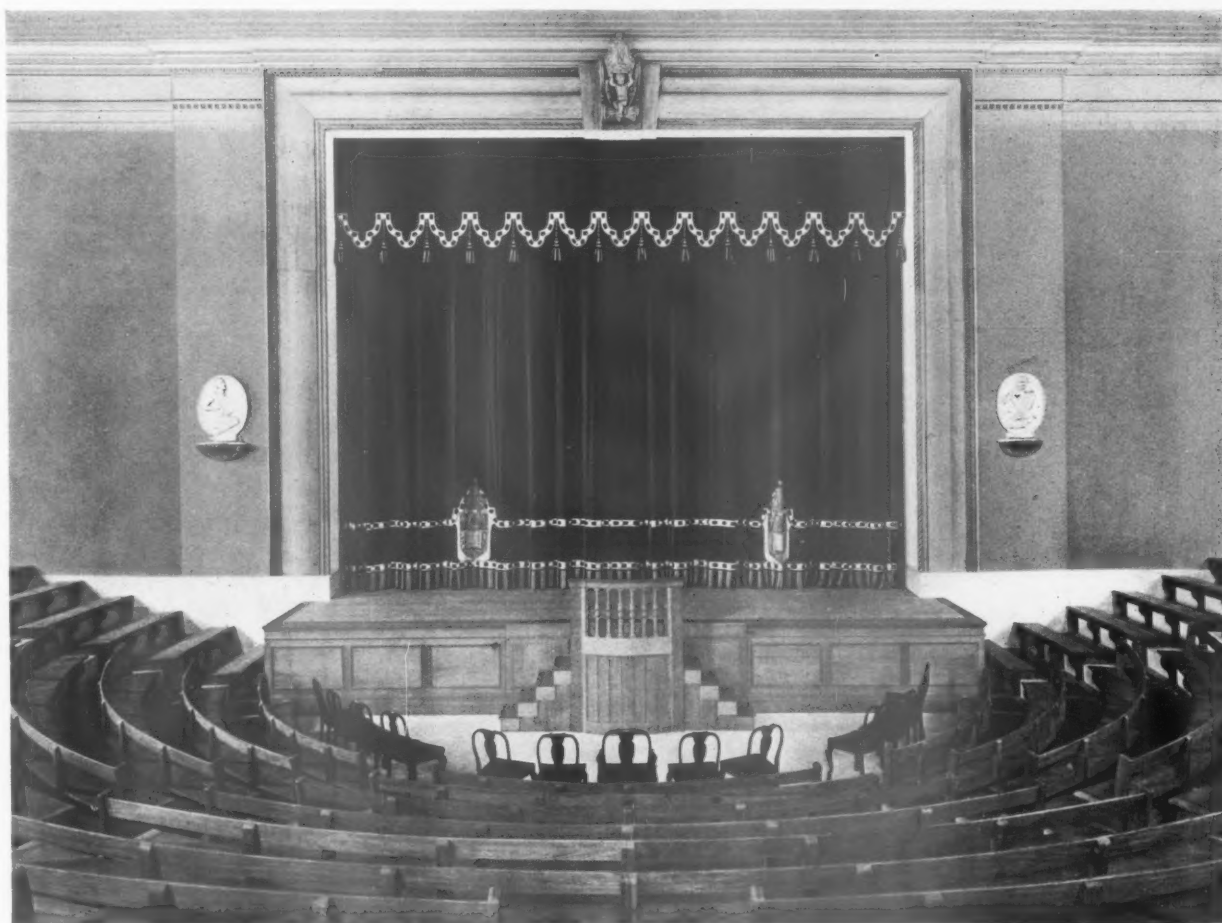
THE AMBULATORY.



✓ THE HALL, FROM THE AMBULATORY.



THE HALL.



THE STAGE AND PROSCENIUM WALL.

The Old Italian Farm.



1. BUFFALOES AT WORK ON A FARM IN THE CAMPAGNA.

THE appreciation of old rural buildings on the part of architects is quite recent, at least in Italy. This is proved by the total absence of all literature on the subject. Architectural bibliography, while counting hundreds of works on civil and religious architecture, has not one single book on rural buildings, if we except what has been done by Arch. Jona on the peasant houses of Amalfi and of the Valley of Aosta and some occasional articles on the more characteristic specimen of Apulia and Sardinia.

Up to now painters alone seemed to be aware of the charm of old country homesteads, but, of course, from a merely picturesque standpoint. Now, at last, a few of our younger architects have become alive to the importance of such buildings and of their various local characters, to which can often be traced back the development applied to civic buildings of the same region. And it is even here that the danger lies; those charming features, like small loggias supported by square pillars, the external staircase, the porch, etc., would lose what represents their chief quality, i.e. adequacy to a purpose, if inserted without any discrimination into a town building.

One of the most promising among young Italian architects, Plinio Marconi, is now trying to adapt some of the special

features of the farms scattered in the Campagna and in the Tiber Valley to a garden city, with whose construction he has been entrusted, near St. Paul, just outside Rome. The small houses, each with its own plot of ground, are both comfortable and homely, and in perfect keeping with the surrounding scenery.

As a general rule peasants' homes belong to two categories. Especially where political conditions maintained the need of feudal fortresses and castles, they have, as it were, grown out of the old tumbling walls, as if still seeking their support and protection. Except where, as in the case of the Odescalchi farm (Fig. 4), they belong to wealthy families, able to spend money on them, and using the old towers with artistic aims, ancient feudal remains are chiefly used where local architecture does not demand a proper farm with granaries, haylofts, stables, etc., such as are required in other districts where agriculture is more advanced.

Figs. 2 and 5 show two very picturesque specimens; the first in the Tiber Valley, where the house is almost exclusively used as a dwelling for the members of the family; agricultural life there is almost limited to the tending of sheep, and these, in the cold winter nights or in rainy weather, huddle together under sheds. The second (Fig. 5) lies on the slope of a mountain



2. A PEASANT'S FARM NEAR TIVOLI.



3. A FARM ON LAKE TRASIMENO.

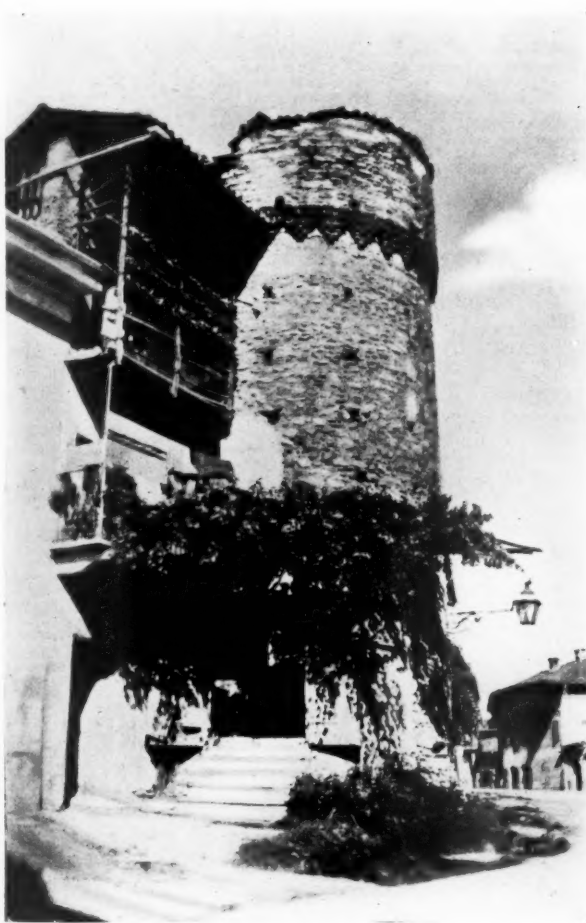


4. A FARM BELONGING TO PRINCE ODESCALCHI.

in Piedmont, and here, too, there is no reason for big farms, as there are no large properties. Each peasant has his own few fields, generally producing Indian corn, of which one can see the cobs drying on the balcony, hung up as to form a sort of golden wall. They simply blaze in the September sun, and when the vine festoons mingle with them they make the most charming picture.

A typical Italian sight is the classical shepherd's hut still to be found in the Campagna; I remember visiting one near Anzio; none of them have proper chimneys, and smoke filters out as best it can. The picturesque house on Lake Trasimeno, the Umbrian lake beloved by St. Francis (Fig. 3) shows a more advanced agricultural life; the white oxen for which Umbria is well known replace the buffaloes of the Campagna. (Fig. 1.)

The characteristic feature of the small loggia with



5. A PEASANT'S HOUSE IN PIEDMONT.

square pillars in brick and mortar is offered by the sun-scorched corner in the ancient Corneto Tarquinia (Fig. 6), the village which once dared to brave Rome; this was the seat of sacerdotal learning, where the Augures acquired their divinatory gifts. The loggia is the one common link between the more distant farmhouses. One finds it in southern Italy as well as on the northern mountains; an evidence of this is Fig. 7, a fifteenth-century farm in Angolo, in Val Camonica above Brescia; in this case the pillars are made of red sandstone. In many instances, especially in central Italy, the peasants still follow the old custom born in the times when everyone repaired to fortified enclosures for the night and went out to the fields with the day. Bagnaia, the lovely old piazza of which lies within the inner court of the castle, is an example of the kind.

LISA SCOPOLI.



6. A FARM CORNER IN CORNETO TARQUINIA.



7. A FIFTEENTH-CENTURY FARM IN ANGOLO.

Can Waterloo Bridge be Saved?

IT would seem that Englishmen are slow to value fine architecture for its own sake. If a building is connected with history, especially with persons and events associated with centuries long ago, if it took form in a civilization very different from our own, then it gains public respect. Unlike the great masters of literature, architects, unless they have some other claim to fame, receive scant recognition as great men. Even Wren himself receives tribute as much because he rebuilt London after the Fire, and was great in other walks of life, as because he built so ably. Vanbrugh is only known to the public on account of a neat epitaph.

Lie heavy on him earth, for he
Laid many a heavy load on thee.

Hawksmoor, Gibbs, Chambers, have scarcely been heard of. Where except among architects are their names spoken? And the architects of the early nineteenth century are, if such a thing is possible, even less known.

In few houses in London could reference to William Blake call for the question, "Who was he?" Yet Rennie's work is so little appreciated, that until the spring of last year there were few who could have told by what right he had a place among the great men of our race. Blake died in 1827, that is, ten years after Waterloo Bridge was built. As much as Rennie, he belonged to the first quarter of the nineteenth century. In contradistinction to literature it is the fashion to neglect if not to despise the architecture of that era. To enter a drawing-room, to sit at a dinner, to be one of the fourth form in a girls' school and not to be able to give some account of Wordsworth or Lamb would be social shame. With Rennie it is quite different. Let us hope that the regard in which he is held, though it is less in quantity, is the healthier for its freedom from intellectual snobbery. It is probable that, had a knowledge of him been necessary for any who attempt, even in a very small way to play the social game, if, for instance, the general public had paid only lip tribute to him, as is so generally paid to Shelley, Keats, or Tennyson, the officers, committees, and members of the London County Council would not have dared to propose the demolition of the noble bridge he built. The proposal is tantamount to one to destroy Charles Dickens's "Pickwick Papers." To me that act of vandalism would be preferable. For we all have within reach of our outstretched hands other books as good, but there are no other bridges as fine in the City of London.

That we should be put in the position of having to explain the value of Waterloo Bridge, is in itself a shameful thing. The daily papers sensing that this is indeed an important matter, have given much space to it, but very seldom have I seen on those sheets even a brief appreciation of the beauty of this bridge, or a description of its meaning to London. In the hope therefore that, since these words appear in the most influential architectural journal of the day, such a statement may perhaps be quoted, I set out here evidence lately given on this subject:

"This bridge is architecturally a magnificent structure, being, with Westminster Abbey, St. Paul's Cathedral, and the City Guildhall, one of the first monuments of London. Like these buildings, it expresses in itself the development of the arts and the constructive methods of the age in which it is built. That it is not very old, makes little or no difference to its value in this respect. It is the finest tangible expression of English civilization

of the first years of the nineteenth century. In addition to its beauty it is still a living bridge, carrying the burden it was designed to take. It is not a dead, but a living monument.

"The great beauty of the bridge depends on its masses, on the relative proportions of the width to the length, and of these together to each individual arch. And each arch is the spontaneous response to the demands of the material of which it is made—that is of granite. The fact that the roadway is on a level with the Strand makes this granite arch-form particularly suitable for this bridge; for the height of the roadway above the water gives room for an arch that is not only structurally adequate but also of a beauty that cannot be surpassed in the conditions. And further, besides the essential beauty of the mass the architectural dressing—the long stretching façades decorated by cutwaters bearing Greek Doric columns is architecturally excellent. And besides this excellence of form, these façades also naturally bear the enrichments which were in the vogue prevailing at the day of building. They are of as much importance in the history of architectural development in England as are the arches, carvings, and mouldings of the Chapter House at Westminster or the west front and towers of the Cathedral of St. Paul.

"The bridge possesses a further beauty in a remarkable degree, a beauty which is most difficult to secure, and very valuable when achieved, namely, the sense of grandeur and "scale" only to be gained by the right relationship of the size of the individual stones to the whole structure. The amateur is vaguely aware, rather than precisely conscious, of the cause of this rare value which so enormously increases the dignity and "scale" of the whole.

"But there are other reasons, besides the important one of architectural perfection, which should be urged in favour of maintaining Waterloo Bridge as a building deserving the reverence of Englishmen. This bridge, with Somerset House, the Thames Embankment, and the towers that rise in the distance beyond, makes the most famous view of modern London. This is the view that visitors recall when they return to their own countries. It may be said without exaggeration to represent the best of our city. This view is full of grace, dignity, mystery, and association.

"Again, is it for nothing that this bridge bears in its name a reminder of the victory of the English over the ambitions of Napoleon? Just as Trafalgar Square and the Nelson Column, with less intrinsic beauty, remind us of our greatest sailor, so does this bridge commemorate the most difficult and most decisive victory of the greatest soldier who has served England. This is an important point, and one of great national significance. The bridge was to have been known as the Strand Bridge, but in 1816 its name was changed, by Act of Parliament, to Waterloo Bridge. The Act recites:

"The said bridge, when completed, will be a work of great stability and magnificence; and such works are adapted to submit to posterity the remembrance of great and glorious achievements,' and it goes on to declare that: 'the name given to the bridge shall be a lasting record of the brilliant and decisive victory achieved by His Majesty's Forces in conjunction with those of his allies.' Waterloo Bridge is thus an acknowledged national monument.

"These reasons alone are of such importance to the nation, that it is desirable that this bridge *should* not be considered as though its sole importance to London and to England rested on the fact that it still conveys from bank to bank across the Thames a part of the wheeled and foot traffic of the City of London."

It is then a bridge deserving the highest praise that can be bestowed on it, which actually needs to be defended. Let us consider how the matter arose, and what has happened about it.

The architect glancing at Rennie's drawings for Waterloo Bridge must, I think, be conscious of a certain wonder at the

slightness of the foundations in comparison to the great weight of masonry that rests on them. However that may be, it appears that settlement took place at once, even perhaps while building was in progress. In evidence of this the great engineer Brunell, speaking in 1830, said: "Waterloo Bridge has been settling for years." * It is known that a gradual subsidence has been more or less continuous during its existence. Soon after its completion the removal of Old London Bridge, which, for so many centuries had dammed the upper waters of the Thames, allowed the increased current to deepen the bed of the river; later, when the Embankment was built, the river was confined to a narrower course and the deepening of the bed was further accentuated. In the eighties an attempt was made to confine the bed beneath the piers of the bridge; for the pile-tops and the timber platform were then becoming exposed above the surrounding bottom. Yet still the sinking in the piers was continuous, though much greater in some than in others. From time to time the custodians of the bridge (I would like to renew the old title of Bridgmaster) caused surveys to be made to show what movements were taking place. In the late autumn of 1923, if not before, it was reported that the fourth pier from the Surrey side was suffering more than the others, and in the spring of 1924 remedial measures were adopted there, and signally failed. It appears that early in 1924 the engineer to the L.C.C. was asked to report whether need for reconstruction, strengthening, or widening, was likely to arise at an early date. In the reply to this question, it was pointed out that the foundations were at fault, that steps should be taken to strengthen them, that the cheapest way to do this was to take the bridge down and rebuild it, and that at the same time the opportunity to widen the bridge should not be missed. This reply contains only one hint that the bridge is one of very exceptional beauty. This is a statement that the architectural character would remain unaltered, and, except for increased width, would be a veritable reproduction of the old.

It does not take an architect to perceive that a drastic change in the width or length of a building makes a very material difference to it. It is, however, right to remember that in these days when civil engineering and architecture are as much divorced as trades of mason and bricklayer, the scant reference to the great beauty of the bridge by an engineer need not be surprising. It might well have been reasoned that the County Council must surely have already referred that side of the question to its architect or to some other competent advisers. It is time, however, that professional men hesitated less about giving any opinion or advice that they know to be true, whether it is strictly within their province or not. The plumber who refuses to fix a wooden support for his pipes, or who does not complain when he knows the one fixed for him is inadequate, is a nuisance. We are men dealing with life long before we are members of this or that institute. The fact seems to have been that the value of the bridge as a work of art was nobody's business, and consequently that important aspect of the matter was neglected in the official circles.

It was before the bridge was closed and at about the time the remedial measures were being taken, on April 16, that the Society for the Protection of Ancient Buildings informed the London County Council that it had an important suggestion to make with regard to the repair of the bridge, and asked for an interview at which the engineer consulted by the Society

would be present also. Most unfortunately no interview was granted; and after some twenty-five days of silence the Society was requested by the London County Council to send particulars of its suggestion. It was then that the report drawn up for it by Mr. Harley H. Dalrymple-Hay was sent to the London County Council. This report was referred by the London County Council in the beginning of June to the engineers who had already stated that they were of opinion that underpinning was "out of the question." Later, in the controversy that arose, the Chairman of the Thames Bridges Committee affirmed that by referring to these engineers, who had already given an opinion, independent advice had been sought and secured. It is now generally known that the suggestion made by the Society was turned down. These dates and incidents have assumed an unreal importance owing to the controversy that has grown about them.

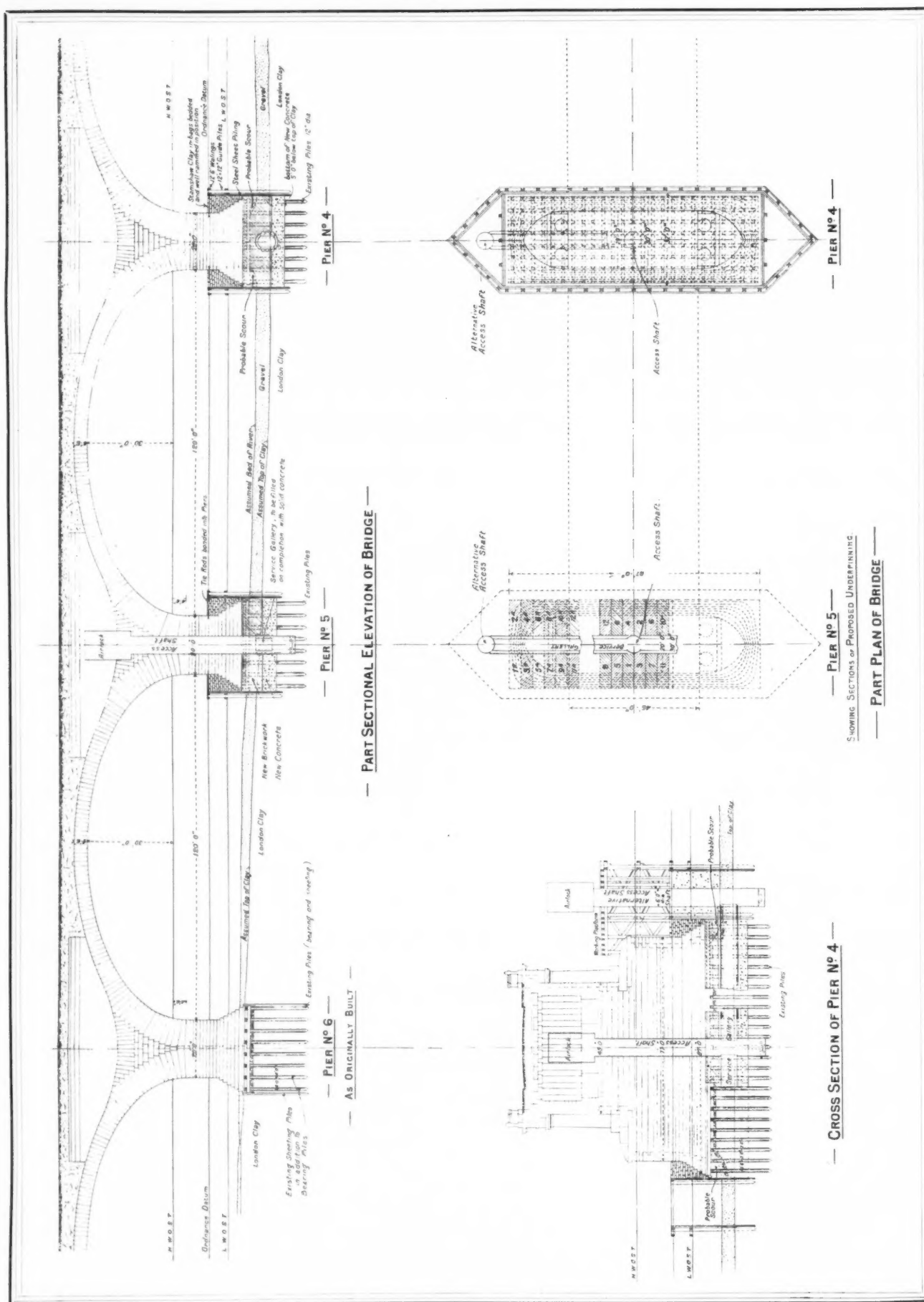
The main issue is now what it was in the spring of 1924, namely, the preservation of Waterloo Bridge. The Society for the Protection of Ancient Buildings believed, and still believes, that if Waterloo Bridge is not maintained in position it will not be maintained at all. In taking engineering advice on this question, the Society not only confirmed its own view that the bridge could be maintained, but also found that to do so would cost London a much less sum of money than would have to be spent if rebuilding were undertaken. Being confident that this must be evident to all who studied the case without prejudice, the Society acquired an uneasy sense that powerful forces were working for the demolition of the bridge and that the technical opinion it submitted did not receive, and indeed as yet has not received, a fair hearing. For when the Society submitted these opinions, that were so clearly put that a layman could understand them, for judgment, to the Chairman of the Thames Bridges Committee, he referred them again to the same engineers who had already committed themselves to an opinion, though this time they appeared in the guise of the Council of the Institution of Civil Engineers. It is time indeed that the matter was laid before a tribunal with a chairman trained in the Courts of Law, to sift evidence and to search for truth. But lest it should appear that the whole case for the maintenance of the bridge rests on the ability of engineers to strengthen the foundations, it should be restated that few would not be satisfied if it was decided that the bridge should be rebuilt to its present form.

The main points are two: (1) That any alteration to the original design would harm Waterloo Bridge as a work of art, and (2) That for the present, the roadway it bears needs less alteration for the easing of traffic than many other main streets in the County of London. Indeed, it has yet to be shown that any advantage would result from widening.

In addition, this is not the most natural or the most convenient place to cross the river, and widening here will surely in future be used as a reason to obstruct a really needed bridge improvement elsewhere. It will be argued then, "You have a wide bridge at Waterloo, it cost a huge sum. The money we have now must be spent on other improvements."

Those who are working for the demolition of the bridge are in a strong position. They have power to carry it through without interference. When underpinning is shown to be possible they say, "'tis for traffic reasons that the bridge must go"; if argument is used proving that it would be unwise to bring more carriages there, they say, "the granite is defective; indeed it cannot stand the strain that comes on

* "The New Monthly Magazine," December 1, 1830.



A PLAN OF WATERLOO BRIDGE.

A drawing prepared by Harley Dalrymple-Hay from Rennie's drawings of the bridge. This should be read in conjunction with the report on the opposite page.

it." It may soon be claimed by them that the work is so far advanced that it is wasteful to stop it; quite possibly the building of the temporary bridge may cause the old one damage and an additional reason against maintenance will be given.

There is no means of holding these gentlemen down to one aspect of the case at a time. It is only by a strong and united effort of all Londoners that we may hope to save the bridge. This united effort is being made. A conference of societies exists to lead the defence. The Royal Academy, the Royal Institute of British Architects, the Society for the Protection of Ancient Buildings, the London Society, the Town Planning Institution, the Architecture Club, and a Group of Civil Engineers formed *ad hoc*, are united under the Chairmanship of Mr. Arthur Keen to plead for a proper public tribunal, so that all aspects of the case may be sifted and the truth uncovered. Each of these societies has been allotted a part in the defence. To the Society for the Protection of Ancient Buildings has been allotted the task of presenting the case for structural repair, for all along it has held that on this the maintenance of the bridge will finally depend.

It is our present concern, for the writer is the secretary of the last-named society, to study the proposals made by Mr. Harley H. Dalrymple-Hay in May, 1924, and with this in view the plan he prepared is here reproduced.

Here is an engineer who has grasped the significance of Waterloo Bridge, for these words follow his opening sentence: "The avoidance of interference with the structure should, I think, be kept prominently in mind when considering any scheme for the repair of the foundations, in view of the fact that the bridge is undoubtedly recognized throughout the world to be a masterpiece of arch-bridge construction."

Again later in the report we find the words, "Apart from these engineering and financial considerations, there is the equally important one, from a national point of view, of preserving as far as possible untouched a structure which, as already stated, is recognized to be a masterpiece of arch-bridge construction." We must not forget that these words are those of a responsible engineer who is constantly engaged in tunnelling operations often necessitating heavy underpinning work.* Now, Mr. Dalrymple-Hay is driving tunnels under the river between Hungerford Bridge and Waterloo Bridge. To-day, as you are carried in an omnibus over Piccadilly Circus, this engineer is at work beneath the wheels of your carriage. The trains ran continually in and out of Waterloo Station while he built the passages and stations which lie beneath that railway terminus. With many other English engineers he feels that the County Council's decision that the defects in the bridge can only be remedied by rebuilding the whole bridge will arouse the ridicule of French and American engineers. For the honour of his profession he would have been impelled to stand out for less cumbrous methods of procedure even if the building to be sacrificed to them had been of no value as an example of the finest architecture and of the most skilful engineering of one hundred years ago.

Mr. Dalrymple-Hay's report is founded on the information obtained from Rennie's description of the bridge. The piers are counted from the Surrey shore, and those numbered 1, 2, 3, 4, and 5, are stated by Rennie to be constructed on the gravel, the remainder on solid blue clay.

When this report was in preparation it was still possible to give all the piers of the bridge firm foundations without interference with the traffic upon it. Had this been done the

cost of the temporary bridge would have been saved and the pier numbered 4, with the abutting arches, would not have needed rebuilding. Since then this pier, which then was undergoing remedial treatment, has subsided, seriously affecting the arches it bore and fracturing a number of the great granite voussoirs. It is now probably necessary to rebuild the pier and the two arches that adjoin it, so we will not consider this part of the report here.

At the time of preparing his report Mr. Dalrymple-Hay had not the figures which recent soundings have provided. He believed the river bed was lower than when Rennie built, but was careful to say that the exact level of the bed did not affect the method he proposed. The present levels are now before him and he finds this statement confirmed.

Rennie's foundations were as follows: Round piles 1 ft. in diameter, varying in number from 176 to 319, according to circumstances were driven under each pier into the clay bed of the river. These piles were sawn off level, well below the river bed, and above them were placed transverse timbers 14 in. wide and 12 in. deep. On these and vertically above the piles longitudinal timbers were laid and secured by long wrought-iron jagged spikes driven through the centre of each pile. The space between the pile heads and timber grill was filled solidly with brickwork and masonry. On this grillage of great beams a continuous 6-in. timber deck was spiked down. This deck forms the base of each pier.

Any man passing in a boat under the arches will see that a number of the piers show signs of fracture within a few feet of the up and down stream faces. Further, the masonry set-offs beneath the cut-waters are not now level. The piers, pointed on plan, stand on platforms shaped as parallelograms and the spread of the set-off stones at the angles necessitated by the change of plan from a square to a boat-shape, was not given enough strength to distribute the load evenly over the timber platform and piles beneath these corners. The result can easily be seen, for at the four corners the piles have not been forced into the clay so much as those under the mass of the piers, and the set-off stones are consequently much tilted. This deformity is not in reality either alarming or serious, though it is very considerable.

Mr. Dalrymple-Hay in his report writes: "The problem, simply stated, amounts to the replacement of the existing timber foundations by solid concrete." He goes on to emphasize that engineering methods now commonly employed "admit of this concrete being placed in position with perfect safety, without disturbing a single stone of the existing structure." I must repeat that these words may no longer apply to the fourth pier from the Surrey shore, but that they hold good of the others. The following paragraphs from Mr. Dalrymple-Hay's report are printed in full, for they contain the pith of his proposals, and in conjunction with his plan can be understood by any man who has ordinary intelligence, whether or no his life has led him to study buildings and watch building operations.

"My scheme and drawing have been prepared on the assumption that the bridge was in no immediate danger, and, as traffic would be continued during the nine months necessary for the construction of the temporary bridge, my suggestion is that if it is safe for traffic to pass over the bridge it is absolutely safe to underpin it.

"Dealing in the first place with the problem on this assumption, the preliminary operation would be to drive enclosing sheet piling of special section entirely around the piers in the positions shown on the drawing. The lower ends of the piling would be driven well into the clay some 2 ft. below the level at which it is

* Mr. Dalrymple-Hay is the Engineer to the Underground Railway.

proposed to put in the new concrete foundations, the upper ends being secured to the masonry of the piers by strong tie-bolts at close intervals. The space between the sheet piling and the masonry above the footings and against the pier-faces would then be filled with Stamshaw clay in bags bedded and well rammed in position so as to make a substantially airtight joint between the piling and the masonry, and by its weight to counteract the uplift due to the compressed air to be employed for the exclusion of the tidal waters during the progress of the excavation for the new foundations.

"An access shaft 6 ft. in diameter formed of airtight steel plating would then be fixed within a circular pit sunk in the masonry at the centre of the pier from a chamber formed under the roadway, or alternatively, in the cut-water of the pier at one or both ends, as may be required, the shaft being fitted at its upper end with an airlock for the ingress and egress of workmen engaged in the underpinning work, and for dealing with materials required for the same.

"Compressed air would then be applied to the shaft through piping carried along the bridge from a working site at one end.

"The maximum air pressure required would be not more than about 15 lb. per sq. in. at high water, and 6 lb. per sq. in. at low water, the actual pressure being regulated automatically in accordance with the level of the tide. Assuming that the work is carried out from the central shaft (as it would in such case be done much more cheaply and quickly than from the alternative position in the cut-water) a short length of service gallery would be driven into the pier foundation under compressed air conditions, and the work be started in that manner. The existing foundations, including all timber, loose stones, etc., would then be taken out in small sections, one at a time, each section being filled in solidly with concrete and brickwork before the next section was commenced, the brickwork being pinned with slate wedging to the underside of the masonry.

"The foundation thus formed would bear directly upon the London blue clay, which, from my personal knowledge of that material from tunnelling operations which I have carried out in that vicinity, is of the very best quality.

"This description will be made more clear on reference to the plan of pier No. 5, whereon are shown by numerals 1, 2, 3, etc., the sections as they would successively be dealt with from the central shaft, and numerals 1a, 2a, 3a, etc., if the work were executed alternatively from the shaft in the cut-water.

"During the operation of excavating the gravel bed, the compressed air would tend to escape into the river, but its passage would for all practical purposes be barred by the cut-off formed by the steel sheet piling and by the clay filling between the upper end of same and the masonry of the pier.

"The small quantity of air that would escape through the joints of the piling would have the advantage of always maintaining the air in the working section in a condition of purity, much to the benefit of the men engaged.

"In every process of underpinning the foundation is, of course, temporarily unsupported immediately under the area where the ground has been removed by the process of excavation, and it is to that extent weakened. It is consequently necessary so to arrange for the execution of the work that the area of each of the sections to be excavated may be as small as possible and that the work be carried out with the greatest dispatch.

"In the present case it is proposed to limit the size of the working section to the space between two rows of bearing piles, and half the width of the pier, i.e., less than 3 per cent. of the total foundation area. The bearing piles would not be removed until the whole of the gravel and clay has been excavated in each section, and then they would be dealt with in pairs and cut off below the level of the new concrete.

"It may be here noted that this type of foundation particularly lends itself to this mode of excavation, as few, if any, new props will be required as the excavation proceeds, and the poling boards which will temporarily be put in to support the sides of the section

can very easily be threaded behind the existing bearing piles, which will automatically do duty for side trees.

"The system which I have thus briefly described would be applied either simultaneously or successively, as may be decided, to any of the piers which may require underpinning."

At this time of the report Mr. Dalrymple-Hay was able to include this important paragraph:

"By the adoption of the proposals outlined above the entire cost of a temporary bridge, the blocking of the river therewith, the pulling down and rebuilding of the existing structure with the consequent interference with navigation over the entire width of the river would be avoided, and in my view the Council should reconsider the whole question if only from the point of view of economy."

Mr. Dalrymple-Hay's report goes on to deal with the methods to be employed in widening should that work be decided on. He points out that nothing in his proposals to underpin would prevent that work.

This report has lost nothing of its value although a year has passed since it was written. The recommendations made therein are still good except where they apply to pier No. 4. If anything, the work would now be easier because traffic is provided for by the temporary bridge. In the case of some piers Mr. Hay now thinks it might be possible to underpin without using compressed air.

It is not my intention here to labour the question of traffic. Briefly put: approaches to the bridgehead are more in need of easing than the bridge itself. Bridges in cities do not need to be as wide as streets, for no carriages stop on them to take up or put down passengers. The objection to the width of Waterloo Bridge rests on the fact that it has room for but three lines of traffic; yet no more accidents happen there than elsewhere in London. The congestion at the crossing of the Strand with Wellington Street, if it can be overcome at all by the suggested subway, can as well be eased in this way with the old bridge standing as with a new one.

No one would propose taking the traffic across the river at this point to-day, did the bridge not in fact exist.

Waterloo Bridge must not be destroyed, altered, or rebuilt, until an independent tribunal, preferably, in my view, under the Presidency of a fully-qualified lawyer, has found that the arguments set forth above are false and null. I hope that the readers of this article will not fail to take all opportunities that occur to press for a public inquiry on these lines.

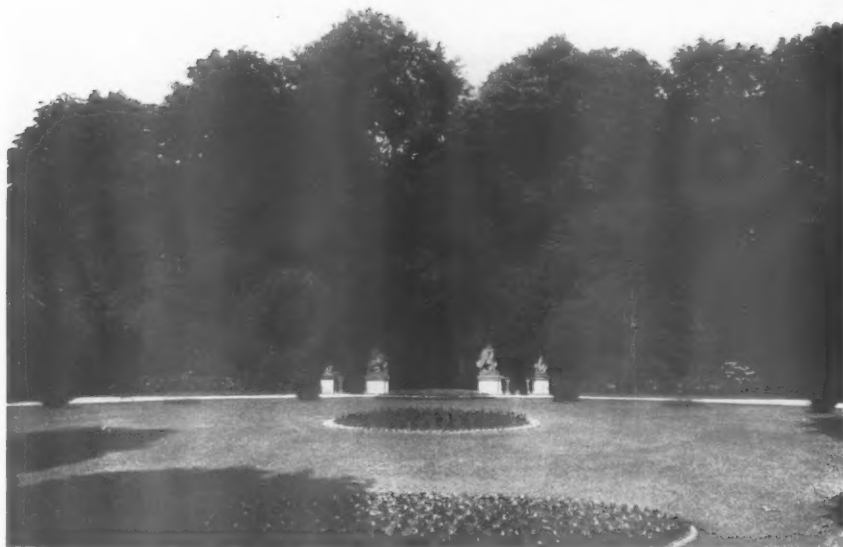
In this article I have endeavoured to tell the history of the attack on Waterloo Bridge, an attack that may yet be successful. I have tried to show the folly of the reasons with which the promoters of the attack sought to justify their proposals, when most unexpectedly they found that the thing they were about to destroy was in actual fact of great value. They knew not what they were about, and to hide their ignorance add reason to reason. Anatole France, in his divine work "*L'île des Pengouins*," exposed a similar folly. Writing of those who convicted Dreyfus and who thought that, being great men in the world, no questions would be asked of them, he used these words:

"Les sept cents Pyrotes ne pouvaient détruire les preuves de l'accusation, parce qu'ils ne pouvaient les connaître et ils ne pouvaient les connaître parce qu'il n'y en avait pas. La culpabilité de Pyrot était indestructible par son néant même. Et c'est avec un légitime orgueil que Greatawk, s'exprimant en véritable artiste, dit un jour au Général Panther.

"Ce procès est un chef-d'œuvre, il est fait de rien."

A. R. Powys.

Italian Gardens in Prague.



1. THE ENTRANCE TO THE BELVEDERE GARDENS.

TRENT is the most northerly Italian town, but long after the traveller has crossed the Alps he finds reminders of Italy. Let him journey northward to Prague, through Innsbruck and Salzburg. As he retraces the steps of many an obscure Italian craftsman and adventurer seeking fortune north of the Alps, he will still see recollections of Italy. During the seventeenth and eighteenth centuries Italian taste embellished the cities of the Holy Roman Empire, and Italian architects designed many of their palaces. Middle Europe possessed in art a less vigorous native tradition than did France, or the Low Countries, and therefore accepted the canons of Southern taste more readily and with less transformation. Prague especially, as a meeting ground of German and of Slav, instinctively welcomed the art of a Latin race.

During two centuries Italian art adorned the palaces of Prague. Their architecture, their stone carvings, stucco mouldings, frescoes and wrought-iron work were all in the Italian taste. The banquet hall at the Wallenstein Palace, the great stairs at the Clam Gallas, the façade of the Czernin, and the courtyard of the Lobkowitz Palace at Roudnice, are all of Italian origin. Only later, well into the eighteenth century, the Baroque became Rococo, to yield before the style called "Louis XV." In the drawing-rooms of the Knights of Malta at Prague, and in the splendid suite in the Archbishop's palace on the Hradshin, are Gobelin tapestries in their original framework, preserved in a setting which Paris might envy. Yet one suspects that many of the craftsmen who worked at the stucco in the Louis XV style of the Archbishop's palace were as little French as was Caffieri.

There still exists in the Malastrana quarter of Prague, at the end of a small lane known as the street of the Italians, an "Orfanotrofio Italiano," a pious foundation dating from the early years of the seventeenth century, established for the orphaned children of Italian workmen, which provided the first example of such an institution in Prague. Favoured in its origin by the Emperor Rudolph II, it pre-

serves the name and continues the beneficence, though there are no longer any Italian children to take care of. Not far off, on the wall of an ancient house, one reads the name of Palliardi, one of the many Italian architects who worked at Prague.

The palaces of Prague are the obvious reminders of Italy, but the gardens are less direct in their suggestion. Fashion altered completely in the latter part of the eighteenth century, and between Jean-Jacques Rousseau and neglect, Italian gardens suffered. Their lines were changed, and in many instances their character became transformed. Old masonry crumbles after winter frosts. Southern vegetation accommodates itself ill to the rigour of the north. Substitutes became necessary, and though the native cypress springs by itself out of the crevices of walls, it grows stunted and never attains the tallness of the Mediterranean tree. The coal-laden atmosphere is little favourable to its delicate growth since Prague has become an industrial town and the nightingale is no longer heard in its gardens. Even in Italy the dignity of the cypress did not save it from being cut down when fashion set in for English gardening, and early nineteenth-century vandalism gratified itself by the rude destruction of whatever was formal. The wish to return to Nature offered the excuse for such ruthlessness. The classical features of many a plantation were destroyed while bad turf and serpentine paths replaced orderly alleys fringed with box and lined with flowers.

Little survives to-day of the original plan of the famous Belvedere gardens at Prague. In the early sixteenth century the Emperor Ferdinand caused an Italian, known as Francesco, to lay these out on the plateau opposite the castle, from which they were separated by a woody ravine. There remains of his design only a noble alley of beeches and chestnuts, replanted perhaps two centuries later along the central axis of the garden. Other traces of the formal garden and its once celebrated grottoes, with their invisible musical instruments and mirror-effects, have long ago



2. A VIEW OF THE CASTLE AND THE CATHEDRAL FROM THE COLONNADE OF THE BELVEDERE.

disappeared. Much was destroyed during the Thirty Years' War, when this part of the capital was occupied by the Swedes. Later the neglect of peace followed the destruction of war, for during many years the Court ceased to reside at Prague.

Yet this garden was once famous among the gardens of Europe for its pomegranates and its orange trees, and its topiary work. It was here that Ferdinand's Ambassador, the Fleming Van Busbec, returning from his mission to the Porte, planted the first tulip bulbs which he carried away with him from Turkey. From here their cultivation spread through Western Europe. In this garden too, the Court Masques were played, notably the great one given on November 9, 1558, to celebrate Ferdinand's triumphal return to Prague after his election as Emperor. He, himself, witnessed this seated on a throne covered with cloth of gold and surrounded by the great dignitaries of the Roman Empire. The description of this pageant with its impersonations of fairies, of devils, wild men and mythological divinities, is not unlike that of other revels, which then formed part of the festivities at every Court in Europe, and which are associated in England with the genius of the great dramatists.

Ferdinand, brought up amid Spanish surroundings and accustomed to the taste of the Renaissance, had felt ill at ease amid the Gothic adornments of the royal residence on the Hradschin. His great achievement in introducing the new art at Prague is still inadequately appreciated. Long political resentment against the Habsburgs has tended to

minimize whatever is associated with their rule. Early in his reign he had summoned Italian architects to construct a pavilion known as the Belvedere, which, according to legend, was to be a surprise for his queen. Enrico de Spatio, a pupil of Sansovino, built of red sandstone the most exquisite jewel of the Italian Renaissance which exists north of the Alps. It was completed in 1567, thirty years after it had been begun, so that the surprise for Queen Ann could not have lasted long.

A number of Italians worked as architects and sculptors on its construction and the decoration of its arcade. Such names as Paolo della Stella or Gian Maria de Pambio convey but little meaning. They were among the many craftsmen who left Italy to seek fortune north of the Alps and helped to diffuse the new art of the Renaissance. Can any proof be more convincing of the inherent merit of this art than to find at Prague, erected by obscure artists, a monument of beauty worthy of the best at Padua or Vicenza.

Only in a single respect does the Belvedere call for surprise. When all else is pure Italian, the copper roof of Baroque shape appears oddly at variance with the rest, and, in point of fact, is of later date. Perhaps the first Italian architects made insufficient allowance for the heavy winter snowfalls of Bohemia. The gentler slant of the original terra-cotta tiles may have fallen in and had to be replaced by steep curved copper sheaves, now grown green with age, which somewhat incongruously ride this southern building.

Close to the Belvedere stands the so-called Chanting

ITALIAN GARDENS IN PRAGUE.



Plate III.

June 1925.

THE CHANTING FOUNTAIN.

Thomas Jarosch, sculptor, 1570.

With the Belvedere in the background. The copper roof to the Belvedere, which otherwise is pure Italian, can here be seen.



3. A BAROQUE FOUNTAIN IN THE GARDEN.

Fountain, its name derived from the figure of a piping boy, which surmounts it. It is the work of a little-known Moravian sculptor and caster of cannon, Thomas Jarosch, of Brunn, and was executed in 1570. The technique follows the Nuremberg tradition, which with Gothic love of detail and survivals of angularity, adapted Italian art to northern taste. Originally this work of elaborately modelled bronze must have formed a prominent feature of the garden with appropriate spacing around it like in many an Italian villa, where fountains connect the stonework of the façade with the greenery of the open. It stands even now on the main axis of the garden. But the meaning of this intention has been lost, and it remains isolated in a round of grass without other relation to the Belvedere or to the garden.

After Ferdinand, who rests with his queen in a splendid sculptured tomb in the Cathedral opposite, the Emperor Rudolph embellished the gardens of the Belvedere with exotic plants, shrubs and trees brought from Italy, Spain, and the Orient. As a botanical garden it then enjoyed its greatest fame. The art-loving Emperor, who filled his treasure-room with the great collection now in Vienna, also adorned his garden with many statues, but save for a Baroque Hercules, the remainder have disappeared, destroyed, it is said, by Prussian cannon-balls during Frederick the Great's siege of Prague. Under the garden parapet the Emperor Rudolph kept wild beasts, for his interests were many. The walls still stand which enclosed the wooden cages containing his lions, his camels, and the rare birds, which he had brought from the East. Below these, in the ravine which separated the garden from the Hradschin, stags wandered at will, and

a favourite amusement of the courtiers was to watch them during the rearing season. The Emperor loved occult sciences as well as the arts, and opposite the garden still stand the tiny houses supposedly tenanted by his alchemists. Rudolph suffered from deep melancholy, and during the last years of his life much of his time was passed in this garden. It is said that strangers who wished to see him in his declining years had to enter it dressed as gardeners or as stable boys.

At the other end of the Belvedere garden, close to the bridge which joins it to the Hradschin, an eighteenth-century garden design is still preserved. The flower-beds are in contrast with the high timber. There are stone balustrades and marble statues and ornaments and garden pavilions, which date from Maria Theresa's time. Beyond stretches a shaded alley of lofty beeches enclosing a Baroque fountain. At one end of this, separated by a wooden fence, is the great ball-room, built in 1568, in a pure Palladian style, by Boniface Wolmuet, who also designed the Renaissance organ loft in the cathedral. Decorated with much damaged *sgraffiti* and utilized by the Austrians as a military store-house, its splendid shell remains the tribute of a northerner to Italian taste.

Elsewhere in the garden one searches in vain for Renaissance reminders, or even for others of later date. The famous theatre which the Court architect, the Bolognese Galli Bibbiena, built in the early eighteenth century was destroyed by fire in the Seven Years' War, during the siege of Prague. The President now gives the name of his office to the garden which once the Emperors loved.

LEWIS EINSTEIN.

(To be continued.)

At the Royal Academy.

Architecture.

This year the small room at the Academy has the usual effect of careful selection. There are a hundred and seventy-three exhibits including several large perspectives and two notable models. There is nothing eccentric and no great divergence from the usually accepted standard. The work of the Academicians is represented by Sir Aston Webb, Sir Edwin Lutyens, Sir Reginald Blomfield, and Professor Anning Bell; neither Sir Giles Gilbert Scott nor Sir John Burnet exhibit this year.

There is a strong entry on the part of the Associates, designs being contributed by Sir Robert Lorimer, Mr. Herbert Baker, and Mr. Curtis Green; Mr. E. S. Prior not exhibiting. As far as architecture is concerned it is a fair year, exceptional only in the high standard of draughtsmanship, for what astonishes everyone is the keen competition among the renderers, who range from Mr. F. L. Griggs to Messrs. Walcot and Dechaume. Mr. Walcot having a large following can claim the distinction of being the leading perspective artist of the day. The outstanding design is by Sir Edwin Lutyens associated with Messrs. Gotch and Saunders and is destined to be the Head Office of the Midland Bank. This design is vigorous and is endowed with a novel silhouette, the latter being characteristic of Sir Edwin's work. The façade is freed from make-believe and with the exception of the entrance, columns are avoided. If built as designed the building will have the quality of a uniform surface contrasted by deep recessings. As a mass the façade is consistent, it is relieved from undue monotony by the end breaks and the twin attic story which is held at the centre by a saucer dome. Horizontally it is a four-part grouping having an arched basement story, a rich intervening mezzanine, a dominant part of three stories, and the twin attic previously mentioned. The offsettings suggest careful and original modelling. Immediately facing this drawing is the half-inch scale model, accompanied by a plan, of the Memorial to the Missing at St. Quentin. From the design it is possible to gather Sir Edwin Lutyens's idea of a church in section, open at the sides and ends. This memorial will have the effect of great scale and interesting perspective. It is to be built of brick and stone. Sir Reginald Blomfield shows three designs, the foremost being a large perspective of the new bridge which is to replace the suspension bridge at Lambeth, a convenience long required at this point. There is a study for the centre pavilion of Messrs. Barker's new premises which in detail recalls the draughtsmanship of the Old Masters. Sir Reginald also exhibits scale drawings for the New Usher Gallery at Lincoln.

The works at Imperial Delhi are represented this year by a perspective view showing the interior of the central domed hall of the Legislative Building. Mr. Herbert Baker has achieved an academic interior enriched with mural decoration, thus affording scope for artists whose work too often is relegated to portraits. Sir Aston Webb and Mr. Maurice Webb have two exhibits. The first, dealing with the proposed extension to Birmingham University, continues the character of the existing buildings. The second for the new Kensington, Fulham, and Chelsea General Hospital, shows an urbane combination of brick and stone with four prominent bays running through three stories. Sir Robert Lorimer in his design for the Scottish National War Memorial changes a dour castellated keep, which for long has been a disused barrack, into a chapel having a sufficiency of detail to recall the associations of Rosslyn. Yet it is a reticent design in grouping and proportion.

The model for the reconstruction of the Bank of England directs attention to the largest rebuilding scheme now in progress

in this country. Mr. Herbert Baker has treated the problem as one demanding the retention of Soane's screen walls and as many of the vaulted halls as could, with convenience, be preserved. The new six-storied portion rises from within the screen. The model shows the purpose of the projecting wings and the subsidiary domes at the angles which are to foil the junction of the old with the new. It is a little early to judge of the ultimate effect externally.

Mr. Curtis Green has two exhibits, the most important being the Head Office of the London Life Association, King William Street. This design is a free interpretation of Academic Classicism in which the Corinthian Order is spiritedly used. The sculptured interest to the sub-features and the crown over the entrance adds a slight Baroque touch. The second exhibit shows the New Entrance to Messrs. William Whiteley's. In this design respect has been paid to the matured Italian Renaissance. Mr. Curtis Green also exhibits a pencil drawing of Siena in the Black and White Room.

In his schemes for the New Aquarium at the Zoo, Mr. Joass has successfully combined a plain building with the artificial scenery of the Mappin Terraces. This design is conspicuous for its restraint and matter-of-fact statement.

There are many other excellent contributions representing all phases of architectural activity from churches to cottages and even including one design which must rank as structural engineering. Mr. Guy Dawber shows the Foord Almshouses at Rochester, an essay in plan grouping; Ashley Chase, Dorset, a pictorial rendering of local traditions in stone; and new premises proposed for Piccadilly.

The perspective view of the London County Council re-housing scheme at St. Pancras shows the modern tendency to accept the ruling that inner London must be gradually re-organized to check the interminable sprawl which is taking place out of town. There is everything to commend in the reticent treatment of the building exhibited by Mr. Topham Forrest. Perhaps when the first plans have been restudied some slight alterations will be made and the wavy lines in brick omitted.

Little Coates Church, Lincolnshire, is an essay in free Gothic from the skilled hand of Mr. Walter Tapper who has had in mind the locality for which his work is intended. Mr. E. P. Warren shows a design for a brick-built church for Brighton. Other church designs include St. Columba, Egremont, Cheshire, by Messrs. C. E. Deacon & Son; St. John the Divine, Earlsfield, by Mr. Alan D. Reid; the design for First Church of Christ Scientist, Southport, Mr. Braxton Sinclair; a new church at Killarney, Ireland, by Mr. R. M. Butler; New Chapel, St. Saviour's Priory, Mr. J. Harold Gibbons; Congregational Church Southbourn, Messrs. Pearson & Burrell; Proposed "Argles" Memorial Church of St. Chad, South Bank, York, Messrs. Brierly and Rutherford. A church at Salonika for the American Mission, Mr. Harold F. Trew; St. Boniface Church, Tooting, Messrs. Williamson and Foss. There are in addition numerous cartoons for stained glass and church appointments ranging from the drawings of Professor Anning Bell to those of Miss Florence Camm, Mr. Robert Camm, and Mr. Leonard Potter.

All Saints' Church, Hindley, Lancashire, is shown in a large perspective by Mr. Robert Atkinson. It is an example of economic design which at first sight appears convincing. It would gain in force if the dual gables, the campanile, the side door, and circular window were recast. As set forth, the building appears to be of two independent parts, the subordinate features having the effect of being grouped according to rule.

The Memorial Hall at Marlborough College by Mr. W. G. Newton combines the feature of an Ionic colonnade with what can be termed a two-part composition, the entablature running

over the end blocks without breaks. It is an academic study and has the merit of being in sympathy with the older parts of the College while expressing the period of its erection.

Domestic architecture is, as usual, to the fore, although it is to be regretted that the perspective drawings this year do not include small key plans. Mr. Arthur Keen's drawing of the garden terrace at Blunt House, Oxted, has been somewhat unkindly skied, and the same fate has overtaken the two drawings of Fonthill House by Messrs. Blow and Billerey. These drawings by M. Dechaume are examples which repay study. They have nothing of superficial interest and are freed from motor cars and figures, thereby enhancing the domestic qualities of the buildings depicted.

It is pleasant to notice the work of Mr. Andrew Prentice who shows a view of the smoking-room of the new liner *Otranto*. In this case the architect has chosen cedar for the woodwork.

Among the designs for schools and colleges the following are representative. The new Science Building, Mill Hill, by Mr. Stanley Hamp; a proposed new House for Stowe School, by Mr. Clough Williams-Ellis; the Rebuilding of Warrington Church Training College at Childwall, Liverpool, by Mr. Arthur H. Moberly; and the War Memorial Buildings, Trinity College, Cambridge, by Mr. H. S. Goodhart-Rendel. The latter design which has since been abandoned shows how essential it is to consider and complement existing buildings. The perspective drawing is by Mr. F. L. Griggs. Messrs. Lanchester, Lucas and Lodge show a House at Oxted. Mr. Hepworth a house in Bishop's Avenue, Finchley, which is roofed in a way that detracts from desirable simplicity. Mr. Oliver Hill shows a house at Aldeburgh. The additions to Ashampstead Green, Berks, indicated in a delicate drawing by Mr. C. Wontner-Smith show overstudy of Tudor elements. The richest examples of old work of this type have a structural rather than a purely decorative significance. In his design for a Residential Club for Young Men, Mr. Arthur T. Bolton follows the Adam manner. There is a view of a quiet country house at Beckenham by Messrs. Crickmer and Foxley; and another at Moor Park by Messrs. Lowry and Woodhouse, whose work invariably shows freshness.

There are three small houses by Mr. Basil Oliver, including Wolford Lodge, Honiton, which has regional traits, and a house at Frensham by Mr. Palmer Jones who is responsible for the perspective drawings of several exhibitors.

Mr. Cyril Farey shows a small house at Oxhey near Watford. Other works of this type are symmetrical houses such as that at Limpsfield, Surrey, by Messrs. Baillie Scott and Beresford, another at Baythorne End, Essex, by Mr. Hepworth; and the designs contributed by Mr. Horace Field for a House at Rye, Sussex. It is impossible to avoid feeling the absence of domestic work from Sir Edwin Lutyens and other architects who for years have specialized in country houses. This is not a vintage year for large works of this class. Commercial buildings in London and other centres on the other hand are shown to be on the increase. Messrs. Mewes and Davis have a perspective of the new Westminster Bank Head Office in Lothbury, replacing the older building designed eighty years since by Professor Cockerell. This design while meticulous in its academic proportion, has the rare quality of complementing the main lines of the neighbouring buildings. Mr. Pearson exhibits a portion of a public building. There is the strong design for City offices at St. Martins-le-Grand by Mr. Sullivan, conspicuous for the absence of the usual shop space at the ground floor which most city clients insist upon for office buildings, though the reason is never explained.

There are designs for minor bank premises, such as the Bank at Doncaster by Messrs. Brierly and Rutherford, a version of English Renaissance.

The design for Berwick Bridge by Messrs. L. G. Mouchel and Partners, shown in pencil by Mr. Woodhouse, is an engineering work, but it is evident that architectural considerations determined the simplicity of the shaping. The Welsh National Memorial, Cardiff, by Mr. A. Chalton Bradshaw with sculpture by Mr. Ledward is shown in one of Mr. Bradshaw's slight renderings. The monument is satisfactory but the sculptural interest is redundant. It would be more effective if the upper group of sculpture at the top of the monument were suppressed.

An invitation to review the architectural exhibits involves some responsibility, for criticism is, or can be, as varied as the works of art which are discussed; most critics adopt a circuitous policy, oftentimes falling into the error of crediting their audience with a full knowledge of the subject. It can be said of the present collection of drawings that they reveal individuality, diversity of type and a spirit of contrivance. In other words they are distinctly English.

A. E. RICHARDSON.

Painting and Sculpture.

One's general impression is that the present exhibition at Burlington House is somewhat worse than usual; but then one is perhaps always inclined to think this.

To encounter Mr. Walter Sickert's little picture "Victor Lecour" (17) came as something of a shock of pleasure, like finding an unexpected drink of water in a desert. Here was the real thing! for the moment one was transported to the Camondo collection in the Louvre, where it would not be out of place.

This painting expresses the personality of the sitter and the character of his surroundings to such an extent that we seem to know him intimately; and yet the artist has conveyed it all so entirely in terms of paint. The manner in which he has seized upon little accidents, such as the light which strikes the lower part of the figure, and the burst of pink showing through the ear, and the spotty patch of wall-paper, all give interest to the picture and create the illusion of life and movement. Let us hope that the President has found in this little picture some of the humanities which he, the other day, declared artists are inclined to neglect.

Mr. George Clausen's landscapes are always soundly painted. His "Evening in May" (145) is beautifully fresh and clean; the consistent manner in which he mixes his paint, and the perfect craftsmanship which he displays, always give one unalloyed pleasure. His other landscape "A Summer Morning" (159) is not so successful. The over-insistence upon the decorative shapes of the clouds has forced this part of the picture out of harmony with the more realistic portions.

The small portrait "Daphne" (2) by Mrs. Inez Addams is like a robust Whistler: for her modest and beautiful little work has the feeling of this artist, but is more clearly defined and stronger in colour. One wonders why work by Mrs. Addams is not more often seen in exhibitions: it would be welcome.

Mr. Harold Harvey's "Janie" (4) is interesting, but fails to be quite satisfying because the face is treated in a more realistic manner than the rest of it: it thus just missed being very good.

"Summer" (35) by Mr. Philip H. Padwick is painted in a way which clearly defines the forms, being reserved in colour, and the light and dark portions are carefully adjusted much in the manner of Old Crome.

"After the Shower: Glaslyn Valley" (573) by Mr. W. Alison Martin is also very solidly constructed and shows him to possess an appreciation of beautiful quality in pigment.

Mr. Connard shows a number of his more or less decorative landscapes with figures in them: a kind of subject which he has made distinctly his own.

Sir John Lavery's painting of Mr. G. B. Shaw, although physically like him, does not convey the animation and sparkle that is so characteristic of the man. This artist's other portraits are nearly up to his best standard, but his painting of jockeys and stable subjects are rather tiresome.

Sir William Orpen has many portraits upon the walls, which no doubt are excellent for presentation purposes.

Among the usual sort of sculpture which the Academy has made us familiar for years, the two small heads "Jane" (1403) and "Dr. Yan Kampstra" (1404) by Mr. Alfred H. Hardiman, should be noticed for their simplicity of treatment: and the little pottery group by Miss Stella Crofts, "Giraffes" (1249) also deserves mention.

The kind of water-colours and engravings and miniatures which one is accustomed to meet with here are well represented this year.

RAYMOND MCINTYRE.

Selected Examples of Decoration.

IN CONTINUATION OF
"THE PRACTICAL EXEMPLAR OF ARCHITECTURE."

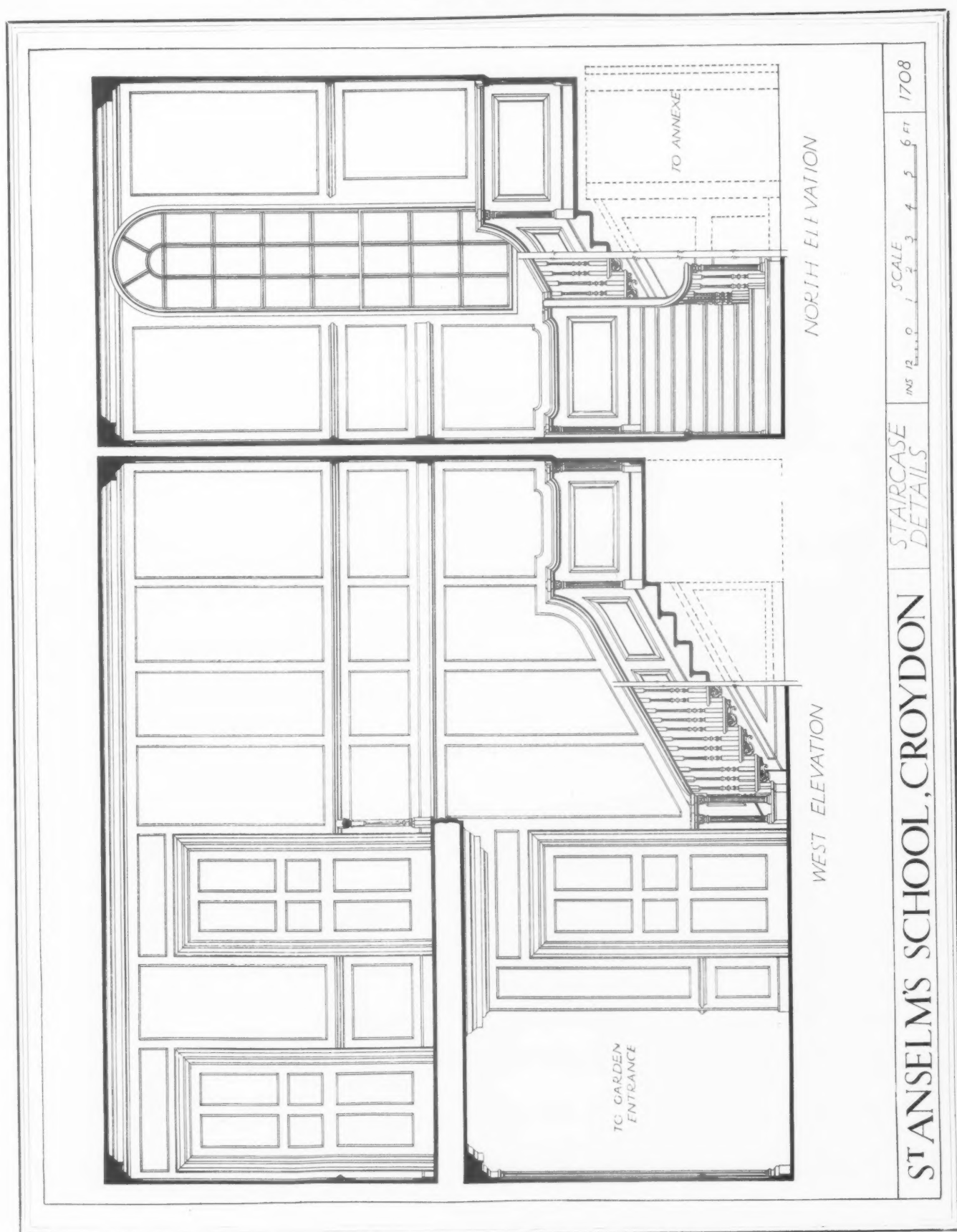
The Staircase, St. Anselm's Preparatory
School, Croydon, Surrey.

MEASURED AND DRAWN BY CHRISTOPHER J. WOODBRIDGE.



FROM THE HALL.

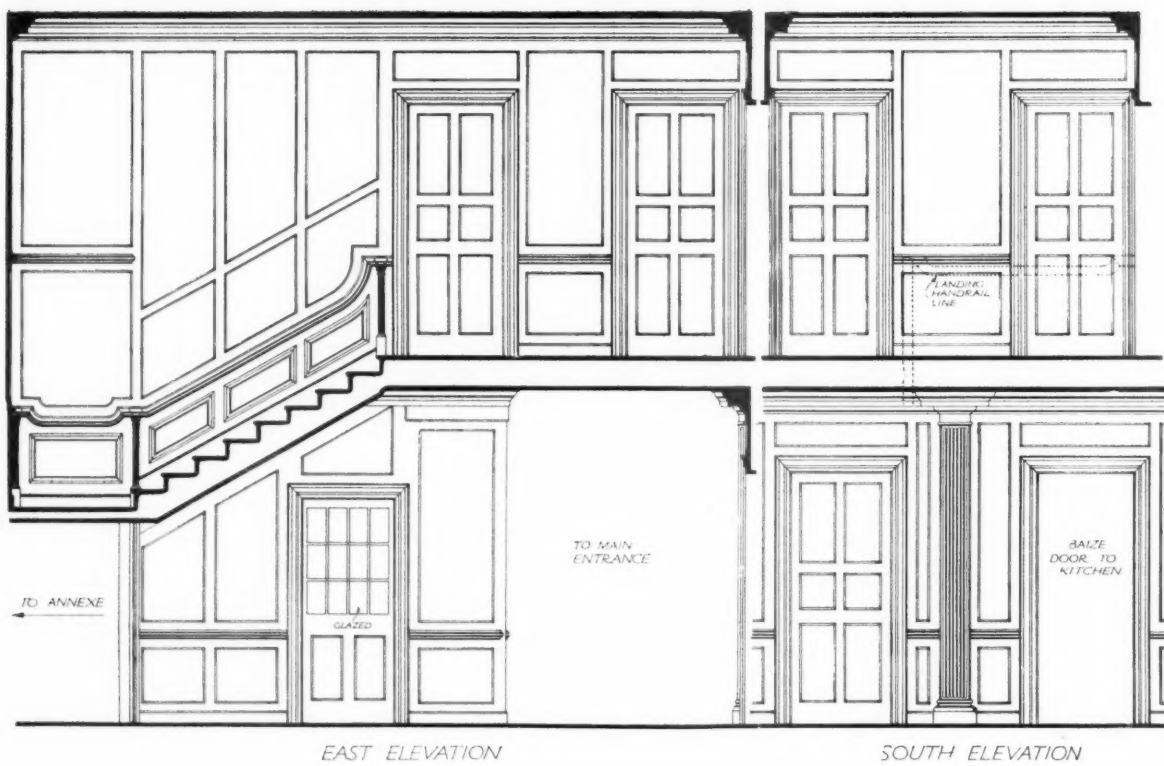
NOTE.—We are about to start in the next volume of the REVIEW a new series on the lines of *Selected Examples*, but illustrating, instead of old examples, modern details of design selected from the works of well-known living architects. It is hoped by this means to give greater importance than has heretofore been possible to the developments of to-day.



THE STAIRCASE AT THE GROUND FLOOR.



THE FIRST-FLOOR LANDING.



EAST ELEVATION

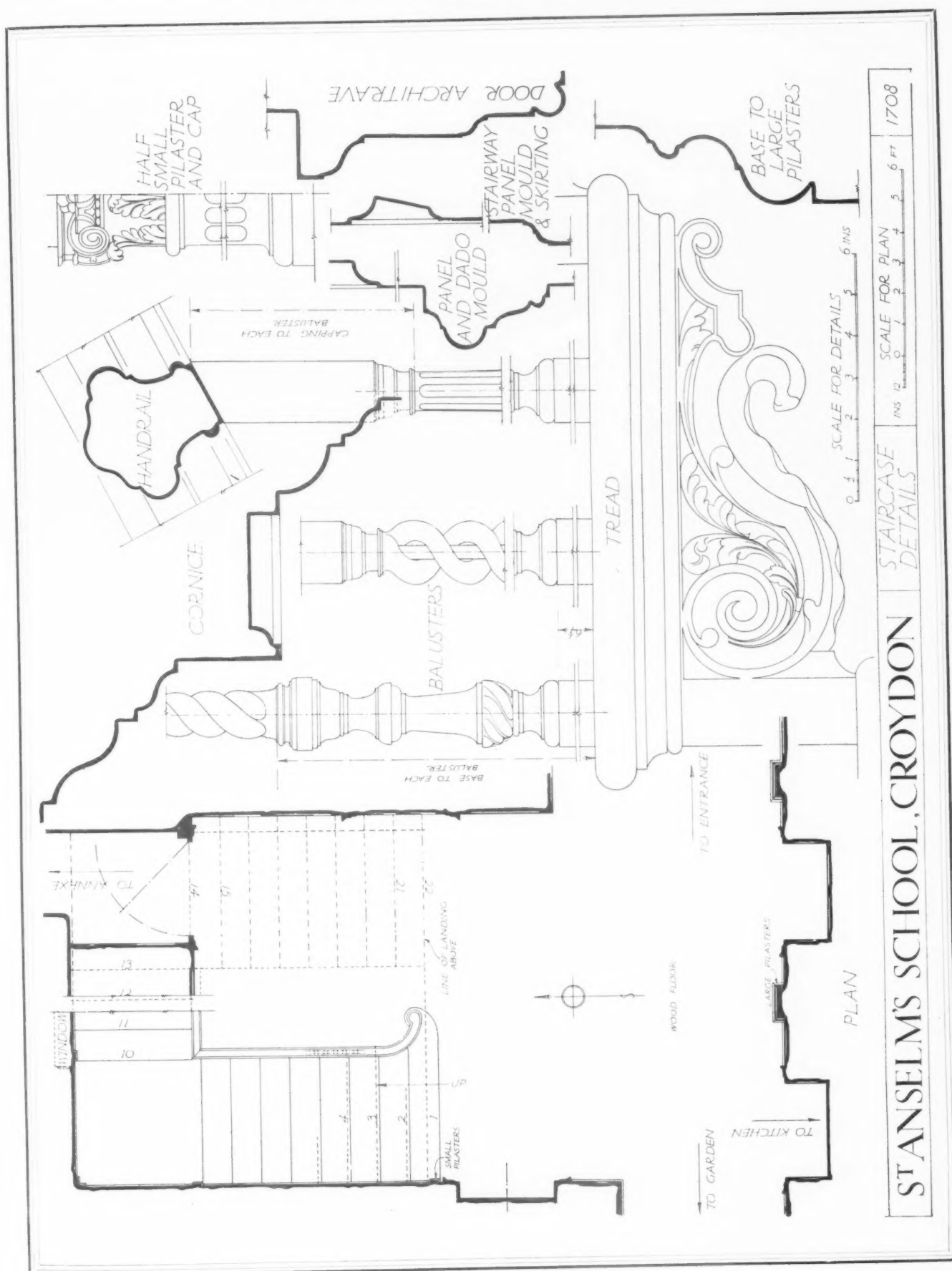
SOUTH ELEVATION

ST ANSELM'S SCHOOL, CROYDON

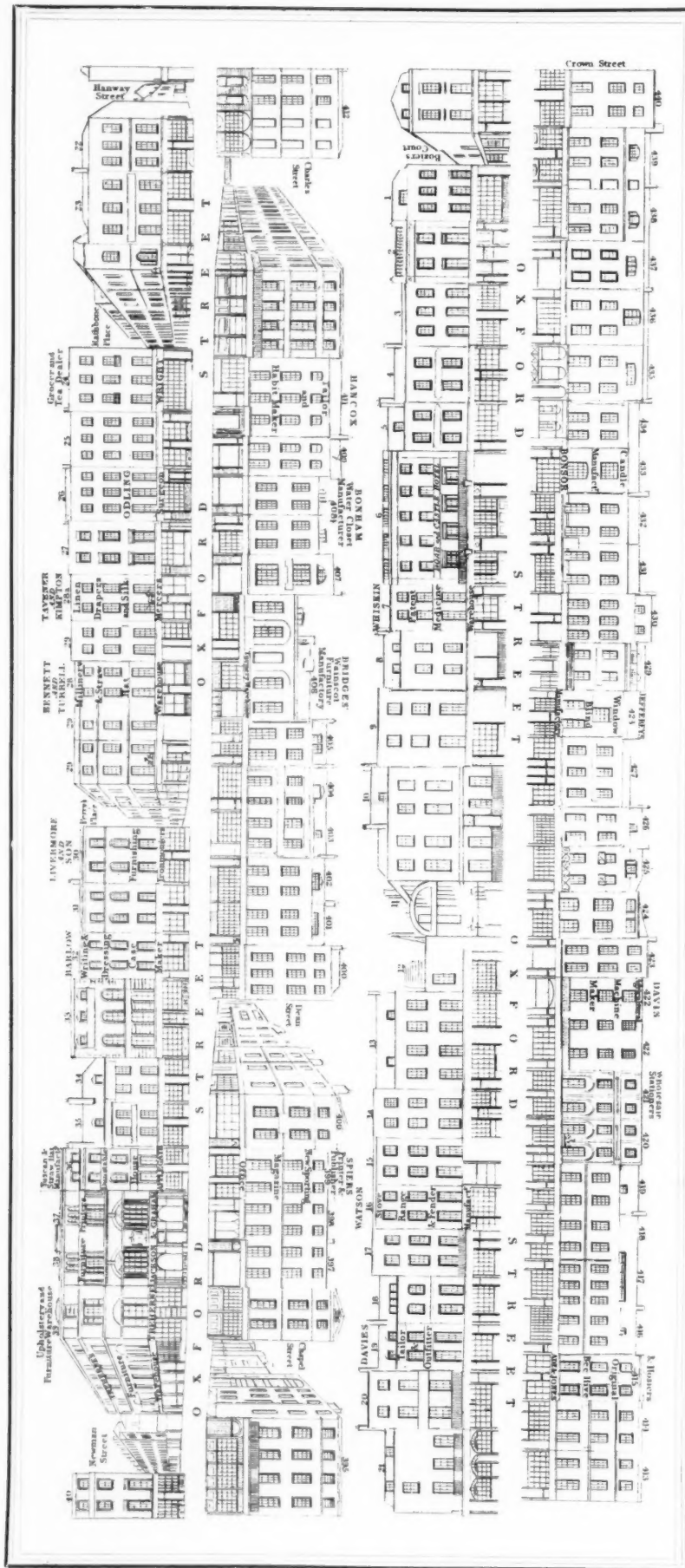
STAIRCASE
DETAILS

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THE UPPER HALF OF THE STAIRCASE.



DETAILS OF THE STAIRCASE AND BALUSTERS.



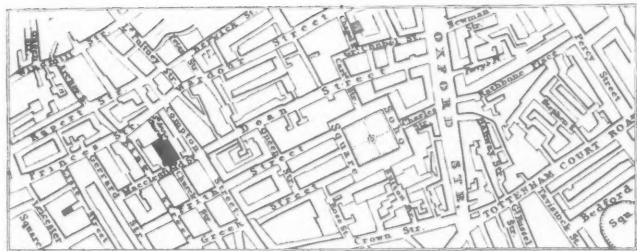
OXFORD STREET.

(No. 40 in "Tallis's London Street Views." Published about 1839.)

"Although," says Tallis, "Oxford-street cannot boast of the architectural beauty, and variety of design, exhibited in its neighbour and rival, Regent-street, yet it does not yield to it in the importance of its shops, and it has decidedly a more truly English appearance. It is particularly distinguished as being the largest street in London, extending from the junction of Tottenham-court-road and High-street, St. Giles's, to Tyburn, of melancholy notoriety. The lower end of this street has lately attracted a great deal of attention, on account of its being the spot chosen for the experimental trial of several novel descriptions of pavement, the most extraordinary that has ever been attempted. On Friday afternoon, January 4th, 1839, the hoards and incumbrances (*sic*), which had for many days prevented the thoroughfare for carriages, were removed, and it presented a most animated spectacle, being thronged by some thousands of curious pedestrians, of all classes, desirous of viewing its opening. Soon after two o'clock, the paving committee, appointed by the parish of St. Mary-le-Bone, attended to superintend the arrangement of the work, headed by the parish beadle, in full uniform, and accompanied by the different projectors, and many of the parochial authorities. They arrived on the spot in procession, and passed over the ground, followed by twenty or more omnibuses, after which the road was thrown open to the public. The space in which the experiments will be tried, extends from Charles-street, Soho-square, to Tottenham-court-road. This is occupied by twelve different specimens which are completed in the following order:—the first forty feet, commencing at Charles-street, is composed of Robinson's Parisian bitumen, twenty four feet laid in straight courses, and sixteen diagonal; the next seventy four feet of Paris stone paving—fifty four feet laid in straight courses; the stones nine inches deep, and the interstices filled up with Claridge's Asphalt; the remaining twenty feet (consisting of stone only), four and a half inches deep, but laid diagonally, and filled up with the same composition; the adjoining sixty feet is of Bastenne Ganjac bitumen, part in straight courses, and part diagonal; a hundred and thirty five feet of Paris stone paving, in this order—first, seventy feet of dressed Aberdeen granite, with concrete bottom, and the joints grouted with lime and sand; second, forty feet of the same laid diagonally; and thirdly, twenty five feet of dressed Aberdeen granite, without concrete bottom, the joints fitted in with fine gravel. The next specimen is fifty feet of Scotch Asphaltum, laid down in straight courses. The next, and which seems to attract the greatest attention, is sixty feet of Mr. Stead's pavement of wooden blocks, of a hexagonal form, twelve inches deep, divided into three compartments,—one prepared with Kyan's patent, part dipped in with the joints run with Asphalt, and part without any preparation whatever. The last specimen is sixty feet of the Valde Travers bitumen, part of which consists of square blocks, laid in straight courses, and the remainder, consisting of a line of Guernsey chippings, cemented together by boiling Asphalt, run among them nearly to the surface, and a face made with Asphalt, merely showing the chippings occasionally. The wooden blocks have at least one great advantage, as vehicles pass over them almost noiselessly. At the latter end of June, 1839, is stated to be the time when an official report will be made, as to their various excellencies, and it is understood that the whole of Oxford-street is to be paved in the manner found to answer best."

Tallis's *London Street Views.*

XVII—Oxford Street.



PLAN OF THE PART OF OXFORD STREET ILLUSTRATED.

TALLIS'S delineation of Oxford Street is contained in four sections, and extends from Tottenham Court Road to Stratford Place, from which point westward there were not then sufficient business premises to make a further section necessary. The views, when several were occupied with a single thoroughfare, were not issued in regular order, and thus we find that in this case, No. 1 Oxford Street, which begins at Bozier's Court (forming a little island of houses at the junction of Oxford Street and Tottenham Court Road long since cleared away) to the corner of Newman Street, is contained in No. 40 of the elevations; and that the following instalments in order are No. 34, No. 36, and the last, No. 41A. Taking section No. 40 first, then, we shall find a number of very plain and ordinary shops until we come to No. 6, then occupied by the Boar and Castle Hotel, an unusual sign which I do not remember otherwise to have met with, and a little further on at No. 11, the entrance to the Star Brewhouse is shown, with its curious semi-circular over-ornament. The front of No. 21, then occupied by Thursfield, an oilman, breaks, with its semi-circular headed windows, the normal regularity of these features in the other shops; next to this is Hanway Street, once known as Hanway Yard, not infrequently miscalled Hanover Yard, which was formed in 1721, as is indicated by a stone let into the wall of one of its houses. It was for long a notable centre for the sale of ladies' clothes and general mercery, and in it William Godwin set up as a bookseller in 1805.

Two doors off is Rathbone Place, so named after a carpenter, one Rathbone, who constructed buildings here in the early part of the eighteenth century, buildings commemorated by a stone in one of the houses, and dated 1718. Rathbone Place has been occupied by several notable people, Lord Bolingbroke, Ozias Humphrey, the miniaturist, and Hone and De Wint, the painters, among them, and in Tallis's time was so commercially important that one of his views (No. 64) is concerned wholly with it.

Reversing the plan, and beginning with Crown Street, at the top left-hand corner, we shall see that on the south side of the street the shops and houses departed, in those days, little from this monotonous regularity; nor are those who occupied them of any special note. But many of the buildings dated, then, from the year 1725, at which time the thoroughfare, hitherto known as Tyburn Road, was renamed, although it was not till some four years later that much of its north side was built over.

In Tallis's time all sorts of trades and businesses were carried on in the predecessors of the present rebuilt shops. At No. 429, was Sneezeum's wine vaults; at 427, Jessop's Toy warehouse; at 432, one Askew had his "Bird Warehouse"; and linen-draper and tailors, upholsterers and cutters, were represented among those wine vaults, which were such a feature once; while "dining-rooms," like, for instance, that of Hutchinson, at No. 437, abounded. Few of these shops were of any special size or importance, and the only ones that have any particularly special architectural distinction (and that is only relative) are Nos. 420 and 421, which form a single frontage.

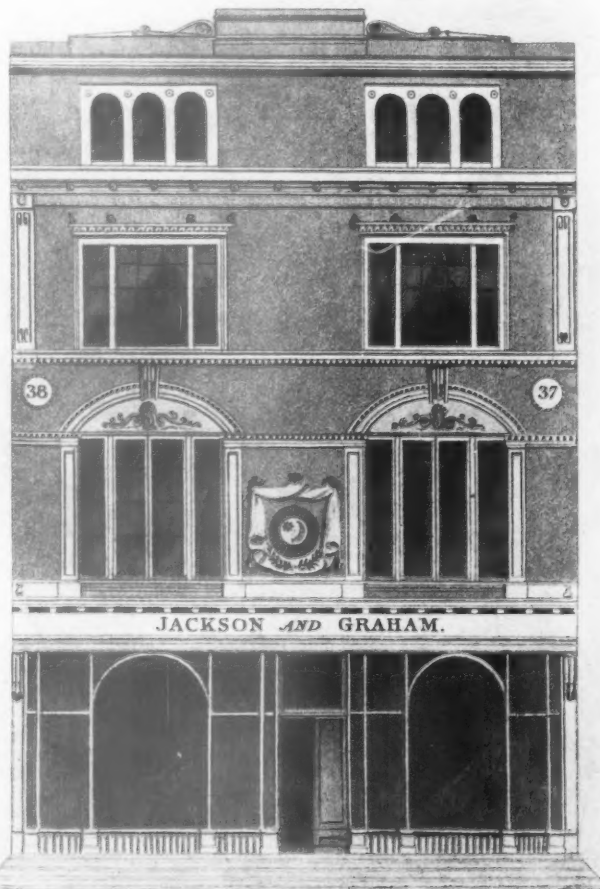
Next to No. 412 (in the lower section) is Charles Street, leading into Soho Square, and so named after the Merry Monarch in whose reign it, as well as the famous square, was built. It will be observed that the large house at its west corner, is not

numbered in Oxford Street, although it has a considerable frontage and, apparently, an entrance on to the thoroughfare.

In Tallis's Directory, Foster's Auction Rooms are given at No. 410, but as this does not appear in the elevations, I imagine that it occupied back premises, and was entered by the large doorway shown. Balls and Son, music sellers, are similarly given at the equally illusive No. 408. Two doors west, No. 406, was occupied by two people; Dr. Bridges' Turnery Warehouse was there, as was also a ham-and-beef shop kept by one Davis. This building, of lower elevation than the rest, had obviously, at some time, been reconstructed from a single house at the corner of Dean Street, was then Rippins's Wine Vaults; while more wine vaults, run by Fairlam, were at No. 396, the end house of the large block, beginning at No. 400, which has the appearance of a single large building, after the manner so often affected by the Adams. Tallis calls Dean Street "a respectable street of substantial brick houses." Chapel Street he ignores. Yet Chapel Street has its memories. Here the unfortunate Theodore, King of Corsica (who is buried in St. Anne's, with a well-known memorial written by Horace Walpole marking the spot) died, in 1756; and here Edward Kean went to school. The annals of Dean Street, especially its artistic annals, would make an article in itself—and besides, although a tributary to Oxford Street, it is not Oxford Street, and must therefore be passed by with this bare allusion.

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Recent Books.

Westminster Abbey.

London. Vol. I.—Westminster Abbey. Royal Commission on Historical Monuments (England), 1924. Published by H.M. Stationery Office, 218. Obtainable from Imperial House, Kingsway, W.C. 2, and 28 Abingdon Street, S.W. 1.

To this important Government publication the Provost of Eton, Dr. Montague James, has provided an Introduction of twelve pages, sketching clearly the history of the Abbey, and describing its architectural relation to the French cathedrals, and the special interest of the plan. Acknowledgment is made of the debt to Professor Lethaby in securing credit to Master Henry "of Reyns," as the architect of the building in all its parts, from 1245 to about 1253, and to John of Gloucester, 1254, and Robert of Beverley, 1261, who formed the group of directors under Henry III. The names of the subsequent masters are known down to the building of Henry VII's chapel on which we await further light. Dr. James briefly reviews the architectural figure-sculpture, the sepulchral imagery, the rich mosaics, practically unique in England, the painted tile pavements, the paintings and wall paintings in which the Abbey is comparatively rich, and the glass in which it is poor. Mention of the monastic buildings around the cloister follows, and the Introduction concludes with a commemoration of the names of the labourers who have elucidated the history and cared for the fabric of the Abbey and "its unrivalled treasures."

An Appendix to the Introduction adds, "details of interest," viz., altars, bells, brasses, chests, consecration-crosses, monuments, niches, plate, pulpits, screens and tapestries.

The wealth of interest thus indicated could be supplemented if the mediæval crafts and Renaissance artists were catalogued. The Abbey, having the nature of a mine or fountain of unlimited interest and discovery, one wonders that the Gothic Revival has come and gone, with all its ecclesiastical fervour, and has left so much for further sifting and exploration.

The body of the book is an inventory of objects accredited to a date anterior to 1714; it therefore does not profess to cover the whole content of the Abbey for, leaving on one side the modern restoration works which have covered almost a century, unfortunately, most attractive and characteristic monuments are excluded by the imposed limit of dates. A book that does not know Rouilliac lacks an important element in the general impression which Westminster Abbey leaves on the imagination and memory.

But the Royal Commission was originally limited to 1700, so we regret the incompleteness of an inventory of the contents of the Abbey which is short of reality, as the modern additions have as genuine a claim to impartial record as those which have the adventitious enchantment of two centuries of distance.

The inventory opens with an account of the historical development of architectural history, which is dry and dogmatic in style. The sources of the plan and the absence of other relations to French work are discussed; superlatives appear with the pendants of Henry VII's chapel, and comparisons are instituted with King's College, Cambridge, and the "unventuresome attempt" at Christ Church, Oxford. The building is then dealt with in sections from east to west, the chapels are taken seriatim, with Henry VII's chapel as a conclusion. The architectural features of each part are shortly stated and the fittings, screens, glass, are set out, with a descriptive text of monuments previous to the prescribed time-limit. The whole makes an astonishingly interesting list, which in its dryness is appetizing. But Scott, Stanley, and Lethaby, having written with warmth and feeling, the contrast of the inventory method is very marked. The criticism seems unavoidable, though it may not be altogether kind, that the difficulty of avoiding the technical statements for which the architect looks and the historical connections which have a general appeal, has robbed the book of life; its note seems that of unavoidable repression. An historical description of the monastic buildings follows, which will have something of novelty for most readers. The preservation of so much of a monastery in the heart of London is remarkable and little dreamt of by the passer-by.

A page of description accompanies two plates giving detached moulding sections—really of little value apart from elevations. An armorial follows, signed E. E. Dorling, giving the bearings which are previous to 1550, as it is thought its inclusion will be of interest to students of heraldry, and an alphabetical list of monuments and floor-slabs after 1714, with their present position. A glossary and good index complete the letterpress, which runs to 119 quarto pages.

The book is, however, rendered splendid by the 220 plates of photographs. It is not too much to say that they are fascinating. The charm and variety of the subjects, which are excellently selected and reproduced, fulfil a great public service in bringing home the wealth of the architecture and decorative arts that the nation possesses in Westminster Abbey. A valuable complete plan of the Abbey and monastery buildings is included with the vaultings shown. One scarcely likes to ask for more, but elevations and sections would have helped to make the record more than an album, which is the main impression given by the whole.

This book must be added to every architect's library and put out for inspection. It can be taken up for a few minutes to enjoy the pictures or it may be pored over; the price is popular, the print and paper beyond criticism, and that it provokes one to ask for more still about the wondrous Abbey cannot but be a commendation.

BERESFORD PITE.

Rome.

Wanderings Through Ancient Roman Churches. By RODOLFO LANCIANI. Illustrated. Constable and Co. 32s. 6d. net.

The name of Senatore Rodolfo Lanciani on the title-page of a book at once guarantees its accuracy and attractiveness of treatment; for no one knows Rome and its manifold wonders and beauties more thoroughly than he; no one has written more delightfully and authoritatively on that inexhaustible theme. In a sense the present instalment of his knowledge of this subject which the recognized historian of the Imperial City has given us, through the well-known firm of Messrs. Constable and Co., may be said to be complementary to his wanderings in the Roman campagna, which appeared, under the same imprimatur, in 1909. In the present instance, however, forsaking for a time that vast area around the city which he knows so well, the author is concerned with some of the churches of Rome, of which a full list would extend to as many as there are days in the year. It need hardly be said that but a few of the specially interesting ones are here dealt with; in fact, the scheme of the volume is, as Senatore Lanciani tells us in his preface, to deal in the six chapters first with the fate of pagan temples and their artistic treasures, after the promulgation of the Edict of Milan, A.D. 313; then with the basilicas raised by Constantine over the graves of the Apostles Peter and Paul; then with the Church of the Saviour at the Lateran, and its appendage, the Hierusalem, or church of the Holy Cross; and finally, with the minor Constantinian basilicas of St. Agnes and St. Lawrence. The history and development of these landmarks are revealed to us in this sumptuous volume, not in the dry-as-dust manner which even topographers are beginning to realize is the least attractive way of making known their stored knowledge, but in that more humanized form in which original information is served up in an anecdotic and appetizing manner. In this way the author shows us how when Constantine, moved by religious and political considerations, determined to raise in Rome a certain number of churches, and selected the spots where martyrs like Paul and Lawrence and Agnes and the rest were buried on which to raise these edifices, he took special care not to disturb their graves by an inch; and it was due to St. Paul's coffin lying near a rock, overhanging the road to Ostia, that the basilica named after him could only be of relatively diminutive size as compared with St. Peter's, on whose site no such obstacles existed.

Senatore Lanciani's latest contribution to the annals of Rome is a work to be read with profit by the student, as well as with pleasure by anyone who is interested in that amazing collocation of wonders, which are to be found in the city that crowns Italy with its magic glory.

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THE ARCHITECTURAL REVIEW.

TO OUR READERS.

THE ARCHITECTURAL PRESS have acquired additional premises at 9 Queen Anne's Gate, Westminster, S.W.1, to which address all Editorial and General Correspondence should in future be sent. The telephone number and telegraphic address remain as before, namely: Victoria 6936, and "Buildable, Parl, London."

"The Building, the Architect, and the Craftsman."

By Gerald Moira.

Mr. Gerald Moira, the new director of the Edinburgh College of Art, attended a recent meeting of the Edinburgh Architectural Association in the Council Room of the Incorporation of Architects in Scotland at 15 Rutland Square, and was given a cordial welcome to the city by Mr. J. Inch Morrison, who presided. Mr. Moira acknowledged the greeting, and proceeded to open a discussion on "The Building, the Architect, and the Craftsman." He expressed the view that as the building was the casket in which were placed all those precious things that were so personal, and which reflected not only the life of their owner, but the controlling influence of the designer, it should set a standard in all the canons of taste. It was for this reason that the building should be placed before the designer of it. He made a point also of the responsibilities that rested with the dominating mind, the mind which should set the standard of taste throughout the whole structure. He was of opinion that the architect began from the wrong end. The architect started by studying antiquity and archæology, whereas the painter and sculptor started from Nature and moved forward and into tradition.

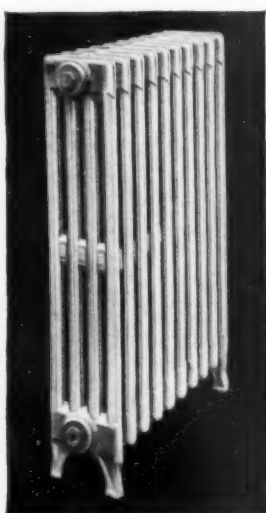
Sir Robert Lorimer, Professor Baldwin Brown, Mr. John Begg, Mr. William Davidson, and others contributed to the discussion.

A Great Scottish Architect.

A lecture on Sir William Bruce, the architect of the new Palace of Holyrood, was delivered by Mr. Henry F. Kerr, F.R.I.B.A., at a recent meeting of the Glasgow Institute of Architects, held in the rooms of the Institute, 39 Elmbank Crescent. Mr. George A. Paterson, F.R.I.B.A., the president, was in the chair. Mr. Kerr said that of Scottish architects of the seventeenth century, Sir William Bruce was undoubtedly the greatest. He was the second son of Robert Bruce of Blairhall, and, like many gentlemen of his time, he was interested in the arts, travelling in France and Holland in pursuit of knowledge. On his return to Scotland he took up the practice of architecture. Art was not his only interest: he assisted in the promotion of industry and was a keen supporter of the Stuart dynasty. In Douglas's Baronage there was this estimate of him: "He was a man of extraordinary parts, a steady loyalist, so much so that no gentleman in a private capacity contributed more to bring about the restoration of Charles II." Charles did not forget his services. In 1668 he was made a baronet, and in 1671 he was appointed H.M. Surveyor-General, and entrusted with the design of the new Palace of Holyrood. Previous to this important work Bruce had been designing large mansions—for example, the house of Panmure and the great quadrangular mansion of Leslie, destroyed by fire in 1763. The lecturer dwelt on the features and excellencies of Bruce's work as shown on other notable buildings, including Moncrieffe House, Bridge of Earn, in the style of which were seen the germs of his later masterpieces, revealing him as the real pioneer in Renaissance architecture in Scotland.

Selby Abbey, Yorkshire.

Serious cracks have developed in the stonework of five of the pinnacles on the north side of the choir of Selby Abbey, Yorkshire, parts of which date back to the early part of the twelfth century. Funds are being appealed for to enable restoration work to be carried out. It is estimated that the cost will be £1,000.



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The New President of the Royal Academy.

Sir Aston Webb has retired from the presidency of the Royal Academy, having reached the age limit fixed for tenure of the office. His successor, Mr. Frank Dicksee, R.A., is the eleventh president elected since the incorporation of the Academy in 1768. Mr. Dicksee, who was seventy-one years of age last month, was elected A.R.A. in 1881, and R.A. in 1891. He was born on November 27, 1853, and at nineteen had won a studentship at the Royal Academy Schools. He made his first appearance at Burlington House at the age of twenty-three with a painting which gained him the gold medal, "Elijah confronting Ahab and Jezebel in Naboth's Vineyard." The picture which made him known, however, was "Harmony," the study of a young girl seated at an organ, with a young man gazing passionately at her rapt face. This was the picture of the year at the Academy of 1877.

In this year's Academy Mr. Dicksee was represented by a portrait of Mrs. Norman Holbrook and a picture entitled "This for Remembrance."

R.I.B.A. Council Meeting.

Following are notes from the minutes of the last meeting of the Council of the R.I.B.A. :—

Registration of Probationers.—On the recommendation of the Board of Architectural Education the Council decided to accept the senior certificate examination of the Ministry of Education, Northern Ireland, in support of applications for registration as probationer R.I.B.A., provided the certificate covers the required subjects.

Godwin Bursary and Wimperis Bequest.—On the recommendation of the Board of Architectural Education the Council approved the memoirs and sketches submitted by Mr. W. T. Benslyn, A.R.I.B.A., Godwin Bursar, 1923.

Illegal use of the R.I.B.A. Affix.—The Council were informed of two cases in which the R.I.B.A. affix had been illegally employed by non-members of the R.I.B.A., and it was decided to take strong action in the matter.

Reinstatement.—Major L. M. Wells-Bladen was reinstated as a Licentiate of the R.I.B.A.

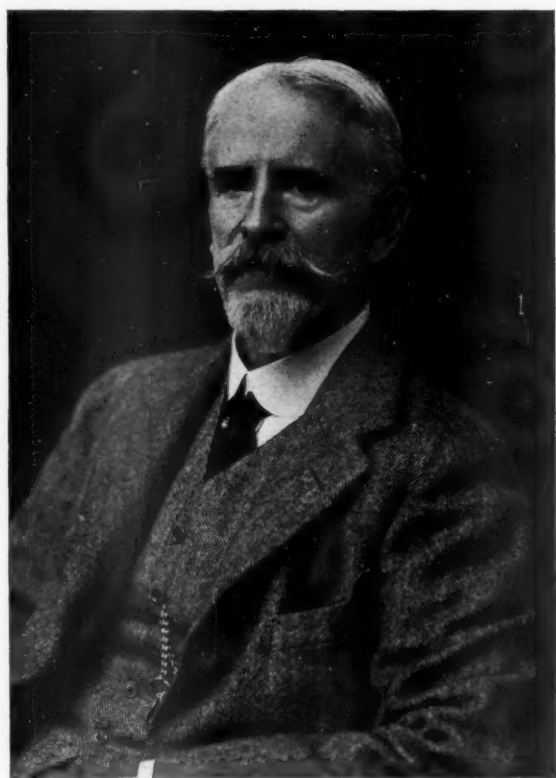


Photo: Russell.

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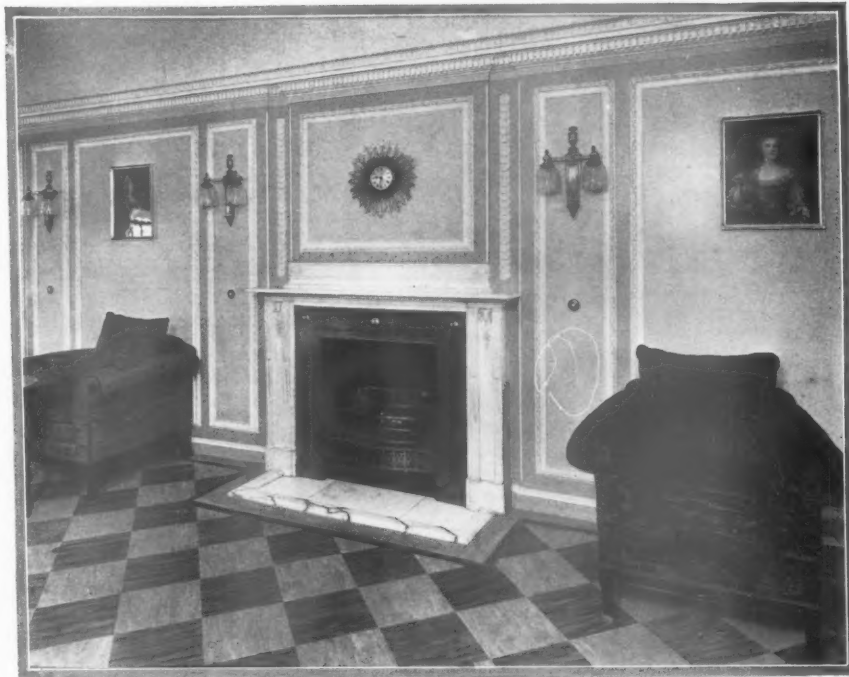
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THE ARCHITECTURAL REVIEW.

The Architecture Club.

Sir Giles Gilbert Scott, R.A., the architect of Liverpool Cathedral, was entertained at dinner on December 18 last, at the Hotel Cecil, by the Architecture Club, Mr. J. C. Squire being in the chair. The club, the chairman said, was proud of the fact that the architect of such a magnificent building, which had been received with acclamation by all sections of professional and lay opinion, should have been one of the original members of that club.

Lord Newton, in proposing the health of the guest of honour, dwelt upon the opportunities of beautifying Parliament Street that had been neglected. The Home Office, he said, had never been completed. The two towers which ought to stand on the building facing Parliament Street had never been finished, for the simple reason that they would have cost £3,000, and the Government of that day declined to find the money. Smoke was the chief enemy of the architect, and so terrible had been its ravages on the buildings of the Houses of Parliament that an army of men had to be maintained to preserve the ornaments of the fabric from falling down. Many of the more delicate pieces of work were so badly injured by smoke that a lady could easily pull them off with her hands. He sincerely hoped Sir Giles Gilbert Scott would not live to see Liverpool Cathedral defaced by smoke in the same way that St. George's Hall, Liverpool, was to-day.

Sir Giles Gilbert Scott, in reply, said he believed the opening of the cathedral at Liverpool had received more notice and public recognition than the opening of any cathedral in the past, owing to the existence of the modern Press. The difficulty of architects was, that they had to deal with so many interests. In architecture they were all the time up against the public, their clients, building committees, and various other interests, which all had to be reconciled as regards both practical considerations and æsthetic aims.

New Devonshire House.

The fate of the Devonshire House site, which has been described as the most valuable of all West End properties, has now been

settled. Three great new buildings will be erected at a cost of between £2,500,000 and £3,000,000.

Briefly, the proposals are as follows: On the Piccadilly frontage will be erected a great block of "apartment" flats, some as high as nine stories, to be known as Devonshire House. It will overlook the Green Park; its internal design will follow American principles, and will afford accommodation to justify the claim made on its behalf that it will be the most beautiful of its kind in London.

There will be shops on the ground level facing Piccadilly, Berkeley Street, Stratton Street, and a new street which will be laid out on the north side of the block. A departure in London architecture will be the provision of a second tier of shops on the mezzanine level, to be approached by a central stairway on the Piccadilly frontage. A new restaurant forms part of the plans for the lower half of the building.

Immediately in rear of the new Devonshire House, fronting upon Berkeley Street, will be erected a palatial block of offices.

The northern part of the site will be occupied by a second block of residential flats, built on the English principle, to be known as Devonshire Court. It will face south and east, and will extend north as far as Lansdowne Passage, which cuts off Lansdowne House Gardens from the old Devonshire House site.

The designs for the block fronting on Piccadilly have been placed in the hands of Mr. Thomas Hastings, of New York, and Professor Reilly, of Liverpool. The owners of the site, Messrs. Holland and Hannen and Cubitts, Ltd., are to be the contractors.

The Devonshire Court block, which will be erected by Messrs. Edcaster Ltd., London, from the designs of Mr. W. Henry White, F.R.I.B.A., will contain twenty shops, with basements, over fifty moderate-rented flats, nearly all of five bedrooms, two bathrooms, and two sitting-rooms, and a restaurant with some 19,000 sq. ft. of floor area. The flats will be self-contained, but all the advantages of hotel life are offered by the magnificent facilities for music and dancing offered by the restaurant.

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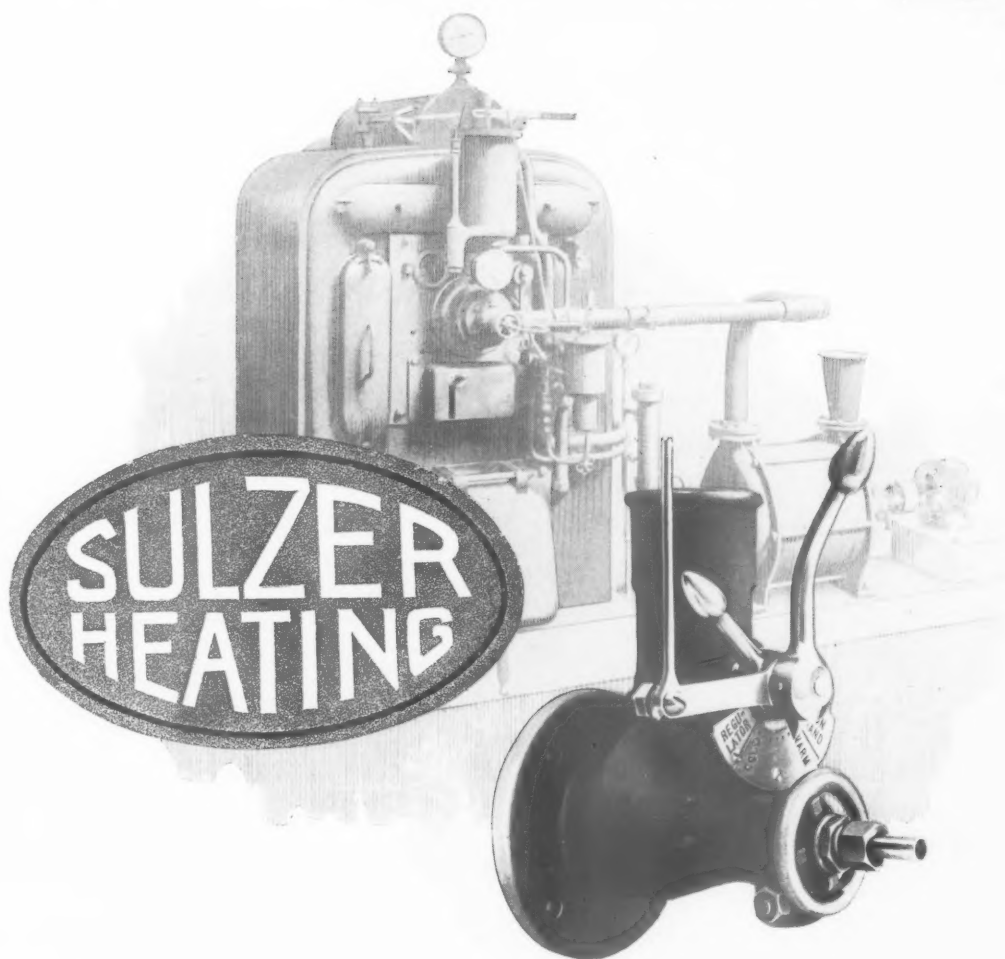


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THE ARCHITECTURAL REVIEW.

Steel Houses.

An Interim Report on New Types.

The Departmental Committee, with Sir Ernest Moir, M.Inst.C.E., as chairman, which was appointed by Mr. Wheatley when Minister of Health, to inquire into the subject of new materials and methods of construction of working-class houses, has presented an interim report on the new types of steel houses in which Lord Weir, the Duke of Atholl, and others, have been interested in Scotland. They have, the committee state, given some attention to alternative systems, but are not yet in a position to submit a detailed expression of opinion on them.

The committee, in the course of their report, state that there "is abundant evidence that houses made of steel on wooden framing can be considered as a reasonable method of providing immediate housing accommodation."

Lord Weir is devoting much time to investigation and experiment, with the object of perfecting this form of construction, and particularly with a view to adopting such methods of standardization as will lead to cheapness in large scale production and to rapidity of building without utilizing the skilled branches of the building industry.

The committee point out that houses faced externally with steel sheeting are not so resistant to high temperature nor so easily kept warm when the temperature is low, as are houses made of brick, but measures are proposed to obviate these disadvantages. The houses for which Lord Weir has so far worked out his proposals are of the bungalow type; but it was understood that consideration was being given by Lord Weir to the adaptation of his principles to the two-storied dwelling.

The committee state that they are satisfied that the method of construction under review presents no difficulty in the way of providing satisfactory accommodation and pleasing appearance. There remain the important considerations of first cost, rent obtainable, maintenance, and effective life of houses of this type. On the question of cost it is impossible at this stage to give a final judgment, exact figures not being available.

University of London, University College.

Architecture Entrance Scholarships.

Fifteen entrance scholarships and exhibitions are available for award to students entering University College, London, in October 1925.

Two of these are tenable in the Bartlett School of Architecture. Three others are available in any faculty of the college or in the school of architecture.

Full particulars regarding all the scholarships and exhibitions may be obtained on application to the secretary of the college.

National Gallery—New Acquisitions.

The portrait of Vincenzo Morosini, by Tintoretto, has now been hung in Room VII at Trafalgar Square, among the other examples of the sixteenth-century Venetian School. It will be remembered that this noble portrait was presented to the gallery by the National Art Collections Fund in commemoration of its coming of age, and of the National Gallery centenary. The pictures of the French School in Room XI have been re-arranged: the latest addition being a spirited portrait of a Young French Gentleman, by Louis Tocqué, purchased from Mr. G. S. Sedgwick, out of the Temple West Fund. In the vestibule is placed a characteristic Seapiece, by Charles Brooking (1723-59), the first considerable English painter of marine subjects. The picture has been presented to the gallery by Miss Tupper.

Samlesbury Hall, near Blackburn.

Samlesbury Hall is now in imminent danger of demolition to make way for modern development unless the present owners can arrange some scheme for the preservation of this priceless old pile of domestic architecture.

The new Preston Road was cut through the grounds and across the moat of the ancient hall, which is rich in antiquarian interest, its story going back many centuries. A Sir Thomas Southwark, who restored it 400 years ago, has left the most prominent mark upon the old place in rich carvings.

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An Important Scheme for Training Apprentices in the Building Industry.

An important scheme for the training of apprentices in the building industry was approved and recommended to local authorities for adoption at a recent conference of the Lancashire and Cheshire Housing Authorities.

Mr. Miles Mitchell, a Manchester City Councillor, who had prepared the scheme, pointed out (says "The Daily Telegraph") that its object was to co-ordinate, by means of a committee, the functions of the local education authority as to the technical training of youths entering the building industry, with those of the Manchester, Salford, and District Building Trades Apprenticeship Joint Committee, and so to secure the efficient training of apprentices in both the theory and practice of the craft, and the continuance of such training through all the stages of apprenticeship.

A joint committee of twenty-four members would be set up, consisting of representatives of the Education Committee, the City Council, the Manchester, Salford, and District Trades Apprenticeship Council, and the Housing Committee of the City Council. The committee would, from time to time, consult with the Building Trades Apprenticeship Joint Council as to the number of apprentices required to be trained in the several branches of the industry and the steps to be taken to secure the necessary number of apprentices.

The scheme, it was explained, would be available to youths resident within the City of Manchester, whose ages fell between the "school-leaving age" and twenty years; and training would be available as follows:—

Technical Training.—To be provided by the Manchester Education Committee under the regulations of the Board of Education.

Practical Training.—To be provided by employers approved under the scheme.

Youths admitted under the scheme would have to observe the following conditions, namely, attend on the day or days required at the centre where technical instruction was to be given, and

become indentured as the committee might approve; abide by the terms of such indentures, and where necessary, be willing to be transferred to another employer as and when the committee might determine.

Mr. Aldridge, secretary to the National Housing and Town Planning Council, said that Lancashire had once more given the lead in housing matters, and he thought that under the scheme, which he recommended to authorities all over the country, there would be at this time next year 100,000 extra boys in training.

Architects' Conference to discuss Acoustics.

The question of acoustics is being investigated by scientists in different parts of this country, and it has been decided to set up an advisory committee under the Building Research Board of the Department of Scientific and Industrial Research, with Dr. R. E. Stradling, the director of the Board, as chairman.

An offer has been made to the League of Nations by the British Government for this department to carry out, at the country's expense, experimental tests bearing upon the acoustic properties of the League's proposed hall at Geneva. The offer was accepted.

Scott Monument in Danger.

Upper Portion Closed to Public.

The monument to Sir Walter Scott, in Princes Street, Edinburgh, described as the finest memorial ever raised to an individual memory, is unsafe in its highest parts.

Edinburgh Town Council have permanently closed the upper portion to the public.

It would cost thousands for scaffolding alone to effect repairs. Some of the higher stones weigh a ton.

The monument, a Gothic structure 200 ft. high, is adorned with thirty-two statuettes of the most striking of Sir Walter's characters. Under the canopy is a statue of Scott with his favourite dog, Maida. It was completed at a cost of £16,000.

The designer, a working mason named Kemp, was accidentally drowned in the Union Canal while his masterpiece was in course of construction.

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Lisburn Cathedral, Belfast.

Restoration of the Frontage.

Considerable alterations are being made to the approach to Lisburn Cathedral, with the result that the front portion of the ancient and stately edifice can now be seen from the square. Since early in the eighteenth century the cathedral has practically been hidden from view by the buildings which sprung up around it. Recently, however, the house at the north side of the entrance gate, which was one of those burned during the disturbances in the town, was purchased by the cathedral authorities, who had it pulled down, and in the centre of the wide opening which has been created it is proposed to re-erect the massive iron gates with pilasters and railings on either side. Suitable ornamental lamps will also be provided, so that when completed the frontage will be worthy of the historic church.

Renovation of an Ancient Stone Episcopal Throne.

Under the Superintendence of Sir Charles Nicholson, M.A.

Dr. Bertram Pollock, the Bishop of Norwich, has now completed the renovation in Norwich Cathedral of the ancient stone episcopal throne, built, it is believed, by the first bishop, Herbert de Losinga, 800 years ago. The throne is quite unique so far as this country is concerned, though there are traces of a similar bishop's seat at Winchester. Otherwise there is no relic of a similar character north of the Alps. One stone side of the throne was almost perfect and there were also remains on the other side. Under the superintendence of Sir Charles Nicholson, the ecclesiastical architect, all the details of the old throne have been carefully reproduced. H.M. the Queen has worked the bishop's monogram on the cushion of the throne, and a number of Norwich ladies have wrought some artistic needlework on the valances and other cushions.

TRADE AND CRAFT.

The "Star and Garter" Home for Disabled Sailors and Soldiers, Richmond, Surrey.

Earlier in this issue will be found an article, fully illustrated, dealing with this Institution, which was visited by their Majesties The King and Queen, on July 10, 1924. We feel that a few words touching upon some of the workmanship of the building will not be out of place.

The following extracts from a contemporary sum up one's feelings after a visit to the Home:—

"On the principle that nothing can be too good for the maimed and crippled warrior, then it can fairly be said that nothing is lacking to make the new 'Star and Garter' Home perfect. If it had been designed as a millionaires' retreat, the purpose could not have been more sumptuously carried out. The position is, of course, ideal; there is nothing to excel it within the environments of any great city. And the utmost has been made of it. Wherever the eye rests there is beauty and repose. . . ."

"Sir Edwin Cooper, indeed, has been fortunate in the assistance he has received in every department. The care with which he has ensured that every detail should be carried out by those in whom he has implicit trust, has been shown in his choice of Clerk of Works, Mr. George C. Hooper, a man of big undertakings. . . ."

"Indeed, one runs short of superlatives in any attempt to describe the manifold perfection of this amazing creation."

The craftsmanship of the decorator, whether it be of marble, of plaster, or of metal, is skilful and well executed. The bathrooms and lavatories are models of hygiene and sanitation, and the kitchen, with its tiled walls, floors and equipment, is worthy of a visit, for it is beautifully fitted and arranged. The electric light fittings are attractive in design and workmanship, whilst the dining rooms and common room are magnificent in their size and appointments, the oak block floors, the great and imposing fireplaces calling for more than a casual glance. These are two extremely pleasant rooms, and well repay the care and thought spent upon them.

Previously to the reception of the patients the Home was



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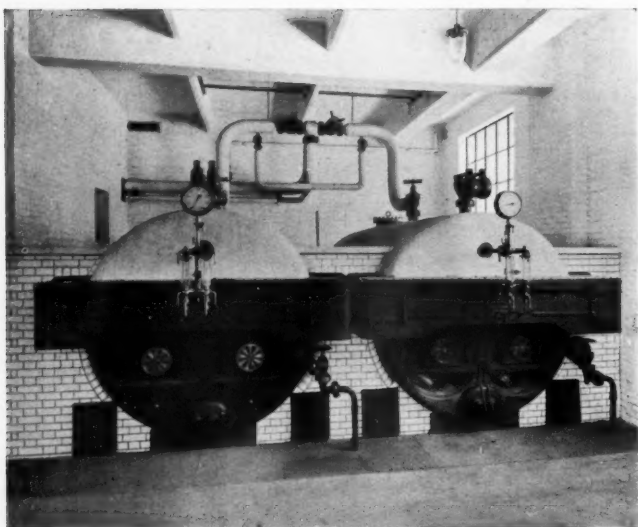


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THE ARCHITECTURAL REVIEW.



1. THE STAR AND GARTER HOME, RICHMOND, SURREY.
THE BOILER PLANT.

thrown open to the public for inspection. Many thousands visited the Home and expressed openly their admiration and appreciation; but—and it is not to be wondered at—the heating apparatus and kitchen were the main features of attraction, and we hope that a very brief description of these two departments of the Home will be of interest to readers.

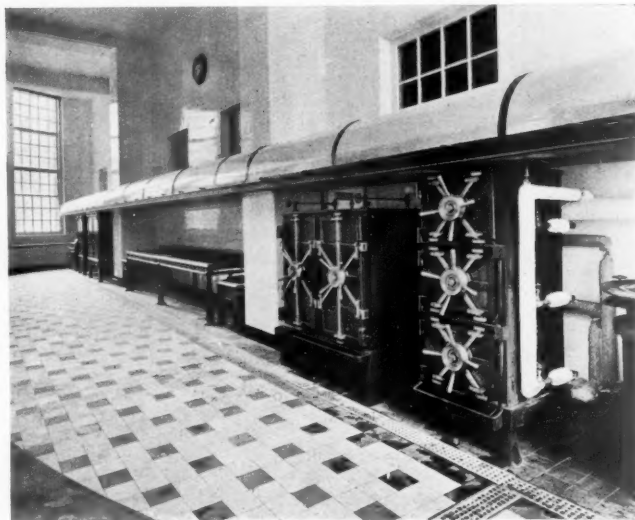
The heating, etc., apparatus, is seen in our first illustration. Here is shown the boiler plant, where steam is generated for pumping all the cold water supplies, for heating, for hot-water services, for the kitchen equipment, and the operating room services. It is interesting to note that such a detail as the insulating covering has received careful attention by a composition of cork and magnesia, by which an efficiency of 92 per cent. has been obtained.

The kitchen, illustration 2.—One of the most interesting

equipped rooms in the Home is the tiled kitchen, where full advantage has been taken of the space available. This is a combination of gas and steam equipment; and the ventilation has also received very full consideration. In effect, the hood shown in the picture can be considered as totally enclosing the whole of the plant. The front, which is shown open, is effectively closed by a keen current of air passing up to the outside of the hood, and the whole is easily accessible for cleaning, an essential detail in kitchen work.

A word of appreciation to the architect. We feel that our duty would not be completely performed if we omitted to say a few words in this connection; we content ourselves, however, with passing on the appreciation of the Governors of the Home in their own words—as quoted from the Souvenir Book:—

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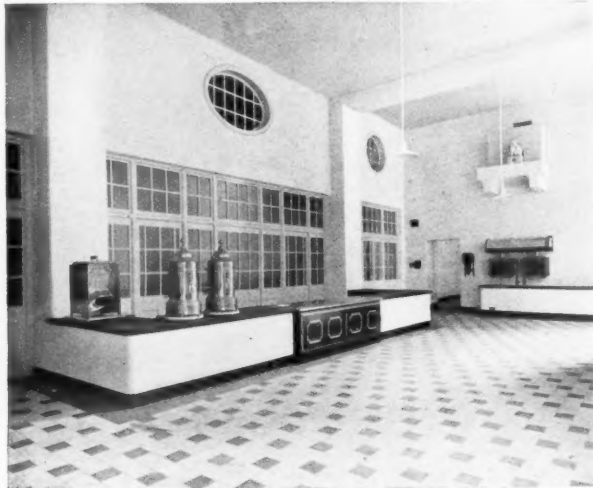
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THE ARCHITECTURAL REVIEW.

and the carrying out of the building since, the honorary architect, Sir Edwin Cooper, has given his services to the great cause of humanity, and the Governors of the 'Star and Garter' desire to offer him their sincere congratulations on the completion of the splendid War Memorial which his genius has created, and, under a deep debt of gratitude, they tender him their most hearty thanks."

The following is a list of the contractors for the building: The main contractors were Messrs. John Mowlem & Co., Ltd.; Mr. George A. Webster acted as quantity surveyor for the committee; Messrs. E. P. Wells, Cocking and Meston, consulting engineers (ferro-concrete and steel); artist for chapel ceiling, Mr. John Cooke; artist for stained glass windows, Mr. J. Dudley Forsyth; clerk of works, Mr. George C. Hooper; contractors' agent, Mr. H. J. Lock. The sub-contractors were: Mumford, Bailey and Preston, Ltd. (heating, ventilation, hot and cold water supplies, water softening, refrigeration (cold stores), gas services and fire and kitchen equipment); Cope & Co. (kitchen and terrace tiling); F. De Jong & Co., Ltd. (fibrous plaster); A. Emanuel and Sons, Ltd. (all the sanitary fittings); James Gibbons, Ltd. (locks and door furniture); Mr. George Haughton (wood carving); Higgins and Griffiths, Ltd. (electric fittings, wiring, telephones and bells); Hollis Bros. & Co. (oak block floors); Mr. Wm. Knight (painting); J. A. Lawford & Co. (asphalt work); G. Matthews, Ltd. (fireplaces); Roberts, Adlard & Co. (roof tiling); G. Rome & Co. (plain plasterwork); Mr. William Smith (gates, balconies, balustrades-in-iron, bronze lamps, bronze electric light fittings and bronze door panels and fanlights in the hall, casements for the terrace windows, and lift enclosures, special glazing and architectural metal work); Smith, Major, and Stevens, Ltd. (lifts); the Synchronome Co., Ltd. (electric clocks); Mr. Joseph Whitehead (architectural stone carving); J. Whitehead and Sons, Ltd. (all the marble work); S. and E. Collier, and the Norbiton Potteries (bricks); Dorman, Long & Co. (steel construction); J. W. Gray and Son (lightning conductors); J. H. Sankey and Son, Ltd. (fireproof floors and partitions); Matthew Hall & Co. (plumbing); Mr. Walter Ingle (official photographer); and all the furniture was made by J. P. White and Sons, Ltd., of Bedford, who supplied all linoleum and carpets.

An Announcement.

We are requested to announce that the following companies were moved to Portland House, Tothill Street, Westminster, S.W., on November 28: The Associated Portland Cement Mfrs., Ltd.; The British Portland Cement Mfrs., Ltd.; The Cement Marketing Company, Ltd.; Martin Earle & Company, Ltd.; The Wouldham Cement Company, Ltd.; White's South African Cement Company; The S.A. Construction Company, Ltd.; The British Portland Cement Research Association. The above companies will be installed at the new address as from 1 December, 1924.

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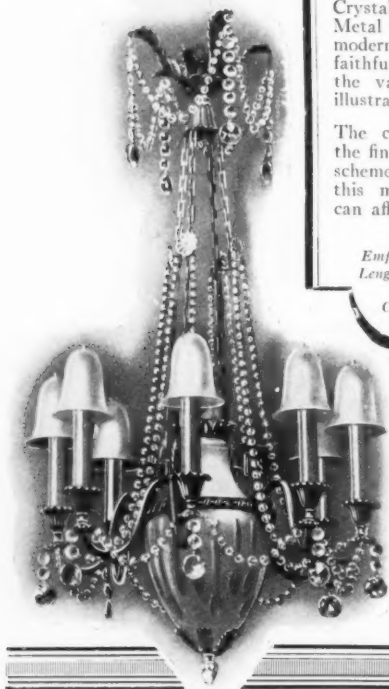
We have received from the National Radiator Co. Ltd., copies of some new pages which this firm intend to insert in their standard catalogue. These pages illustrate various component parts of the "Ideal" radiators and boilers. We would like to mention that the "Ideal" indirect cylinder now takes the place of the "Ideal" storage calorifier previously available, in the same capacities, and being made of galvanized steel is appreciably less expensive, while it is even more efficient.

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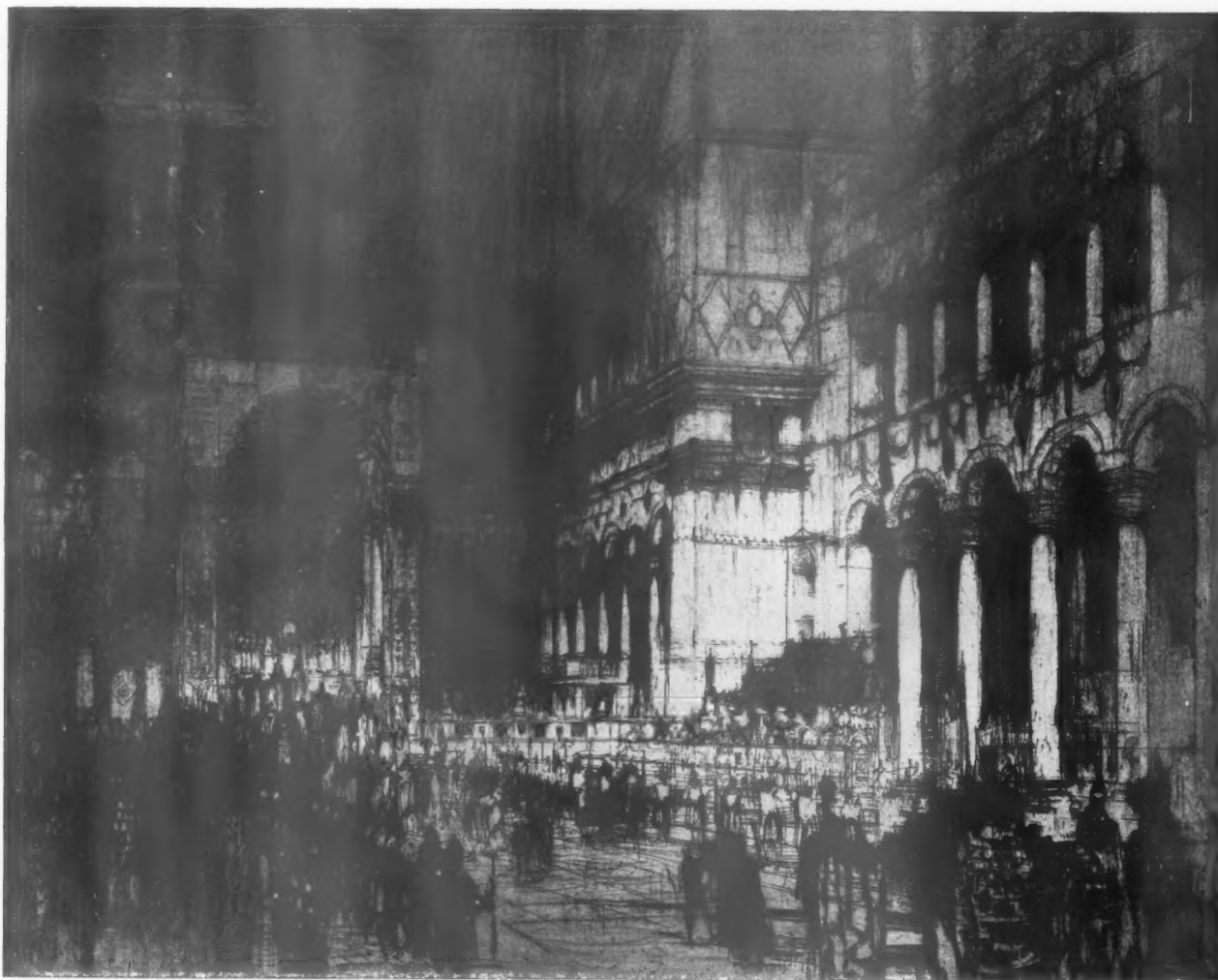


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W. Walcot.

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Re-opening of the Church of St. Magnus the Martyr, London.

Architectural Account of the Restoration, Alterations, and Additions, 1924.

The first mention of this historic church is found in the Cottonian Charters in 1067 as a "stone" church, which marks its distinction from what were probably the many churches in London built of wood. Its site was important, as it stood at the north end of London Bridge, and at one time the gate of the bridge apparently joined the tower. Just south of the church of St. Margaret, the first to be burnt in the Great Fire, whose site is now covered by the Monument, it perished among the earliest. It was rebuilt by Sir Christopher Wren, the steeple being completed in 1705; the general plan of the old perpendicular church probably being followed closely, noticeably in the deviation of the east wall from right angle with the north and south. It has undergone many alterations, the most considerable of which was the demolition, in 1762, of the west ends of the side aisles, which were flush with the tower. In consequence the tower was left standing free on its arches in order to allow a passage way for the footpath of old London Bridge, a great improvement to the exterior, but a spoiling of the proportions of the interior. As a result a new vestibule was made, leaving the old screen in its old position on now the west wall of the church, a new screen being erected, part of which was probably from another church. The proportions were further spoiled by the erection on top of this screen of lath and plaster walls reaching to the ceiling and panelling, boxing up the organ north and south. The present restoration includes the removal of these partitions, which restores greater apparent length to the church and much improves the acoustics of the organ.

The curtailing of the church in 1762 positioned the old centre of the building at the west end of the nave. Wren had left, as in some other churches, a double space between the columns at this centre, giving a sort of transept effect, at this point there having been a shallow dome or lantern. The unfortunate appear-

ance of this great space of unsupported architrave at the west end of the nave has been remedied by the erection of a pair of new columns.

In 1760 a fire destroyed the roof and damaged the interior and the organ; the roof was reconstructed in a different design, an attic story apparently being added under the barrel vault.

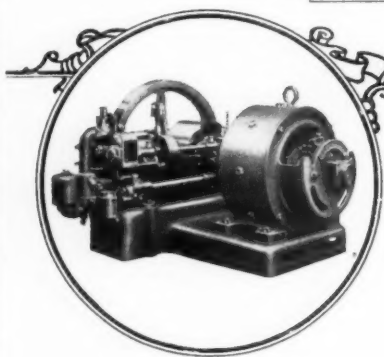
The fine carved wooden portico was removed from the south door when it was blocked up to form an entrance to the vestry in the north aisle. This portico has now been placed as a reredos in the north aisle on a plain plinth. The font of 1712 was probably removed to the north aisle at the same period, evidently losing its original baluster support. In 1830 new oak box-pews were substituted for the original ones, the bases of the columns being covered with flush panelling, some of the lower members of the bases being hacked away.

The church suffered from the revival of stained glass in common with nearly every other City church. The east window was filled with a very early example of geometrical design resembling a mixture of Scotch tartans of unusually crude colouring. In order to show this the reredos was mutilated, the upper story (and its paintings of cherubs) being taken down. The aisle windows are also filled with heavy unsuitable glass, making the church, which was originally well lit, dark and depressing, the effect being emphasized by a superabundance of mural tablets set on black slabs of late date.

A fine sounding-board of the pulpit was removed about 1880, and previously an ugly "three-decker" of patchwork wood was erected round the pulpit base, obscuring the latter's beautiful proportions and altering the staircase. Fortunately, the church entirely escaped the fatal alteration made in many City churches in the middle of the nineteenth century—the removal of the choir and organ from the west gallery to block up the east end.

All the alteration has been undertaken with the greatest care so that the rich, dark effect of the woodwork acquired by time and use should not be lost. Where original colouring had been smothered by repeated coats of varnish these have been removed, and the result shows that rich colouring was a much more important part of seventeenth-century decoration than is usually supposed. As before mentioned, the altar rails and all the iron-

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THE ARCHITECTURAL REVIEW.

work of the church was highly coloured and gilded, and it is the original colouring and not a restoration that is now seen.

The reredos panels, too, were originally rich with colour, as may be seen from the two fine paintings, now cleaned, of Moses and Aaron—almost the only example thus restored in the City.

It is even probable that the walls were originally decorated with gilt scroll work, as a doorway hidden behind the organ was found to have bold gilded scrolls painted round it.

The whole work has been a conservative preservation and restoration as far as possible of Wren's design and spirit; and at the same time shows the inherent capacity of his churches for including and setting forth a developed conception of the requirements of worship. Such new features as the rood and large altar as have been introduced are, it is claimed, of the kind that in borrowing the Renaissance style from abroad, he would have likewise borrowed and made his own if the religious requirements of the age had demanded them.

An Enlightened Railway Company.

Too little has been made of the good taste of the Tube railway authorities in their recent extension of the line to Edgware. Here we have a station which has at last broken away from the Victorian tradition of a frowsy shed hemmed in by high palings and the dingy offices of coal merchants. Instead we have at Edgware a pleasant forecourt with shops on one side and a loggia with seats on the other, for those who wait for friends or vehicles, and in the centre a spaciouly-treated entrance for passengers. The brickwork is attractive, the tiles are attractive, and there is evident thought given to all the details of doors and windows and booking-offices, so that the mind of the passenger is prepared for the pleasantly-upholstered and pleasantly-lit carriages waiting for him at the platform. It is to be devoutly hoped that the estate agents in whose hands is the development of the new part of the town near the station will realize that the simple grace of good architecture is not a fad, but a commercial asset, now that the railway company has given them the lead.

W. G. N.

The Price and Supply of Building Material.

The Minister of Health, the Right Honourable Neville Chamberlain, accompanied by the Parliamentary Secretary and officials of the department, recently received a deputation from the manufacturers and suppliers of building materials.

Mr. H. J. C. Johnston, on behalf of the deputation, said that the Minister could rely on the hearty co-operation of the manufacturers in the Government's housing scheme. They had given their word that they would not increase prices of building materials for housing schemes unless increases were rendered necessary owing to higher costs of production; the record of the past few months had shown that the materials manufacturers and suppliers were keeping their word. The manufacturers objected to being singled out for control by Act of Parliament as had been intended by Mr. Wheatley, and had strongly expressed themselves as opposed in principle to the Building Materials (Charges and Supply) Bill.

The manufacturers referred to the fact that although there might be a shortage of bricks in some areas, there were, on the other hand, several districts in which the production exceeded the demand, and they strongly urged that some means should be devised whereby these surplus stocks could be economically transferred to the needy areas.

The Minister, replying to the deputation, said that he accepted their promise of co-operation, and he was sure that they all realized that what would pay them best would be a continuous demand for their commodities. This could best be secured by maintaining prices at the lowest possible level. He welcomed their promise to set up a committee, which he thought would have many useful functions to perform with regard to the distribution and the most advantageous use of available materials, so that a shortage in one district could be supplied out of an excess in another district. He promised to send the manufacturers a draft of the precise terms of reference for their committee so that its functions could be settled quite definitely.



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"Hawgood's" Reversible Spring Hinges are approved and used by H.M. Office of Works, the L.C.C., railway companies, corporations, schools, theatres, work-houses, etc., throughout the country—evidence of their efficiency.

Adaptable to any weight or style of door, they are fixed in the same position as ordinary Butt-Hinges and have no connection with the floor.

Made of Gun Metal by British Labour, they are extremely simple to fix or repair and eliminate the high cost of labour entailed in fixing other spring hinges under the floor.

Always specify "Hawgood's" Reversible Spring Hinges in your estimates.

Description:

Twin Hinge has 2 springs which are inserted in casement or post. Wings (which clip door and are not inserted) measure 3½ ins. by 4 ins. deep. Weight about 5½ lbs.

Single Hinge: Wing measurements, 3½ ins. by 1½ ins. Weight about 2½ lbs.

Specification Requirements:

For doors up to 50 lbs., 2 single hinges (1 pr.). Doors from 50 lbs. to 100 lbs., 1 twin hinge at top and 1 single hinge at bottom of door (1 set). Doors from 100 lbs. to 200 lbs., 2 twin hinges (1 pair).

Fulllest particulars on application to the sole makers:

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THE ARCHITECTURAL REVIEW.

St. Paul's Cathedral.

A fund has been opened by "The Times" for the purpose of enabling the authorities of the Cathedral to carry out the restoration work to the main piers supporting the dome, which the Commission of Experts declare in their recent second interim report to be imperative. Their Majesties the King and Queen head the first list of subscribers.

The second interim report of the Commission emphasizes the need for prompt action in the grouting of the piers on a carefully prepared programme, together with repairs to the stonework, in order to prevent the condition of the piers becoming grave.

In the issues of "The Architects' Journal" for January 14 and January 21 last, Mr. William Harvey, an eminent authority on domed buildings and ancient structures, declares against the suggestion that the dome should go. He suggests a re-examination of the building to discover the best place for inserting tensile reinforcements; an endless concrete beam buried in the thickness of the outer walls; the anchoring back of leaning portions of the building; and reinforcement within the defective pillars. To save the dome Mr. Harvey suggests the adoption of a cone-shaped support. The outer and inner drums would be connected, and in part supported on a truncated cone of reinforced concrete, the base of which would reach to the outer and unloaded portions of the eight main piers. Pressures on the piers would be more evenly diffused by a baseplate of reinforced concrete covering the vaults surrounding the dome. The articles are accompanied by many interesting drawings and photographs.

The National Society for the Preservation of Property.

The National Society for the Preservation of Property, 8 St. Martin's Place, W.C.2, are publishing periodically a Journal for free distribution to its members. The aim of the Journal is co-operative action by the paint and varnish industry in educating the public to the economic necessity for the use of paint and varnish in the preservation of property, and to secure greater effort on the part of the trade to sell its products.

Crumbling Statues.

A Suggested Remedy.

"Like the Houses of Parliament, Westminster Abbey, and all the other buildings that should be the pride of Londoners, St. Paul's is being sacrificed to our obstinate adherence to the coal-burning habit," said Dr. J. S. Owens, consulting engineer and honorary secretary to the Advisory Committee on Atmospheric Pollution, discussing recently the safety of St. Paul's Cathedral.

"It is true," he went on, "that the most important feature of the present trouble—the weakening of the piers that support the dome—cannot be ascribed to London's atmosphere. But there can be no doubt that the crumbling of the outside stonework is due directly to atmospheric pollution. Anyone can see from the top of a 'bus the damaged fingers of many of the statues, which are being rapidly disintegrated into something like a powder.

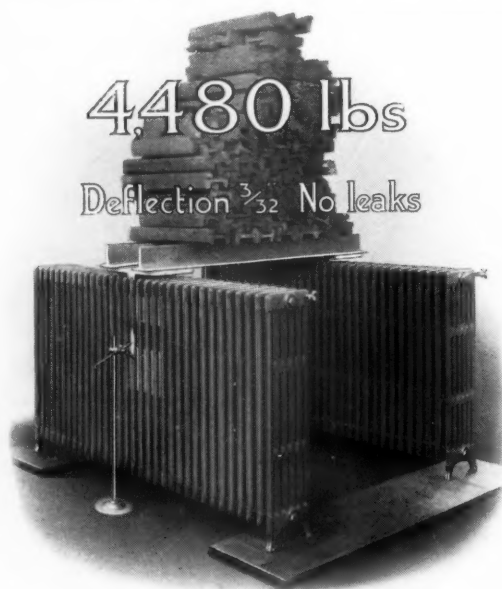
"I have frequently observed that even interiors of buildings are affected by smoky air. The cloisters of Westminster Abbey, for instance, have been appreciably damaged by the atmosphere.

"We burn in London 17,000,000 tons of coal every year, and out of every ton burnt 20 to 100 lb. emerge into the air in the form of soot deposits, while domestic coal fires and, to a lesser extent, factory chimneys, shoot from 200 to 300 tons of sulphuric acid into the air every hour. These 300 tons of sulphuric acid could, in time, convert about the same weight of limestone into dust.

"We live in a constant cloud of smoke. It is high time that it was made a penal offence in our towns to poison the atmosphere with coal smoke.

"One of the best remedies, and the one to which we are gradually but much too slowly tending, is the replacement of coal heating by gas heating, or the replacement of smoky coal by semi-coke.

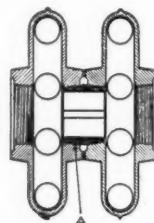
"Perhaps the only really effective method of eliminating coal smoke from the air would be to adopt the suggestion of Sir Napier Shaw and give a rebate off the rates to every householder who made no smoke."



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Houses in Sections.

A large number of schemes providing alternatives to bricks and mortar have been placed before the Government committee, which met last month under the chairmanship of Sir Ernest Moir. Both steel and wood are suggested, and the committee are considering the suitability of wood. It is claimed for wooden houses that they can be imported in sectional form, and rapidly assembled on chosen sites in this country, and that both bungalows and two-story buildings can be suitably built of wood. The cost is, however, comparatively high in relation to other materials, and this is a serious objection to the adoption of wood.

Victoria and Albert Museum.

A further series of concerts will be given under the auspices of the League of Arts in the Museum Lecture Theatre on Saturdays, as follows:—

- 7 February.—Sir Richard Terry. Sea Chanties.
- 14 " Dorothy Howell and Gilbert Bailey.
- 21 " A Stanford Concert. League of Arts' Choir.
George Parker.
- 28 " Harold Craxton—Pianoforte Recital.
- 7 March. The London Male Voice Octet.
- 14 " Dorothy Helmrich—Vocal Recital. Violinist—
Desirée Aimes.
- 21 " The Kendall Quartet.
- 28 " Lecture Recital. English Songs—Geoffrey Shaw.
- 4 April. The Wayfaring Trio.
- 11 " (No concert).
- 18 " The Tudor Singers.
- 25 " League of Arts' Choir—Hymns and Motets.

The above programme is subject to alteration.

The concerts will begin at 3 p.m., and last about an hour. Admission will be free, but programmes will be on sale at the entrance to the theatre, and the League hope that the public will purchase them, in order that some part, at least, of the expenses incurred may be defrayed.

The Art of "Tinycraft."

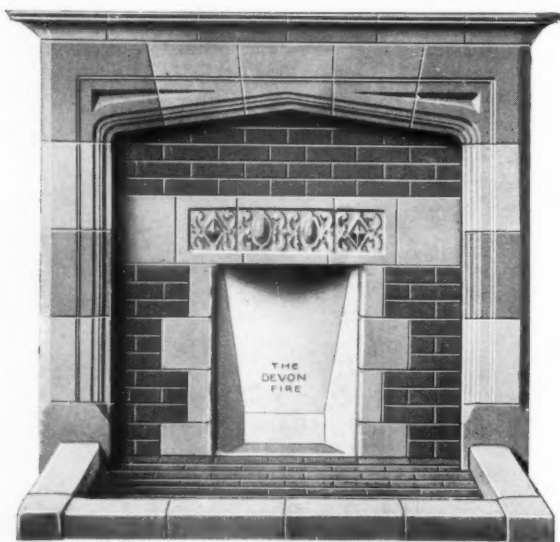
Mr. Neville Wilkinson, whose model, "Titania's Palace," was exhibited at Marshall and Snelgrove's for the benefit of crippled children, recently gave an interesting lecture before the Art Workers' Guild on "The Art of Tinycraft," or the making of models in miniature.

Dealing with the educational possibilities of "Tinycraft," Mr. Wilkinson claimed that a large proportion of our provincial museums were merely cemeteries in which the collections of local antiquaries might be decently interred. He had, therefore, developed a scheme by which each provincial museum and school might become a centre for the display of "Tinycraft," issued under proper supervision from a central depot.

A New Engineering Laboratory for the Ford Motor Company.

On a field in Dearborn, where Henry Ford as a boy played about an old brickyard pond and watched the working of a small steam engine developing power that pressed the brick, now stands the new engineering laboratory building of the Ford Motor Company ready for occupancy. The purpose of the building is revealed in its design and architectural details. It is of white Bedford limestone, 804 ft. long by 202 ft. wide, the main portion is one-story high in keeping with the latest Ford standard. The central portion in front, where the executive offices are located, is two stories in height, with massive stone columns and pilasters. The building, set back 1,000 ft. from Oakwood boulevard, which connects Detroit and Dearborn, is approached by wide driveways skirting the lake. The laboratory is practically one vast room supporting columns 40 ft. and 50 ft. apart. The roof is of unique steel arch construction, the arches being carried on reinforced concrete brackets. Numerous windows in the three wide roof monitors and in the outer walls flood the interior with daylight. White enamelled ceilings aid in even distribution of the light. The total glass area of 64,000 sq. ft. is equivalent to 40 per cent. of the floor space.

THE "DEVON" FIRE—several new 1925 models



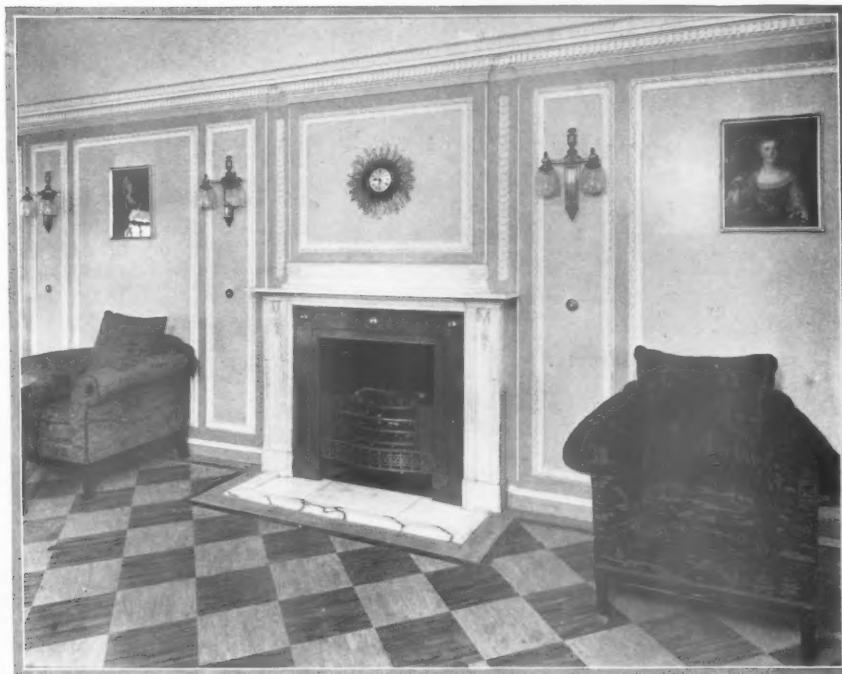
IN reducing smoke, saving coal, and giving out warmth, the "Devon" Fire surpasses any other fireplace obtainable. Its construction is scientifically correct, its appearance is artistic, "homely," and attractive.

Several exceptionally fine models have been produced for the 1925 season. There is a large number of designs in tiles and faience which can be produced to harmonise with any colour scheme.

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THE ARCHITECTURAL REVIEW.

The Queen's Dolls' House.

To be shown at the Ideal Home Exhibition, Olympia.

Her Majesty the Queen has been graciously pleased to grant permission for the Queen's dolls' house to be exhibited at the Ideal Home Exhibition to be held by "The Daily Mail" at Olympia in March next.

The Queen's dolls' house, designed by Sir Edwin L. Lutyens, R.A., was one of the great attractions of the British Empire Exhibition at Wembley. Housed in the Palace of Arts, it was visited by 1,617,556 people from all parts of the kingdom and of the Empire.

At Olympia the Queen's dolls' house will be exhibited in a special building designed by Sir Edwin Lutyens, and the proceeds will be added to the Queen's Dolls' House Fund.

The Mansard Gallery.

An exhibition of works of the members of the Junior Art Workers' Guild (pictures, sculpture, craftwork, etc.) will be held in the Mansard Gallery, 196 Tottenham Court Road, W.1, from March 9 to 29. There will be no charge for admission.

A Farm in London.

An attractive and highly novel feature of the Nations' Food Exhibition, to be held at Olympia from April 11 to May 2, will be a real English farmstead filling the whole of the annexe.

This will be a miniature reproduction of a five-hundred acre holding, in every respect a working demonstration of how to run a mixed farm on up-to-date lines.

The buildings will include a farmhouse, model dairy, scientifically constructed barns and sheds for valuable animals, while vegetable and flower gardens, an orchard of fruit-bearing trees, and a duck pond will be laid out. The object of the structures is to show the most modern methods of economical, efficient, and hygienic construction. The total cost of this farm in Olympia is about £30,000, and no expense has been spared to make it a practical creation and not a mere exhibit for the curious. The plan was made and the produce selected by Mr. P. B. Tustin, who has had agricultural experience all over the world.

TRADE AND CRAFT.

Adelaide House, London Bridge.

This building stands on the site formerly occupied by the Guard House and shore arches of Old London Bridge erected in A.D. 1167. When the present bridge was opened in A.D. 1831 the old one was demolished and a block of buildings erected, occupied for many years by the Pearl Assurance Co., and Sir John Knill & Co.

The lease of this block having expired, an opportunity arose for the erection of a modern building, which obviously would have to be of the first magnitude in view of the importance of the site. The owners—represented by Oswald E. Parratt, Esq., F.S.I.—accordingly instructed Sir John Burnet and Partners to prepare the designs, and Sir Douglas Fox and Partners were retained to advise with regard to the many problems likely to arise as regards the foundations and constructional steelwork. In view of the difficulties anticipated in connection with the foundations, the work was entrusted to Sir Robert McAlpine and Sons as being the most likely firm to overcome any and every difficulty that might arise.

After demolishing the old building, trial bore-holes were put down in selected positions on the site, and it was speedily ascertained therefrom that the site consisted of made-up ground—the accumulation of the city debris for centuries—until the London clay was reached some 35 ft. to 40 ft. below road level.

In addition to the subsoil difficulty an old storm water drain of 10 ft. diameter in poor condition ran diagonally across the site discharging into the river in the centre of the frontage—two smaller sewers making connections therewith on the site, not to mention a further serious difficulty by reason of the City and South London Railway Co.'s tubes being at such a level below the site as to be liable to disturbance by the operations unless considerable precautions were taken. In addition, the whole of the site was badly water-logged and liable to floods, whilst heavy warehouses on the east side necessitated extensive underpinning for some 20 ft. below water-level.

Under these circumstances the consulting engineers decided to place no reliance upon the subsoil but to carry the whole weight

(Continued on p. lviii.)



Scagliola Marble

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TO HIS MAJESTY.

An old Italian process, revived in the early part of the Sixteenth Century by Guido Sassi; is not a surface decoration, but a thoroughly artistic material. It was largely used by the Florentines in some of their most elaborate works, and was introduced into this country by Mr. J. Wyatt about 1750. It has been manufactured by this firm for the last 125 years, and fixed in many of the most important buildings in the Kingdom.



Messrs. William H. Bryne & Son, Architects.
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Telegrams: "PROTEUS, WESDO, LONDON."

THE ARCHITECTURAL REVIEW.

of the building upon piles supporting substantial reinforced concrete foundations. For this purpose over nine hundred pitch-pine piles from 14 in. x 14 in. to 16 in. x 16 in. in section, and up to 40 ft. in length, were driven right through the made-up ground until they had penetrated solidly into the London clay. In addition a massive reinforced concrete retaining wall 25 ft. wide and 27 ft. deep was constructed along the entire river frontage, the base of this wall being considerably below the river bed.

Great care had to be taken in these operations, but eventually all difficulties were successfully overcome, and having once got to ground level, rapid progress began to be made although operations were considerably restricted by having to keep a road open across the site for the very heavy traffic to and from Fresh Wharf.

The contract for the steelwork was placed in the capable hands of Messrs. Dorman, Long & Co., Ltd., who supplied and erected about 2,050 tons of steelwork for the purpose.

The granite base supplied by Messrs. Brookes, Ltd., is noteworthy by reason of the abnormal size of many of the blocks, and in this respect the contract is probably unique amongst the many fine buildings in London.

The Portland stone was supplied complete by The United Stone Firms, Ltd., and it is very satisfactory to note that, notwithstanding the unusual difficulties presented by the battering faces, very few—if any—of the stones that came upon the site required alteration. The cornice is especially noteworthy, the monoliths averaging 4 to 4½ tons each, whilst the quoins had to be worked out of blocks weighing between 13 and 14 tons apiece. It was obvious that under these circumstances the question of suitable scaffolding would present considerable difficulties, especially as the main faces batter back some 33 in. from the plumb-line. The American type of suspended scaffold—controlled in this country by Messrs. Scaffolding (Great Britain), Ltd.—was considered, and after the company had made the alterations and additions desired by the contractor's agent (Mr. S. Hathaway), the type was adopted with satisfaction to all concerned, considerable confidence being also imparted to the workmen by reason of no accident due to the scaffold occurring whilst the building was under construction.

The fire-resisting floors were constructed upon the "Truscon"

system controlled by The Trussed Concrete Steel Co., Ltd., and appear to have given satisfaction and unquestionably a considerable amount of dead weight is saved by this method. The concrete roof is for practical purposes a shallow tank, the asphalt work being carried out by The Whitehall Asphalt Co. The wood block floors are being laid by The Acme Flooring Co., Ltd., and Messrs. Stevens and Adams. The steel casements throughout were executed by The Crittall Manufacturing Co., Ltd., and the fire escape staircases were supplied by the Lion Foundry Co., Ltd., considerable ingenuity being required in the design of the latter by reason of site difficulties, coupled with the unusual height.

Some good examples of hardwood joinery are to be found in the doors and fixtures adjacent to the main staircase, the whole of this being supplied and fixed by Messrs. Rippers, Ltd., whilst The Central Aircraft Co. have been responsible for most of the fittings in the various offices. The ironmongery was supplied by Messrs. James Gibbons, Ltd. The finishings to the main stairs, together with the whole of the partitions, linings, etc., in lavatories have been carried out in Hopton-wood terrazzo and black tile bands by Messrs. Carter & Co., Ltd., and afford a good illustration of this firm's capabilities. Special mention might here be made of the "Carterazzo" lavatory partitions: these are fixed into bronze metal frames, and it is difficult to conceive a more sanitary and pleasing arrangement.

The art metal work was carried out by the Birmingham Guild, Ltd., the whole of the plumbing work was executed by Messrs. W. H. Earley, and the sanitary fittings were supplied by Messrs. Shanks & Co. The electrical work has been carried out by Electrical Installations, Ltd., and a vacuum installation has been installed by The London Plenum Heating Co. The fire-resisting shutters and doors were supplied by Messrs. Thornborough, Ltd., the marble columns and linings by Messrs. Fennings, Ltd., and Galbraith and Winton, respectively.

The extensive heating and hot water plant has been installed by Messrs. Young, Austen and Young, the very latest system of oil fuel for heating the boilers having been adopted. The fire hydrants and sprinklers in the warehouse portion were installed by the Newton Witter Engineering Co., Ltd., and all lifts throughout the building were installed by Messrs. Waygood Otis, Ltd.

(Continued on p. 1x.)

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Western Electric Co. Ltd.

THE ARCHITECTURAL REVIEW.

To overcome the difficulty of water supply, three artesian wells were sunk and pumping apparatus installed by Messrs. Le Grand, Sutcliffe and Gell. All the fire-resisting pavement, floor, and roof lights were supplied by Messrs. J. A. King & Co., Ltd., in their patent "Ferro" glass construction, together with the electric fire-resisting glazing, to special designs by the architects. An 18-hole putting green is being laid down on the roof of the building, designed and carried out with Cumberland turf by Messrs. Maxwell Hart.

It is quite impossible in the space at our disposal to deal in detail with the work of the other firms who contributed their quota to this imposing building, and we must content ourselves with just mentioning their names. We shall, however, return to this article next month, and hope to give further details of the work carried out.

Messrs. Diespeker & Co. supplied and erected the marble mosaic finish on the Lower Thames Street floor: the brick work was supplied by The London Brick Co., Messrs. Eastwoods, Ltd., and Messrs. Smeed, Dean & Co.; the glazed bricks by Shaw's Glazed Brick Co., and the terra-cotta blocks by the Hemel Hempstead Patent Brick Co.; the collapsible gates by the Bostwick Gate Co.; the neat and dignified directory boards in the entrance hall by Betterways, Ltd., and the lettering on doors, etc., by Mr. Percy Smith, of the Dorian Workshop and Studio; plaster work, the Grano-Metallic Plastering Co.; glazing, G. and J. Rae, and Smith & Owen; painting, J. and R. Anderson; the General Post Office are responsible for the telephones; the rubber roadway was supplied by the Leyland and Birmingham Rubber Co.; the carving was done by Hart and Sons; the G.E.C. were responsible for some of the electric fittings, whilst John Tann, Ltd., executed and supplied the fireproof doors.

Altogether the structure presents many unusual features, and in spite of the congested nature of the site, together with the many restrictions, but little friction has arisen during its progress. The building stands out to-day at the main entrance to the City of London as pre-eminently a monumental structure bearing silent but eloquent testimony to the sterling work put into the scheme by the designer, contractors, and craftsmen—in fact, everybody concerned.

We cannot conclude this notice without a word of thanks

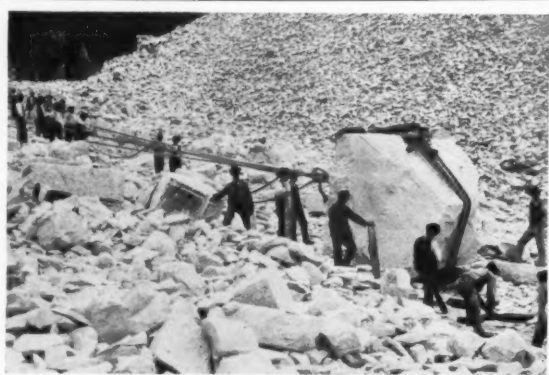
to the clerk of the works, Mr. Allen Jane, and more particularly to Sir Robert McAlpine's agent, Mr. S. Hathaway, for the valuable assistance accorded us in supplying the above particulars. The last-named gentleman spared himself no trouble, and it is almost entirely due to his kindness and efforts that THE ARCHITECTURAL REVIEW is able to present its readers with even this curtailed—if somewhat lengthy—"story" of the City of London's most imposing "office block."

A New Catalogue of Doors.

We have received a copy of a new catalogue issued by the Woco Door Company, in which is given illustrations of many designs for the doors manufactured by this well-known firm. During the past three years, it is stated, Woco doors have been used throughout the country in a great many private and public buildings, including county councils, and also in connection with urban and municipal building schemes. We understand that the Woco Door Company have recently secured many important municipal contracts for the supply of their doors.

An Advance in Partitions and Floor Blocks.

It is many years since Cranham Porous Hollow Partition Blocks were introduced. The makers, Messrs. J. H. Sankey and Son, Ltd., Canning Town, have, however, been continually asked by architects to increase the lightness, sound, heat and cold insulating properties. It is not possible to do this with English clays, but, after considerable investigation, the manufacturers have satisfied themselves that Cranham Moler (Fosalil) is a unique material, and gives extraordinary results as regards lightness, insulating properties, and strength. In actual fact they are about one-third lighter than ordinary terra-cotta and clay products, and partition blocks made of this material bear a crushing weight of about half a ton per square inch. Searching tests have proved that they offer remarkable fire-resisting and sound-resisting properties, and are ideal for the encasement of steelwork, and for the construction of interior walls, floors, ceilings, etc., for the insulation or conservation of heat and cold, and for the prevention of condensation in cellars, basements, etc.



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THE ARCHITECTURAL REVIEW.

"Ten Wonderful Clocks."

Messrs. Robersons have recently published a booklet under the above title. Nine of the clocks are illustrated, and a fairly full description is given of the makers and details of the workmanship, etc. As examples of the mechanical ingenuity and infinite patience of the old-time horologists the clocks are unsurpassed. These timepieces are the work of some of the most famous craftsmen of the eighteenth century. They were made entirely by hand, and the delicate and intricate movements, together with the artistically designed and, in many instances, beautifully engraved cases, give ample evidence of the years of patient labour spent by the master workmen in their creation. It is an interesting fact that the collection was gathered together by an Irish gentleman during the course of his world travels before the Great War. In Peking, Teheran, St. Petersburg, Lahore, and many other Eastern towns this gentleman made his purchases, paying fabulous prices, and he kept them for several years in his home in Danzig. At the outbreak of war he returned with them to Ireland, and they have finally found their way, like most objects of historical interest, to Robersons' galleries in London. A skilled horologist has spent two whole years in overhauling these timepieces, and they are all guaranteed to be in perfect working order, both mechanism and movement operating for eight days with one winding. It can safely be said that in no other building in the world is there such a unique assembly of marvellous clocks, and the collection is now offered for sale as a whole or separately. Messrs. Robersons cordially invite architects and others interested to inspect these works of art at their galleries, Knightsbridge Halls, 217 Knightsbridge, S.W.7.

From Messrs. Robersons also comes an illustrated brochure on decoration. This booklet contains reproductions of photographs of some of the contracts they have carried out under the supervision of many famous architects, and states that "although the decorative interiors reproduced in these pages are of a rather sumptuous nature, Robersons of Knightsbridge undertake to introduce the same note of quality into apartments of smaller dimensions. Discriminating taste is exercised throughout, blending every feature into one harmonious ensemble." Architects are invited to send for a copy of this neatly-produced publication.

Steel Rolling Shutters.

Kinnear Patent Steel Rolling Shutters (manufactured solely by Messrs. Arthur L. Gibson & Co., Ltd., Radnor Works, Twickenham) are being used in increasingly large numbers for purposes of fire protection in division walls, lift lobbies, staircases, windows, etc. Messrs. Gibson & Company have recently completed a contract at Messrs. Harvey, Nichols & Co., Ltd., Knightsbridge, S.W., and among other users of Kinnear shutters as fire doors in large numbers are: John Barker & Co., Ltd., Derry and Toms, Dickins and Jones, Ltd., Harrods, Ltd., Pontings, Lilley and Skinner, Ltd., J. Lyons & Co., Ltd., "Daily Sketch," and United Newspapers, Ltd.

Three "Gazeway" Contracts.

Messrs. W. H. Gaze and Sons, Ltd., of London and Kingston-upon-Thames, have been favoured with the contract to carry out the construction of the new additions to Wellington Barracks, at the corner of Buckingham Gate and Birdcage Walk, directly facing Buckingham Palace. They have also secured a large contract from W. Courtenay Le Maitre, Esq., F.R.I.B.A., for a new factory for Messrs. Waygood-Otis, Ltd., at Falmouth Road.

The London County Council have also placed orders with Messrs. Gaze for the modernization and redecoration of the Banstead Mental Hospital.

A Correction.

With reference to the photograph of the Retaining Wall at the Viscount Leverhulme's residence at Hampstead, published in an advertisement by the British Reinforced Concrete Engineering Co., Ltd., in the January issue of THE ARCHITECTURAL REVIEW, the Company wish us to state that the architectural work has been carried out by Messrs. T. H. Mawson & Sons in conjunction with Leslie Mansfield, Esq., F.R.I.B.A.

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THE ARCHITECTURAL REVIEW.

St. Paul's Cathedral.

St. Paul's has recently become "news" to the daily Press. But anxiety about its stability is of long standing. More than eighteen years ago a committee of experts was called into consultation by the Dean and Chapter. Their report was published in our pages in September, 1907. Since then vigilance and research has continued, and another advisory commission was appointed in October, 1921. Their report is published as we go to press. It is a careful document and deserves serious study. Three main aspects of the problem are considered: the integrity of the foundations; the movements of the dome structure; and the stability of the dome supports. An elaborate system of observations by levelling and measurement has been initiated. This is of great importance as enabling the movements of the building to be checked from year to year. The commission is satisfied by the record of these observations that no settlements of the foundations are taking place at the present time, though it is plain from a careful examination of the stone coursing that a considerable and irregular settlement took place during the progress of the building, and was corrected as the work advanced. That is to say, that while the plane of the imposts in the crypt is tilted, the base and axis of the lantern which crowns the whole show no deviation from the horizontal and the vertical respectively. Their micrometer gauges further record a seasonal expansion and contraction (amounting at the level of the whispering gallery to about one-sixteenth of an inch) in the drums supporting the dome, and they attribute the cracks in the thirty-two radial cross-walls which originally connected together the inner and outer drums to such temperature stresses rather than to unequal settlement. As these seasonal openings of the drum-walls tend to contract rather less than they expand, it is proposed to encircle both the inner and the outer drum with systems of metal hooping, to arrest this progressive increase. On the question of the stability of the dome supports the expert commission advises the continuation of the grouting system which has hitherto been employed, with certain improvements. They are of opinion that the load per square foot on the piers is probably less than 25 tons, though they feel that the exact distribution of the load between the piers and the bastions is not accurately calculable.

In their view the results of the grouting up to date have been satisfactory. This is no doubt the point where opinions will be most sharply divided. There is here no heroic remedy, such as appeals to the lay imagination. Grouting is a hidden process, and its results cannot be incontrovertibly established. On the other hand, the minute observations of three years seem to have shown no cause for panic; while the whole fabric is so sensitive, so nicely and yet so obscurely balanced, as it were, that the disturbances preliminary to more thorough remedies might prove disastrous. That, at all events, is the view of the expert commission; and they have studied the matter minutely. Opinions which are not based on the data are valueless. It now rests with the Representative Committee and presumably the Corporation to agree on a course of action. If in their combined wisdom they decide on some more drastic course than that proposed by the commission, it is to be hoped that they will appoint one man, who must be pre-eminent for his knowledge and experience of engineering as applied to building, with full powers to do all that has to be done.

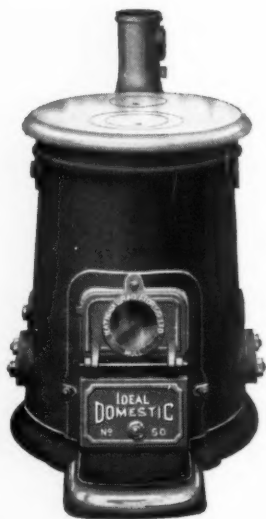
Two New R.A.'s.

At a General Assembly of Academicians and Associates, held on February 19 last, Sir John J. Burnet, A.R.A., architect, and Mr. Philip Connard, A.R.A., painter, were elected Royal Academicians.

Sir J. J. Burnet, who is sixty-seven, was elected an Associate in 1921. He has designed a very large number of buildings, chiefly for commercial purposes, both in Scotland and in England. In London he is best known for the colossal Adelaide House, London Bridge. He also designed the King Edward VII galleries at the British Museum, and the Institute of Chemistry in Russell Square. He is chief architect in Palestine and Gallipoli for the Imperial War Graves Commission.

Mr. Connard, who is forty-nine, was elected an Associate in 1918. He is chiefly known as a painter of subject pictures and portraits of great technical accomplishment. Examples of his work are to be seen in the Tate Gallery, the Luxembourg in Paris, and the public collections in Dublin, Manchester, Cardiff, Bradford, Southport, Aberdeen, and Melbourne.

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The British School at Rome.

The Rome Scholarship in Architecture, 1925.
Preliminary Competition.

The Faculty of Architecture of the British School at Rome have selected the following candidates to compete in the final competition for the Rome and Henry Jarvis Scholarships of 1925:—

F. N. Astbury (Liverpool University); R. W. Briggs, B.A., A.R.I.B.A. (Manchester University); G. A. Butling (Liverpool University); Irene J. Macfadyen (Architectural Association); C. A. Minoprio, B.Arch. (Liverpool University); Elsie Rogers, B.A. (Finalist 1924, exempted from Preliminary Competition 1925) (Manchester University); W. F. Scarlett, B.A. (London University); H. G. C. Spencely (Liverpool University); R. J. Willis, M.A., A.R.I.B.A. (Manchester University).

The designs submitted in the Preliminary Competition of 1925 will be on exhibition at the Royal Academy Galleries from March 6 to 14 next.

Recent Additions to the National Gallery.

The pictures bequeathed to the gallery by the late Sir Claude Phillips have recently been placed on view in the vestibule at Trafalgar Square. The larger group of pictures will be found by the entrance to the Spanish Rooms, near the charming little series of Flemish, German, and Italian primitives presented last year by Mr. Henry Wagner, whose collection is to be sold at Christie's next week. It may be mentioned that Mr. Wagner's picture of "St. John and the Holy Women," in the centre of the left wall, has recently been identified as a fine example of Bartholomeus Bruyn. Of the Phillips pictures the attractive "Portrait of a Boy" (more probably by F. Gérard than by David), the "Pieta," by Dosso Dossi, and the two large "Saints," by Pordenone, from the ceiling of the Scuola of S. Francesco ai

Frari, at Venice, are, perhaps, the most notable. Neither Pordenone nor Gérard was previously represented in the gallery. On the opposite side of the vestibule, near the entrance to the French and British schools, three other pictures will be found, also by artists not previously represented, namely, a "Portrait of a Woman," ascribed to Adrian Hanneman, with male portraits by Tilly Kettle and Philip Mercier, the latter bearing the date 1740. Last, but not least valuable, comes a Byzantine panel representing "The Dormition of the Virgin," of unusual charm of colour, which has been hung opposite to the catalogue stall, near the two other works of the same kind which the gallery previously possessed. One of these, a curious panel from Crete, representing various scenes from the Resurrection, was a quite recent gift from the Rev. E. Boys-Smith.

An Architects' Tour.

Professor Albert C. Phelps, of the College of Architecture, Cornell University, Ithaca, New York, has sent us an announcement of an architects' tour which he is conducting during the coming summer in co-operation with the Bureau of University Travel. The party will sail from New York on June 17 by the S.S. "Berengaria," arriving at Southampton on June 23. Salisbury will be visited on the following day, including motor tours to Stonehenge and Old Sarum. Other places of interest to be included in the itinerary will be Winchester, Cambridge, Ely and Lincoln, York, Ripon, and to Fountain's Abbey, Durham, Edinburgh, the Trossachs, Melrose, Keswick, Grasmere, Chester, Warwick, Kenilworth, Stratford-on-Avon, Oxford, and London. Thence to Brussels, Strasbourg, Interlaken, Lucerne, Lugano, Lake Como, Milan, Venice, Florence, Rome, Pompeii, the Amalfi Drive, Capri, Naples, Pisa, Monaco, Monte Carlo, Arles, Nîmes, Avignon, Paris, Versailles, and Chartres. The return journey to New York will be made in the S.S. "Homer," sailing from Cherbourg on August 26. Fuller particulars may be obtained either from Professor Phelps or the Bureau of University Travel, 11 Boyd Street, Newton, Mass.

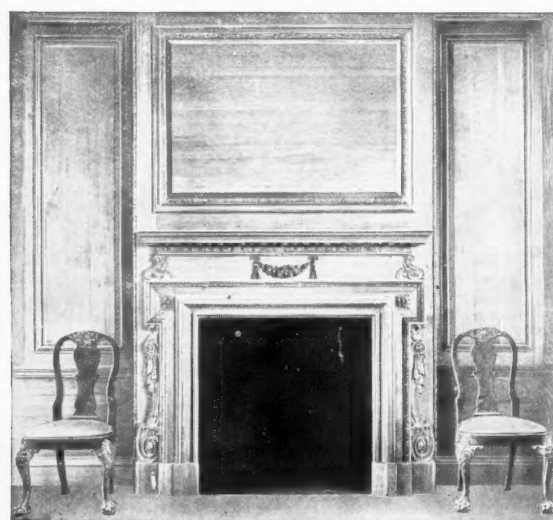


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OUR FOREFATHERS bartered and enjoyed the combination of adventure with simple bargains. To-day faced instead with a rate of exchange, the average man is at the mercy of influences which, so far as he is concerned, are speculative. Unaided by good fortune, he is unlikely to secure the most favourable terms, whether he is changing his travelling cheques or is concerned with larger business affairs. In all matters involving foreign money, he is invited to consult the Westminster Bank either through its London offices or its branches. He may be sure always of receiving careful advice and ready assistance.

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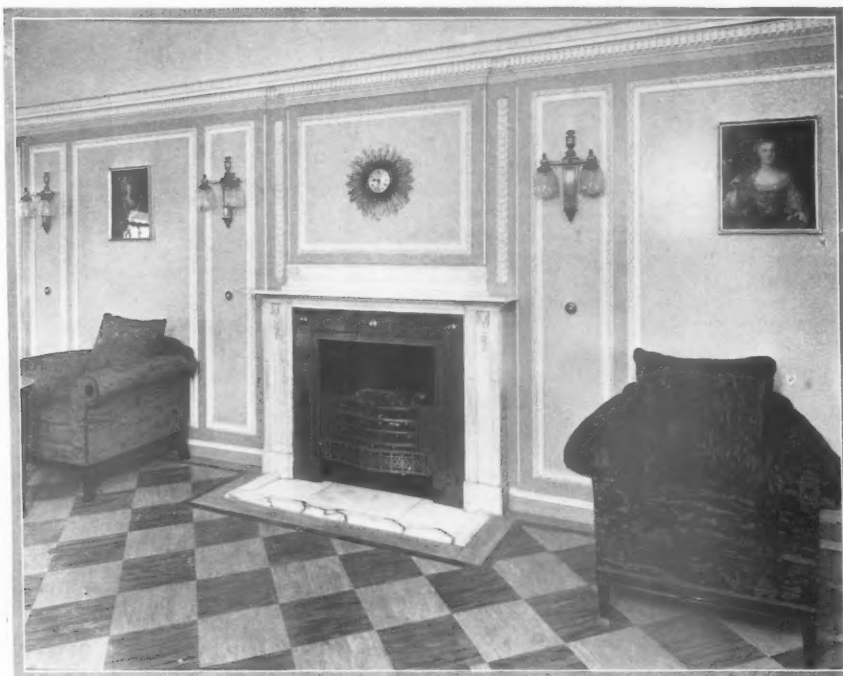


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THE ARCHITECTURAL REVIEW.

Waterloo Bridge.

The progress that has been made with the erection of a temporary bridge alongside the old one at Waterloo can now be seen. The work was begun on August 13 last year, and several months were spent in the pile-driving and steelwork necessary for the foundations. Now, however, two of the huge steel spans which will form the new bridge have been placed in position in the middle of the river, and iron girders to support the span which will cross the Embankment have been lowered on to the scaffolding on either side of the roadway.

The temporary spans will duplicate those of the arches, except for one, which will span two of the arch openings, in order to assist navigation by avoiding the tunnel effect which would otherwise be given. The original openings are 140 ft. across, and the single span will be 280 ft. The side of this span will be a deep girder construction about 30 ft. high in the middle, and its weight will be so great that the ordinary timber piling, which has been used for the remaining spans, would not be strong enough to bear the weight. Iron cylinders have therefore been sunk in the timber framing to take the top structure.

The old stone staircase leading down to the Embankment from Wellington Street was demolished some time ago, and a new one of iron and wood was built, leading from the footway of Waterloo Bridge to the pavement on the riverside of the Embankment. The steel spans have been erected on the old bridge and lowered into position on the foundations of the temporary bridge by means of cranes. This work has been done at night for the sake of safety. As the temporary bridge runs parallel to the old one, the outside spans, which connect with the approaches on either side of the river, will be turned at as easy an angle as possible so as to make the junction.

The scaffolding across the Embankment is a strong wooden structure, designed to safeguard traffic while the end span is being erected. It is high enough to give ample clearance to tramcars, and when the span is completed it will be removed. When completed the width of the new roadway will be 20 ft., with footpaths 7 ft. wide on each side.

TRADE AND CRAFT.

The Auctioneers' and Estate Agents' Institute, Lincoln's Inn Fields.

The general contractors for the Auctioneers' and Estate Agents' Institute, Lincoln's Inn Fields, were Holland and Hannen and Cubitts, Ltd., who also carried out the plumbing and sanitary work. The Portland stonework of the exterior elevations was worked throughout at their stoneyard at Nine Elms, and the joinery and finishings, including the hardwood panelling of the principal rooms, at their shops in Gray's Inn Road.

The assembly hall and committee room on the first floor are panelled throughout in Italian (Ancona) walnut, with quartered and veneered panels. The council chamber is on the second floor, and is panelled in English oak, with quartered and veneered panels. The library bookcases on the same floor and finishings are in Honduras and Cuba mahogany in the Adam style.

The sub-contractors were: Redpath, Brown & Co., Ltd. (steel construction girders); A. Beanes & Co. (casements and casement fittings); Haywards, Ltd. (patent glazing); Bratt Colbran & Co. (stoves, grates, mantels); A. Emanuel and Sons, Ltd. (sanitary ware and fittings); Bromsgrove Guild, Ltd. (lead down pipe and R.W. head, art metal work, electric light fixtures, and gates, railings, etc.); Granwood Flooring Co., Ltd., and J. Whitehead and Sons, Ltd. (flooring); G. and A. Brown, Ltd. (plaster work); Yannedis & Co. (door furniture); Haywards, Ltd. (gates, railings, handrails, balusters); J. Whitehead and Sons, Ltd. (mosaic decoration and marble work, and stair treads); Waygood-Otis, Ltd. (lift); James Gray, Ltd. (heating apparatus); Strode & Co., Ltd. (electric bells, electric wiring, house telephones); John Tann, Ltd. (strong-room door); The Synchronome Co., Ltd. (electric clocks); Spillman & Co. (special furnishings—assembly room, council room, committee rooms, etc.); Empire Stone Co., Ltd. (artificial stone); Paripan, Ltd. (internal paint).

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LIBERTY'S NEW PREMISES IN ARGYLE PLACE,
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IN the present transition of Regent Street, London, Liberty's new building is prominent. The steel framing is British Steel weighing 1,200 tons, rolled in Dorman Long's mills at Middlesbrough, fabricated at the London constructional works at Nine Elms, and erected by the Company.

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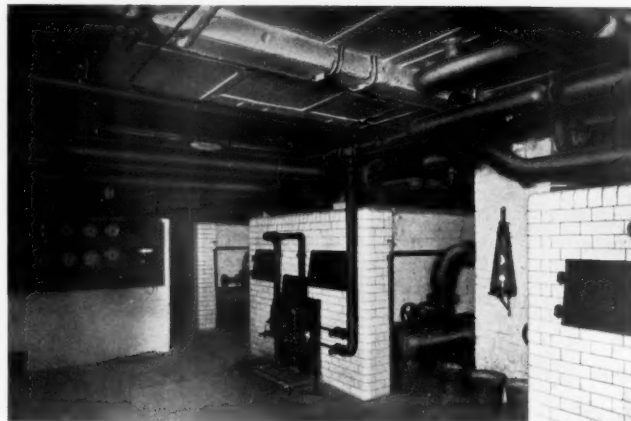
Adelaide House, London Bridge.

In the February issue of THE ARCHITECTURAL REVIEW this building was described as fully as space would permit. The following notes are a brief outline of a few additional facts which will be of interest concerning Adelaide House, which has been described as a strong, simple, and dignified building, expressing the power and orderliness of modern commerce in a way no other building in London does. The foundation work has already been referred to, but it is an interesting fact that during the excavations the complete span of one of the original arches of Old London Bridge was again brought to light, and this was eventually removed stone by stone to be re-erected elsewhere.

Steelwork.—The entire framework of the building is of steel. Messrs. Dorman Long & Co., Ltd., supplied and erected the steelwork, though a Continental firm provided some portion of the original framing. The weight of the steel for the eight floors for which this firm was responsible was, approximately, 2,050 tons, the weightiest individual member being over 11 tons. Initial difficulties, into which we need not enter, were encountered by Messrs. Dorman Long, who completed the section of the work placed with the Continental firm, after which a design was carried through to fit in with the material supplied from abroad. The firm's Nine Elms wharf took its part in the putting together of sections of the framework, the delivery of the same being conveniently carried down the river from Battersea to the site. All the floors have steel main and secondary beams.

Granite work.—The external facings of the lower portion of the building to the three main frontages are in fine axed Swedish granite, and were supplied by Messrs. Brookes, Ltd., the granite having been worked in the Swedish quarries of the company. The granite being of a grey colour with a slight pink tinge, has a very pleasing appearance. The quarries from whence the material was obtained are of an extensive character, and very large work can be executed in this particular material.

Lights.—The pavement, floor, and roof lights were installed by Messrs. J. A. King & Co., of London, in their "Ferro Glass." Under this patent every lens is insulated, and special attention is given to the questions of expansion and contraction. This firm



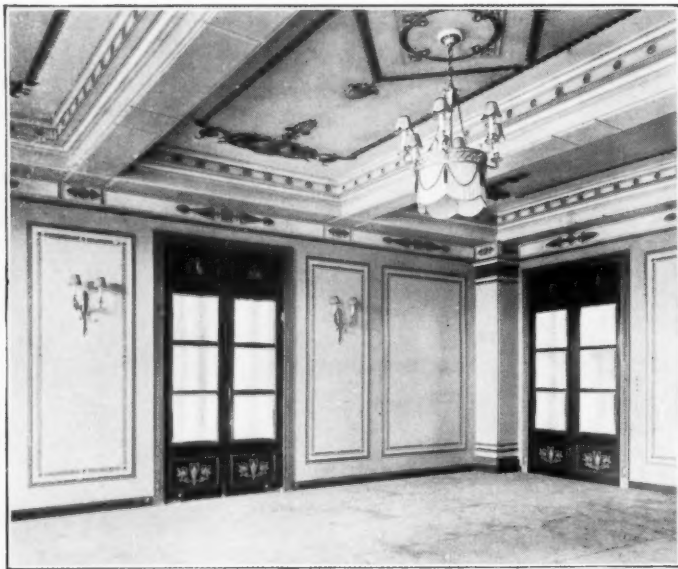
THE BOILER HOUSE AT ADELAIDE HOUSE.

also supplied and fitted the electro fire-resisting glazing in "King" electro copper fire-resisting construction to the special design of the architects, and a special H-section casing was used and an interlocking joint, making the whole job clean and strong.

Water Supply.—This was undertaken by Messrs. Le Grand, Sutcliffe and Gell, Ltd., who bored three wells, each 7½ in. in diameter, and 500 ft. in depth. Each well is lined to the chalk with 7½ in. diameter steel tubing, and protected from surface contamination for a depth of 50 ft., with 10 in. diameter steel outer lining tubes. An air-lift pumping system has been installed, so that all three wells can be pumped simultaneously from a central pump-room, the necessary air supply and water delivery pipes being run underground, in order not to interfere with the floor space. The requisite compressed air for raising the water from the borehole is supplied by three sets of compressors, two sets being belt-driven from 18 b.h.p. electric motors, and one set being direct coupled to a 10 b.h.p. motor. The

(Continued on p. 111.)

TO THE DESIGNS AND INSTRUCTIONS OF ARCHITECTS



Architects: Messrs. Henry Tanner, F.F.R.I.B.A.
A CORNER OF ONE OF THE NEW BANQUETING ROOMS, CAFÉ ROYAL, REGENT STREET, which have just been decorated by Hamptons in the style of the First Empire. A notably pleasing feature of the decorative schemes is the series of panels with groups of classic figures modelled in relief and gilt. These panels, which are characteristic of the style at its best, were all expressly designed and made for these Banqueting rooms.

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A typical example of interior work recently carried out by Hamptons is shown herewith.

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If our long experience is likely to be of use to you in any difficult or unusual situation, we shall be happy to place it at your disposal.

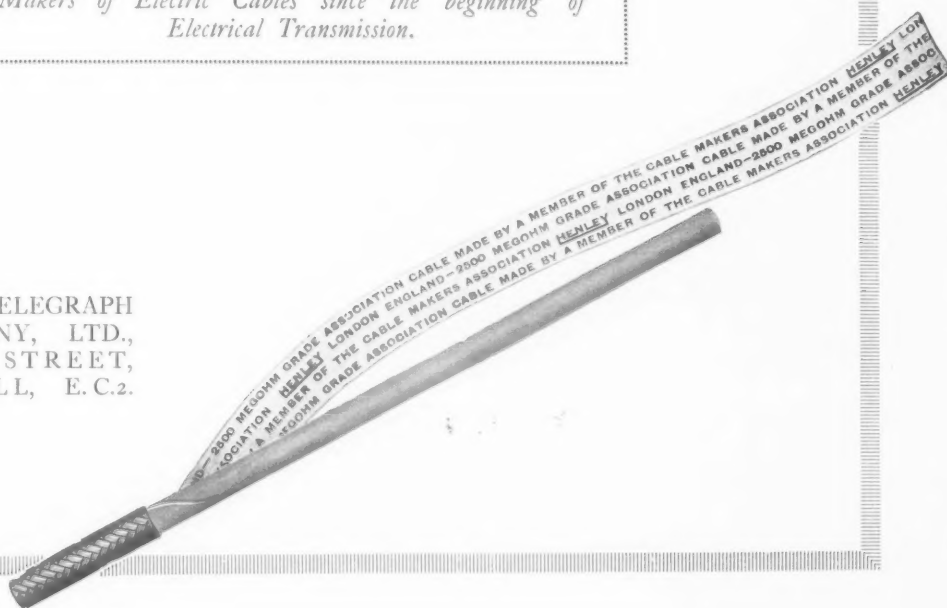
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1925

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BLOMFIELD STREET,
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THE ARCHITECTURAL REVIEW.

water is discharged by the air-lifts into a tank under the pump-room, from whence it is raised by a centrifugal pump direct coupled to an electric motor to the storage tanks on the roof, some 120 ft. higher. A stand-by centrifugal pump set is installed in case of a breakdown. All the pumping machinery is provided with automatic control gear, so that a continuous supply of water is ensured, the compressors and pumps being started and stopped by float gear according to the fall and rise of the water level in the tanks, without the attention of an engineer. Messrs. Le Grand, Sutcliff and Gell, Ltd., also installed the pumping plant.

Fire-escape Stairs.—The two iron fire-escape stairs, which were supplied and erected by the Lion Foundry Co., Ltd., are 3 ft. 6 in. and 4 ft. 6 in. wide respectively, and reach to heights of 118 ft. and 121 ft. They are arranged to allow free passage for cart traffic underneath. The stairs are supported on steel stanchions and girders, and have steel string beams and cast-iron steps and landings, with wrought-iron balustrade.

Windows.—Messrs. Crittall Manufacturing Co., Ltd., supplied the metal windows, the majority of which are about 4 ft. 6 in. wide, vertically pivoted, so that two-thirds open outwards and one-third inwards, in order to enable the outside face of the glass to be easily cleaned. The glass is all fixed from the inside by means of hard wood beads instead of putty, and the wood frames are fixed direct to the surrounding masonry, the joint between the frame and the stone being pointed with mastic cement.

The decorative metalwork was made by the Birmingham Guild, and this comprised the wrought-iron entrance gate and stair railing, the bronze porter's box and screen, the lift doors, letter shoot, some of the electric fittings, the door furniture, etc. The gate echoes in its vertical lines the design of the building as a whole, and has, as an interesting feature, a bronze and enamel panel with a figure of Queen Adelaide. The decorative metalwork is, indeed, a feature of Adelaide House.

Terrazzo Work.—The terrazzo work to the main staircase, corridors, and lavatories was executed by Messrs. Carter & Co. (London), Ltd., and consists of a Hopton wood stone terrazzo finish to the stairs, and string from lower ground floor to roof,

and a similar terrazzo paving to the landings and corridors. The dadoes to the staircase and corridors are also treated in a similar material, with a simple tile decoration in dull black, glazed tiles. On each floor lavatories are provided, the dadoes being formed in terrazzo of a dove-coloured marble in white cement, with tile decoration in black, unglazed tiles. A particular feature of the treatment of these lavatories is the adoption of "Carterazzo" partitions, a hygienic method of constructing lavatory compartments which, with the bronze metal framing, make a rigid and effective fitment.

The Heating.—What is claimed to be the most modern heating equipment of the present day is incorporated in the oil-fired central heating and hot-water service installations. The boilers are of special design for burning oil, and are of the water-tube type. The installation is divided into six main circuits, and thirty-one subsidiary circuits, each being under independent control for cut-out in case of repairs. By means of a distance thermometer installation the engineer can, without leaving the boiler-house (illustrated), ascertain the internal room temperature at thirty-seven different points in the building. By regulating the firing of the boilers accordingly, fuel economy is assured. The oil-burning equipment is of the Wallsend-Howden air-jet system, and was installed by Messrs. Young, Austen and Young.

Fire Protection.—The building is protected against fire by means of a "Newton" automatic sprinkler installation. This is provided with two separate and independent water supplies taken from the available mains, both 6 in. internal diameter, and is equipped with automatic alarm apparatus, so that wherever a fire might occur in the sprinklered portion it would not only be dealt with at its incipency, but an alarm would be sounded on a gong fixed outside the premises to give warning that a fire had taken place. Messrs. The Newton-Witter Engineering Co., Ltd., are responsible for this installation, as well as for the hydrants fitted in accordance with the demands of the L.C.C., and chemical fire extinguishers are provided as first aid.

The lifts comprise four high-speed electric passenger lifts made by Messrs. Waygood-Otis, Ltd. Three of these lifts carry a load of thirteen persons at a speed of 300 ft. per minute. The fourth also carries thirteen persons, and is provided with a special dual

(Continued on p. liv.)

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A Gallery.

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THE ARCHITECTURAL REVIEW.

form of control, i.e., by an attendant or, in case of need, by a passenger operating for himself. The cars are of mahogany, of handsome design by the architects, fitted with special screw clutch safety apparatus. The entrances on the landings are provided with double sliding doors, designed to prevent the lifts being started unless the doors are properly closed, and to prevent any door being opened unless the car is at that floor.

In conclusion, eleven floors will finally be erected on this building, two further floors than at present constructed, and a flat roof will complete the construction. As already noted, a putting green is being laid upon the temporary flat roof, a heavy roller, 6,000 sods of Cumberland turf, and 350 tons of soil having been hauled up by the cranes. Each sod is laid on 9 inches of soil with ashes below for efficient drainage. The course will be of 18 holes in an area of 700 sq. yds.

Sewage Disposal.

Messrs. Jones and Attwood, Ltd., of Stourbridge, have published an interesting booklet dealing with country house sewage from mansions, hospitals, sanatoria, schools, hotels, etc. The booklet is well illustrated. Copies may be obtained by any architect, free of charge, on application to Messrs. Jones and Attwood, Ltd., Titan Works, Stourbridge.

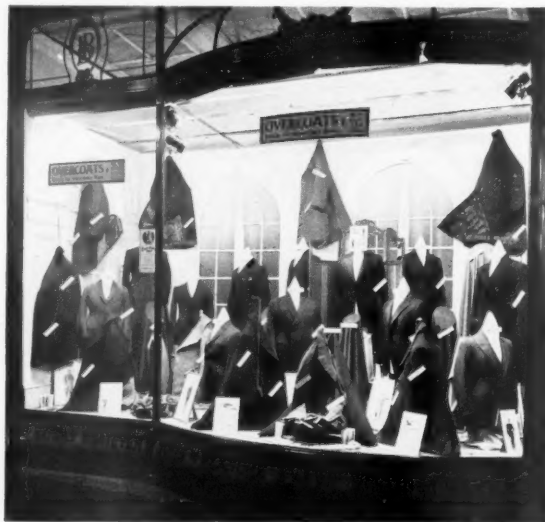
Telephone Development.

We have received a copy of a brochure published by the Telephone Development Association, in which is set forth the reasons for the development of telephonic communication in Great Britain. It is interesting to note that amongst the countries of the world, Great Britain stands fourteenth in the use of the number of telephones per one hundred population. The formation of the Telephone Development Association emphasizes the determination of all classes of telephone plant manufacturers to make a co-operative effort to extend the use of the telephone in this country, and to secure its recognition as an effective ally to business, and to social and domestic life.

Scientific Shop Window Lighting.

Shop window lighting is showing a marked improvement both in London and the Provinces and it is very evident that shopkeepers are rapidly appreciating the value of well-designed and attractive lighting arrangements.

Our illustrations show a typically well-lighted tailor's window in London. The installation, which was designed by the Illuminating Engineering Department of Siemens and English Electric Lamp Co., Ltd., consists of daylight (or colour matching)



gas-filled lamps in mirrored glass trough reflectors. Three spotlights are also installed, which serve to focus attention on special lines by making them stand out conspicuously from the remainder of the goods in the window.

(Continued on page lvi.)

THE "DEVON" FIRE—several new 1925 models



IN reducing smoke, saving coal, and giving out warmth, the "Devon" Fire surpasses any other fireplace obtainable. Its construction is scientifically correct, its appearance is artistic, "homely," and attractive.

Several exceptionally fine models have been produced for the 1925 season. There is a large number of designs in tiles and faience which can be produced to harmonise with any colour scheme.

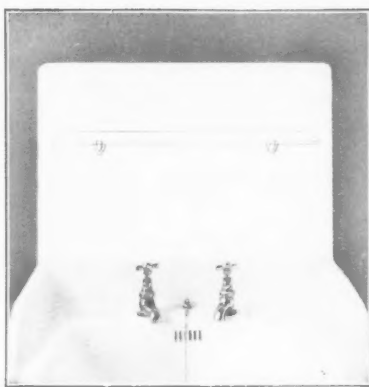
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Vitrolite Splash Back, complete with Vitrolite Shelf and white enamelled brackets.



White Vitrolite Wall Lining, in large panels, Ceiling and Shelf to Operating Theatre.



White Vitrolite Signboard held in frame. Wood or Metal Letters applied.



White Vitrolite Panels and Shelves to Luncheon Bar.

VITROLITE is a substance as hard as crystal manufactured in large panels, snow-white or jet black, non-absorbent, acid proof, and absolutely durable. The above illustrate a few of the manifold uses of Vitrolite both for outdoor and indoor work.

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THE ARCHITECTURAL REVIEW.

The general result is a good quality of evenly distributed light of high intensity, which gives the window a distinctive appearance and does not fail to arrest the attention of the passer-by; further, by virtue of the colour-matching lamps the would-be purchaser is able easily to distinguish the various shades of colour in the materials and clothes on view.

The value of a show window as a silent salesman can be greatly enhanced by leaving the spot-lights on after closing time as illustrated, controlled by a time-switch set automatically to switch off at any given time.

Those who have not tried the use of these special lamps for colour-matching purposes would be well advised to give them a trial.

Advertising Concrete.

National Campaign Opened to Promote its Uses.
Travelling Experts.

The formation is officially announced of the British Portland Cement Association, with offices at 20 Dartmouth Street, Westminster. Its Director is Brig.-General A. C. Critchley, C.M.G., D.S.O., an officer whose organizing ability won him rapid promotion during the war, and who has had a wide experience at home and abroad of construction and development work.

Explaining the objects of the Association recently, General Critchley said:—

"The work which our Association will undertake is to help the public to a fuller appreciation of the utility of British Portland cement, and the main purposes to which it may be put in the form of concrete. We shall carry on the educative part of our campaign by the most effective methods available, chief among which we place newspaper advertising.

"At the same time, we shall do everything possible to promote the development of British concrete by providing free advice and assistance for all those interested in its use—whether architects, builders, public authorities, or private individuals.

"In addition to placing at their disposal the services of the Concrete Utilities Bureau, which has been merged into the Association, we have established an organization of travelling experts, who will be prepared to visit any locality and give help

and advice, if needed, in connection with such questions as the construction of concrete houses, roads, and bridges, the uses of concrete on farm and estates, the chemical and physical testing of aggregates, the artistic possibilities of concrete, etc.

"In general, our purpose is to convince the public that concrete has an enormous number of uses which are not yet fully realized, and that many economies could be effected by the employment of concrete as an alternative to materials now more commonly used.

"America, which within the past few years owes much to a cement organization such as ours, is twenty years ahead of us as regards concrete construction, notably in the domain of concrete dwelling-houses. Our architects were at first slow to recognize that concrete was a new material which demanded new methods of design and the evolution of an architectural style of its own.

"What I may perhaps term the 'classic' example of concrete architecture in Europe is to be found in the all-concrete church at Raincy (Seine-et-Oise), which was designed by a firm of Paris architects. But we need go no farther than Wembley to demonstrate that a city built of concrete may be a thing of beauty as well as utility.

"Our Association is, it is true, an industrial association organized to promote with its own resources the interests of the concrete industry; but we believe that no great industry can flourish to-day which is not organized primarily as a public service. The interests of the community and our interests must be identical, and it is because we believe that the value of concrete has only to be known to create an immensely extended use that we have organized this campaign of national advertising and information."

A Change of Name.

We are informed by British Insulated and Helsby Cables, Ltd., that it has been decided to change the name of the British Union Lamp, which they manufacture in their lamp factory at Huyton Quarry, near Liverpool, to the B.I. lamp, the new name being the first two initial letters of the cable company's title.

The B.I. lamp will carry the firm's B.I. trade-mark which has hitherto characterized all the Helsby and Prescott products. The prices of the B.I. lamp have been considerably reduced simultaneously with the change of name.

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A Cottage at the Whiteley Village.

Architect: SIR ASTON WEBB, P.R.A.

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We stake our reputation on our work continuing to give satisfaction after completion, and make it our business to see that it does so.

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Pirelli-General Cable Works Ltd.
Siemens Brothers & Co. Ltd.
St. Helens Cable and Rubber Co. Ltd.
Union Cable Co. Ltd.
Western Electric Co. Ltd.

THE ARCHITECTURAL REVIEW.

Decorations and Furnishings.

Messrs. Hampton and Sons have produced a booklet illustrating some examples of interiors decorated and furnished by them, and they invite architects to write for a copy. The photographs reproduced in the pages of the book are of schemes carried out in their workshops and factories. The treatment of these interiors was, in every case, arrived at after a good deal of careful consideration and much consultation with architects and their clients. Of necessity, only a small selection of the interiors actually carried out by Messrs. Hampton and Sons is shown, but those depicted are so varied in character as to include typical examples of their work for public buildings of almost every kind. To quote from this booklet: "Most people who contemplate building are fully aware that it is to their advantage to secure the services of an architect, and this course is invariably recommended by Hampton's whenever their advice is sought. To the instructions and drawings of architects, Hampton's are constantly preparing colour-schemes for interiors. In order that the best possible representation of the general effect may be secured these colour-schemes are usually shown as finished perspectives." For many years past the achievements and reputation of Hampton's have induced many architects responsible for such contracts as hotels, clubs, theatres, government, bank and insurance offices, steamships, hospitals, town halls, public institutions, etc., to entrust the carrying out of their designs for decoration and furnishing to Hampton's. The booklet, which is entitled "Interiors by Hampton's Contract Department," is well worthy of perusal, and cannot fail to arouse interest, to say the least of it, and architects desiring a copy should write to Messrs. Hampton and Sons, Ltd., Pall Mall East, S.W.1.

New Showrooms.

The Bath Artcraft, Ltd., with whom are associated the Bath Cabinet Makers' Co., Ltd., the Bath Timber Supply, Ltd., and the Bath Guild of Handicraft and Design, are shortly opening new showrooms in London. They have bought the lease of the premises at 33-34 Great Pulteney Street, off Beak Street, Regent

Street, W., and will show shop-fitting, carving, mantelpieces, and architectural joinery, besides a small quantity of period and other furniture. The Bath Artcraft, Ltd., are well known as manufacturing joiners and cabinet makers, sculptors and wood carvers, chair makers, upholsterers, gilders, and makers of artistic mirrors, panelling, office, shop, and bank furniture, ship and electric fittings, etc., their head offices being at Lower Bristol Row, Bath.

An Important Contract.

In connection with Government House (Viceroy's Palace) and the Imperial Legislative Assembly, both of which are being erected in Delhi in accord with the plans of Sir Edwin Lutyens, R.A., and Mr. Herbert Baker, F.R.I.B.A., respectively; the contract has been let for twenty-six Waygood-Otis electric push-button lifts.

Of the five passenger lifts for the Government House, two are on the Waygood-Otis micro self-levelling principle, while there are three goods lifts and seven service lifts for that building. The lift installation at the Imperial Legislative building includes six passenger lifts, one goods lift, and four service lifts.

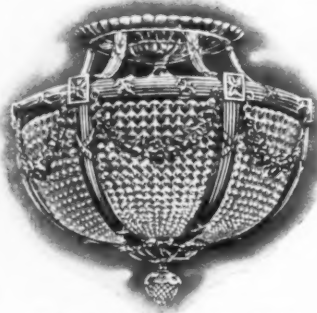
Hand-power Lifts.

Messrs. John Bryden and Sons have sent us a copy of their new catalogue of hand-power lifts, revolving shutters, wood letters, door-opening apparatus, bells, and telephones. From the hand-power lifts illustrated it should be an easy matter to select one for any particular purpose in the home, the restaurant, the club, or the warehouse. Two of the most popular types manufactured by the company are the "Phillimore" and the "Standard." The former has been specially designed for dining-rooms and halls of houses. The "Standard" lift is particularly useful for private houses, hotels, restaurants, and clubs.

REQUIRED, Temporarily, in Manchester District, Architectural Draughtsman, thoroughly conversant with running out quantities and estimating, preferably with some experience of conversion of existing buildings. Apply in first instance by letter giving full particulars. Box No. 180.

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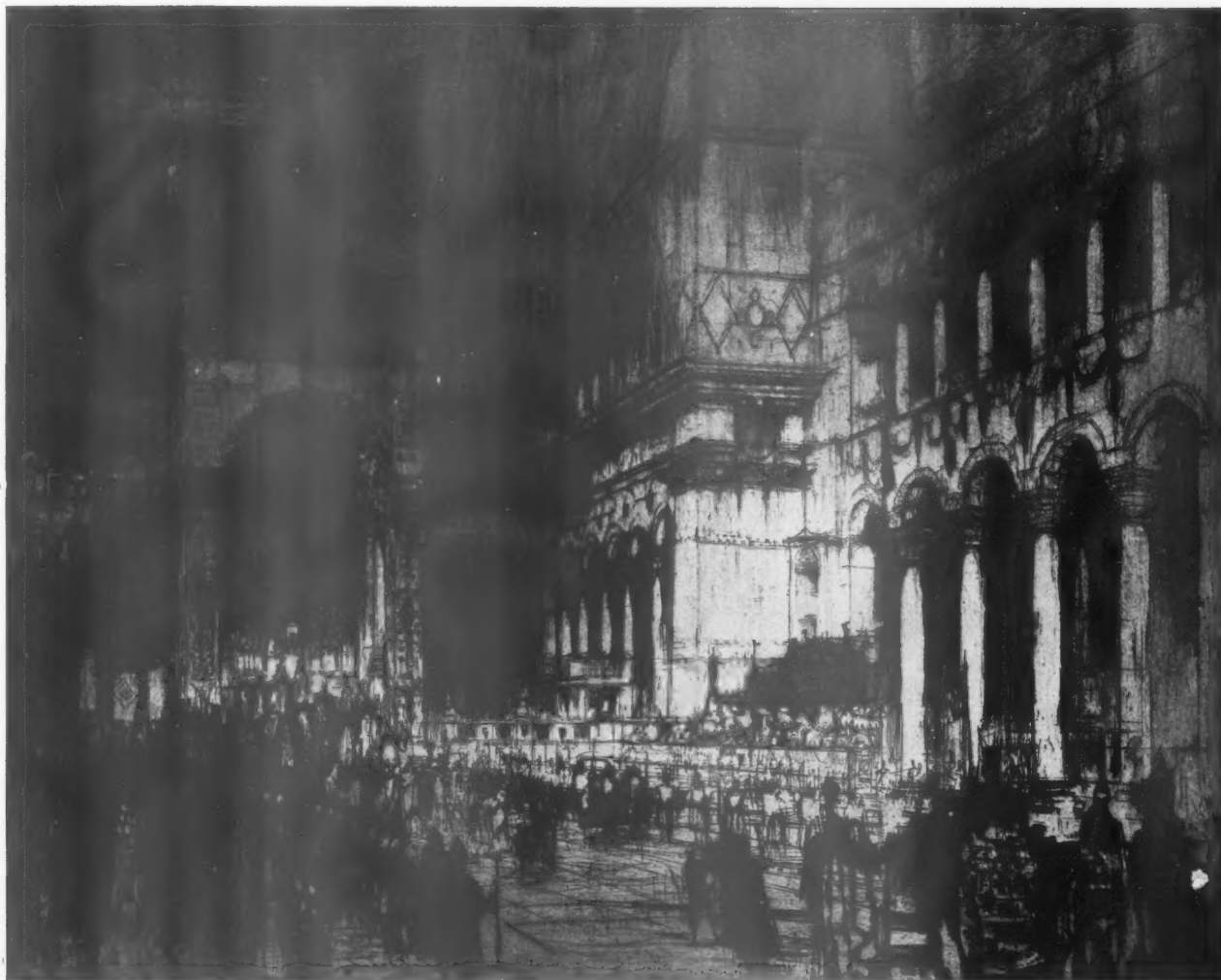
The heart and arteries of the system

are, first the boiler and then the heat-distributing pipes and radiators, and these must be chosen and arranged so that a healthy and even temperature is maintained throughout the whole building. To obtain this, each installation needs careful planning and this is where our long experience as Heating Experts is so valuable to Architects. We co-operate with them in the selection of the right system, and so ensure success and the satisfaction of their clients.

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&
ATTWODEL^{TD}**

**Titan North Works,
STOURBRIDGE.**





Justinian weds Theodora.

W. Walcot.

The above reproduction of Mr W. Walcot's latest etching reveals the important part Marble plays in the setting of social and historical events.

This beautiful etching was composed by the Artist for

J. WHITEHEAD & SONS, LTD.

Marble Experts,

64 Kennington Oval, London, S.E.11.

Exhibitions.

GOUPIL GALLERY.—The exhibition of water-colours and drawings by French artists held in this gallery was interesting if somewhat slight in substance.

In the small gallery devoted entirely to the work of Constantin Guys could be seen his various ways of treating subjects in the manner of "our special correspondent" of that period—1885–1892.

Photography has now practically silenced this form of art, which is rather a pity, for by it a very personal note was introduced and the definite reactions of the correspondent shown in his nervous or fearful apprehension of a scene, or joy in its beauty; whereas, of course, the lens in its impersonal record shows nothing of these things.

It is amusing in the light of our present knowledge of the movements of horses (as shown in slow-moving films) to see depicted by Guys the manner in which they were supposed to move in those days.

In the more legitimate side of his art (that is, in works of a more definite artistic aim) this artist often shows a spacious sense of composition, as in "En Soirée" (8), and in "Promenade en Bois" (13), which are free and open in drawing, reminding one somewhat of the work of Goya.

In the large gallery are various drawings and water-colours by other French artists. Among these, perhaps, the most satisfactory of the moderns is Paul Signac, whose water-colours are beautiful and clean in colour, vigorous and incisive in drawing. They are really *decorated* drawings, the colour put on in little clean spots, detached from the drawing, and not confusing it, but co-operating with it: the effect is therefore stimulating, for there is none of that woolliness which spoils so many water-colours where the colour has been rubbed into the paper. "Paris" (7) seems to sum up the excellent qualities of his work in this style.

There are some water-colours of Vlaminck, splashily done very much in the manner of his oils, and introducing the inevitable white house, without which no work by him would be complete.

"Vence" (73) is a rather exhilarating work by Raoul Dufy if one does not inquire too closely into the arbitrary shapes which go to make up the composition, but is willing to accept it for the feelings it conveys.

"Femme assise," by Matisse, shows that in his early days this artist drew very much in the same way as other students, and had the same difficulties to contend with.

Of those of the older schools, "Mauvais Accueil," by Forain, shows scholarly drawing, and "Sur la Plage," by Boudin, though very slight, is vitally expressed. The drawing, "Portrait de Madame Varcollier," by Ingres, has a sort of antique interest.

THE ROYAL SOCIETY OF PAINTER-ETCHERS AND ENGRAVERS.—The annual show of this society, held in the gallery in Pall Mall East, was not unusual in any way. Whilst there was much painstaking work, there was not anything that showed spontaneity or inspiration.

Mr. Rushby, and some others working along the same lines, are the most accomplished in the dry-point section. Mr. Rushbury is essentially a craftsman, and the great care he takes over every detail of his dry-points is always apparent even to the least observant. Although this kind of work satisfies that side of one's nature, which delights in anything that is well done, it does not satisfy the more æsthetic side. There seemed to me nothing that satisfied this necessity in this show. The austere work of Mr. Austin, consistently carried out, is very satisfactory in many ways, but it again is detached in feeling, and is more like steel engravings.

(Continued on page 1.)

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Walls that are finished with a rendering of waterproofed cement are sanitary and as easy to clean as glazed tiles. They are also better able to withstand rough usage. The cost of the waterproofer is small.

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J. H. Kerner-Greenwood, Managing Director.

THE ARCHITECTURAL REVIEW.

Mr. Martin Hardie, in his etching "Evening in the Fishing Quarter, Cette," shows scholarly achievement, and at the same time a quiet, poetical feeling, qualities which are by no means often found together. Emotional people are usually able to obtain some record of their feelings, but come a cropper technically.

"The House on the Hill," by Miss Eleanor Fell, shows a purposeful sense of composition. "Le Roi Gradlon, Quimper," an etching by Reginald Green, has in it reserved qualities which give promise of further developments. Mr. Iain Macnab's work is of the emotional order referred to, but when he has learnt more self-restraint it promises to be interesting.

Mr. H. Gordon Warlow has a good sense of composition, but his work is habitually much too black and white: what I believe photographers call "soot and whitewash." He does not seem to have much sense of the value of half-tones, which is a pity, because otherwise he is an etcher with distinct individuality.

THE TWENTY-ONE GALLERY.—The exhibition of drawings and water-colours by Mr. and Mrs. Jan Gordon showed the places where this venturesome couple have penetrated. They are doing things which many of us would like to do, and perhaps often dream of doing. They are evidently able to mix quite easily with the most diverse kinds of people and tribes; at least one assumes so; anyway, they appear to have the courage to go forward into the more or less unknown.

To be frank, the pictorial fruits of their explorations are rather disappointing. Mr. Gordon's work is too standardized; too obviously pictorial, and self-consciously following a recipe supposed to be suited to modern requirements. Thus his impressions are always hampered by being marshalled into a set form. We therefore do not get his fresh impressions of a scene, but effects seen through an artistic creed: perhaps considering before depicting a scene "how would Cézanne have seen this?" or some other artist by whom the painter has been unduly

influenced. If Mr. Gordon would throw off this artificial restraint he might produce something that would make a more genuine appeal to one's artistic susceptibilities. After all, we can do Cézannes in Hampstead.

Mrs. Gordon's pencil drawings, very neatly done, are more free from of any decided artistic bias, and the pleasant little details she introduces somehow contrive to give the essence of a scene. Her drawings of cats, done in a broader and more orthodox manner, are quite good, too.

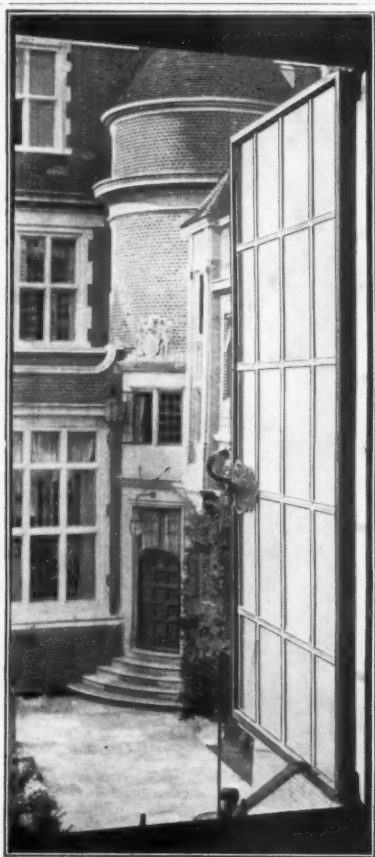
GREATOREX GALLERIES.—The memorial exhibition of old-world gardens, by Mr. E. Arthur Rowe, was held here. As representations or portraits of gardens they are very charming, and his pictures of the Italian Lakes makes one wish to pack up and be off to them. They suggest what a more vivid painter might have made of them. All Mr. Rowe's work is done in the manner of miniatures, and has very little artistic significance to anyone who believes in painting with more serious artistic aims. But they do give one a sense of beautiful gardens, and must call to remembrance in many people happy moments spent in country houses. No mental effort is needed to assimilate these paintings: they will bear the closest inspection, and isn't this what many people demand in paintings? These, I verily believe, will even bear inspection with a magnifying-glass.

The paintings of "Chequers" made one realize, that although to be Prime Minister may not be always a bed of roses, yet decidedly it has its compensations.

There is also an exhibition of the work of Miss Alice K. Goyder of water-colours of the English Lake district and Czecho-Slovakia.

Her work is along more or less conventional lines: the few of snow-clad mountains show more individual character than the others.

RAYMOND MCINTYRE.



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THE ARCHITECTURAL REVIEW.

Books of the Month.

- THE WALLS AND GATES OF PEKING.** By OSWALD SIREN. London: John Lane, Limited. Edition of 800 copies. Price £6 6s. net.
- ENGLISH HOUSE GROUNDS.** Photographic Views compiled by MABEL PARSONS. Text by CLARENCE FOWLER. Edited by Eugene Clute. New York: Mabel Parsons. Price \$7.50.
- THE ARCHITECTURE OF JOHN RUSSELL POPE.** With Introductory Text by ROYAL CORTISSON. In Twelve Parts. New York: William Helburn, Inc. Price \$7.50 per part.
- WANDERINGS THROUGH ANCIENT ROMAN CHURCHES.** By RODOLFO LANCIANI. London: Constable & Co., Ltd. Price £1 12s. 6d. net.
- AN ARTIST IN AMERICA.** By MAXWELL ARMFIELD. London: Methuen & Co., Ltd. Price 15s. net.
- BUILDING CONSTRUCTION PLATES.** By A. BUCHANAN and W. H. HUDSON. In Two Parts. London: B. T. Batsford, Ltd. Prices 5s. and 5s. 6d. respectively.
- HOW TO LOOK AT OLD CHURCHES.** By H. SPENCER STOWELL. With a preface by H. V. MOLESWORTH ROBERTS. London: Methuen & Co., Ltd. Price 5s. net.
- VICTORIA AND ALBERT MUSEUM.** Catalogue of Italian Plaquettes. London: Board of Education. Price 3s. net.
- THE PARISH OF KING'S LANGLEY.** By J. P. HAYTHORNTHWAITE, M.A. London: The Cassio Press.
- TOLSTOY ON ART.** By AYLMER MAUDE. Milford. Price 17s. 6d. net.
- GAUGUIN.** By ROBERT REY. Translated by F. C. de Sumichrast. Bodley Head. Price 5s. net.

Memorial to Lord Kitchener.

Progress of the Work at St. Paul's.

It is likely that the Lord Kitchener Memorial Chapel in St. Paul's Cathedral will be completed this year. The chapel is situated at the base of the south-western tower near the entrance to the Cathedral. When the work was undertaken by the executive committee of the Lord Kitchener Memorial Fund in 1919 it was estimated to cost about £30,000.

The main feature of the chapel will be a group of statuary near the altar. The central figure is that of Lord Kitchener, in white marble, which will be placed at the foot of the altar. In this

piece of work Lord Kitchener is shown in field-marshal's uniform and draped with a cloak which reaches to the feet. His head rests upon a cushion. On either side of the altar and facing it there will be statues of the military saints, St. Michael and St. George, and on the altar itself there is to be a further group of statues.

The sculpture is in the hands of Mr. Reid Dick, who has already completed the group of figures for the altar, and this has been placed in the chapel. The effigy of Lord Kitchener has also been completed, but is not yet in the chapel. Mr. Dick is now engaged on the statues of St. Michael and St. George. The chapel has been designed by Mr. Mervyn Macartney, and work on it is well advanced. The iron grilles at the entrance are already in position, and the marble floor has been completed.

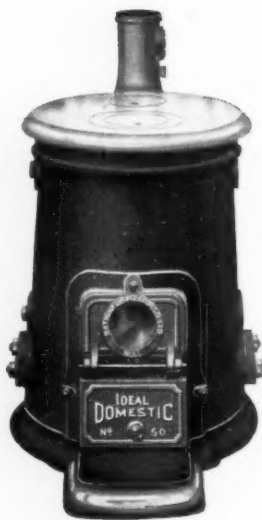
The International City and Regional Planning Conference.

An International City and Regional Planning Conference (International Federation for Town and Country Planning and Garden Cities) will be held in New York City from April 20 to 25. The principal subjects for discussion will be: (a) Decentralization within regions; (b) arterial roads; (c) planning and plotting of building sites; (d) zoning; and (e) waterways and water-fronts. Among our own countrymen submitting papers are Messrs. Raymond Unwin, chief housing architect to the Ministry of Health; G. Montagu Harris, barrister-at-law, British Ministry of Health; C. B. Purdom, finance director, Welwyn Garden City; and G. L. Pepler, past president of the Town-Planning Institute. Delegates will leave London on April 11. Full particulars of the conference can be obtained from the organizing secretary of the International Federation, 3 Gray's Inn Place, London, W.C.1.

The Queen's Doll's House.

It is officially announced that the Queen's Doll's House will not be exhibited at the British Empire Exhibition this year. After being shown at the Ideal Home Exhibition at Olympia, it has gone to Windsor Castle, where a gallery has been prepared for it.

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THE ARCHITECTURAL REVIEW.

Historical Arms and Armour.

New Loan Collection at South Kensington.

Considerable interest has been added to the small collection of arms and armour at the Victoria and Albert Museum by a loan from the well-known authority, Mr. S. J. Whawell, of some of the outstanding pieces from his collection. It includes swords, helmets, arquebuses, pistols, and a beautifully etched suit of armour, probably the work of Sigismund Wolf of Landshut in the middle of the sixteenth century. Among the fine group of swords perhaps the most important is an Italian rapier with the hilt delicately chiselled in relief with biblical subjects. It bears the name of its original owner, Ambrogio Spinola, and is, according to the late Sir Guy Laking, the sword that the famous commander wears in the picture by Velasquez of the Surrender of Breda, in the Prado. Another historical sword is a splendid fourteenth-century example with an enamel medallion in the pommel bearing the arms of the Comtes de Dreux.

Among the many fine helmets may be mentioned an interesting Milanese barbute bearing what appears to be the mark of a member of the famous Missaglia family of armourers; a plain helmet with puffed vizor of the early sixteenth century, and several other close helmets of later date with etched decoration. There is also a magnificent arquebus, with combined match and wheel lock, from the Lord Francis Hope collection, with the arms of Francis II., Duke of Saxe-Lauenburg, and the date 1583. The pistols include two fine French examples of the late sixteenth century and a German ball pommel pistol with magnificently chiselled barrel and inlaid stock. In addition to these loans, Mr. Whawell has given to the museum a group of fine chiselled and engraved gun-locks.

Apart from his arms and armour, Mr. Whawell has lent to the museum a group of objects in silver and a remarkable chiselled iron shrine richly damascened with gold and set with panels of *eglouisé* painting under crystal, Milanese work of the third quarter of the sixteenth century, one of the finest examples of such work in existence. The arms and armour are exhibited in Room 19, the other objects in the Loan Court.

Victoria and Albert Museum.

A group of paintings, drawings, and prints showing views of Waterloo Bridge from its opening in 1817 to the present day has been placed on exhibition in Room 71 of the Victoria and Albert Museum. The exhibits, which are mainly from the Museum collection, include two sketches by Constable, of the Thames-side showing Waterloo Bridge, and his brilliant oil study, based on one of the sketches, for his large picture of "The Opening of Waterloo Bridge." Among other exhibits are a water-colour drawing by Clarkson Stanfield, R.A., which was engraved by George Cooke in 1832, and several drawings and prints showing different aspects of the bridge and its surroundings. Special interest attaches to four designs made by Thomas Sandby, R.A. (1721-1798), the architect, brother of Paul Sandby, for a proposed bridge at Somerset House. Some etchings by Sir D. Y. Cameron, Mr. Muirhead Bone, and Mr. James McBoy have been kindly lent by Mr. Campbell Dodgson, C.B.E., and Mr. Martin Hardie, R.I., R.E.

An interesting loan of Old English "black jacks" and other drinking vessels of leather and horn from the collection of Mr. H. H. Edmondson has lately been placed on exhibition in the Loan Court. The "jacks" range in size from huge tankards, or "Bombards," with the capacity of several gallons, to small mugs, and many of the smaller "jacks" are adorned with old silver mounts. The exhibit also contains a number of "leather bottles," including a rare Late Gothic example, as well as a series of horn tumblers engraved with hunting and other subjects. A curious supplement to the collection are two wooden "jack waggons," which were used for wheeling up and down the long tables of the early dining-hall.

Haddon Hall.

Owing to the danger of collapse, the roof of the famous old banqueting hall at Haddon Hall, the home of the Vernons and Manners, has been taken down and a new one built. The roof is a massive piece of work, oak trees weighing 60 tons, on Lord Granby's Haddon estate, being used. The roof on the main portion of Haddon Hall is in a wonderful state of preservation.

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THE ARCHITECTURAL REVIEW.

A New Reservoir for Manchester.

The conversion of Hawes Water Lake, Westmorland, into a reservoir of the Manchester Corporation waterworks will be commenced forthwith. According to a decision by the Waterworks Committee, the first instalment of the work will be done under the general superintendence of Mr. Holme Lewis, who has been over thirty years engaged in water engineering in the service of the Manchester Corporation. The total cost of the Hawes water scheme is estimated at £10,000,000. It was authorized by a special Act of Parliament under which the work has to be completed by 1934.

The Hawes water scheme will involve eighty-four miles of aqueducts, tunnels, cuts, and pipes. The Gate Scarth Pass will be tunneled to the head of Long Sleddale, and a pipe line from there will conduct the water to Garnett Bridge, near Kendal, and thence a tunnel 8½ miles long will be driven to the neighbourhood of Kirkby Lonsdale. The further line of the aqueduct will be across the Lune Valley and under the moors of the Forest of Bowland, over the Hodder and Ribble rivers, and under Pendle Hill, where it will enter Lancashire, proceeding thence via Accrington and Bury to a service reservoir on the northern outskirts of Manchester.

A Discovery of 14th-Century Frescoes.

During work on the foundations of a small church in the heart of Naples, commonly called Santa Maria Succurre Miseris, the walls of an older church beneath the crypt have been brought to light. These have now been found to be covered with well-preserved and well-executed frescoes, judged to be fourteenth-century work. As well-preserved frescoes of this period are not too numerous, great care is being taken by the Superintendent of Monuments to safeguard them against damage while further excavations are made.

TRADE AND CRAFT.

Midland Bank Ltd., Piccadilly.

Earlier in this issue of THE REVIEW appears an article, fully illustrated and dealing with the architectural points of this building. The firms responsible for the several contracts in connection with the construction and decoration are as follow: Messrs. E. A. Roome & Co., Ltd., of Hackney, were the general contractors; Messrs. S. and E. Collier, Ltd., of Reading supplied the bricks; the stonework was supplied by Messrs. F. J. Barnes, Ltd., of Portland; the asphalt work executed by Messrs. Thos. Faldo & Co., Ltd.; the whole of the reinforced concrete work in the strong-rooms, floors, balconies, staircases, and roofs was carried out by the Excellence Reinforced Concrete Co., of Leeds and London; Messrs. Moreland, Hayne & Co., Ltd., were responsible for the steelwork; Messrs. Martin Van Straaten & Co. supplied the wall tiles; and Messrs. Stirling and Johnson, Ltd., the slates; Messrs. C. E. Welstead, Ltd., of Croydon, carried out the work in connection with the leaded light glazing, casements, and casement fittings; Messrs. George Jennings, Ltd., the sanitary ware and fittings; the English oak wood block flooring and also the special woodwork was supplied and executed by Messrs. W. Nicholson and Son, Ltd., of Leeds and London, and Messrs. R. W. Brooke & Co.; Messrs. Bell Bros., Ltd., were responsible for the electrical installation of the bank; whilst Messrs. G. and A. Brown, Ltd., carried out all the plasterwork and some of the furnishing and woodwork; the electric light fixtures were supplied by Messrs. Marley Bros., Ltd., of Birmingham; the lifts by the Express Lift Co.; Messrs. Sulzer Bros., Ltd., being responsible for the heating apparatus; one fireplace was supplied by Messrs. George Matthews, Ltd.; and the clocks by Messrs. J. W. Benson, Ltd.; and Messrs. Chubb and Sons Lock and Safe Co.'s strong-room doors, etc., were erected; the lightning conductors were supplied and placed by Messrs. J. E. Gray & Co.

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The Church of Humanity, Liverpool.

The general contractors were Messrs. Jones and Sons, of Liverpool, now merged into Messrs. Trollope and Colls, and the sub-contractors were: Ravenhead Sanitary Pipe and Brick Co., Ltd., and Tucker, of Loughborough (bricks); Stourton (stone); Kleine Patent Flooring Syndicate Ltd. (fireproof floors, partitions); Green Westmorland (slates); J. Gibbons, Wolverhampton (casements and fittings, door furniture—locks, electric bell plates, gates, railings, handrails); G. P. Bankart (lead down pipes and R.W. heads, plaster work); Acme Wood Block Flooring Co. (flooring—wood block, parquet); Art Pavements Ltd. (flooring—mosaic, marble, stone); J. Hunter & Co., Liverpool (electric wiring); Hopton Wood Stone Co. (stair treads); Dargue, Griffith & Co. (heating and ventilating).

Llandaff Cathedral

An interesting electrical installation has recently been carried out in Llandaff Cathedral, Cardiff, which is in keeping with the architecture and character of the building.

The lighting installation consists of groups of three Holophane reflector refractor units mounted on specially designed metal work, each fitting taking a 150-watt Siemens' gas-filled lamp. They are spaced in two rows down the Cathedral, the rows being 35 ft. apart, and fittings 16 ft. spacing, and 16 ft. high, which gives a resultant illumination varying between $3\frac{1}{2}$ ft. and 7 ft. candles. By this arrangement the whole body of the Cathedral is uniformly illuminated and an entire absence of glare is obtained.

A similar arrangement of these reflectors in the chancel produces a higher illumination, which shows up very well the altar and the magnificent painting by Dante Gabriel Rossetti on the reredos behind. The illumination here rises to a maximum of 9 ft. candles, whilst on the bishop's throne, choir stalls, and lectern it is an average of 6 ft. candles.



THE ALTAR.

Llandaff Cathedral, which was restored in the early years of last century, is one of the oldest cathedrals in the country, and this installation, which was designed and carried out by Messrs. Haddrill, Hutchison & Co., Ltd., Electrical Engineers and Contractors, 112 Bute Street, Cardiff, shows their forethought and consideration of the architectural design.

The consulting engineers were Messrs. Wm. Angus Scott and Partners, Cardiff.

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THE ARCHITECTURAL REVIEW.

The Lighting of the Capitol Theatre.

In London's latest super-cinema—The Capitol Theatre—situated in Haymarket, designed by Mr. Andrew Mather, the architect, an interesting scheme of lighting has been carried out from designs by the Illuminating Engineering Department of the General Electric Company, Ltd., in collaboration with Mr. Mather, the entire installation being carried out by Messrs. Grierson, Ltd., 43 Bloomsbury Square, W.C.1. Special attention has been devoted to the decorative lighting effects, which are arranged throughout the whole of the theatre in four colours: purple, blue, red, and white.

The Empire Gas Exhibit.

The pronounced success of the gas exhibit at Wembley last year has encouraged the gas industry to demonstrate this year in even more attractive and compelling fashion the manifold uses and advantages of the spirit of coal. In the forthcoming exhibition characteristic tableaux illustrating the 1001 uses for gas throughout the Empire will reveal to the public the notable progress that gas has made and the wide scope of its service, both in the Homeland and in the varied activities of the scattered populations of the Commonwealth of Nations.

The Empire Gas Exhibit will be held, as it was last year, in the surroundings specially designed for it by Mr. H. Austen Hall, F.R.I.B.A., in the centre of the Palace of Industry.

Steel Houses and the Smoke Problem.

One of the steel houses at the British Industries Fair, Birmingham, was fitted throughout for lighting, heating, cooking, and the provision of hot water by the Birmingham Gas Department. The importance of the exhibit is that the installation is thoroughly practical and within the limited means of probable occupants of such houses. Care has been taken not to fit fancy or expensive appliances. The exhibit is, in consequence, really instructive to architects, builders, and authorities responsible for housing schemes. In the scullery a gas cooker and wash-copper

are fixed; in the living-room an open coke fire, with a back boiler which supplies hot water to the bath and sink, while in the bedrooms a very economical combination of gas-fire with surround and mantelpiece, constructed as a single unit, has been installed.

By the elimination of smoke-producing fires a saving in chimney construction is effected, and what is far more important, a really valuable advance is made towards the realization of clean surroundings and a smoke-free air.

A New Building Composition.

We have received from William White, Great Western Works, Abergavenny, an illustrated brochure of their "Hygeian Rock" building composition. The makers claim that this material renders walls damp-proof, increases their strength, and reduces their cost. An additional advantage is that no skilled labour is required for its application.

Non-Ferrous Metals Research.

Improvements in the quality of metals and a further knowledge of their structure and properties are the urgent need of many prospective engineering and electrical advances. The British Non-Ferrous Metals Research Association, of 71 Temple Row, Birmingham, which has now been in existence for five years, secures the co-operation of industrial firms and some of the leading scientific metallurgists in attacking problems of wide interest. The present position of the Association and the twenty-five investigations which it has in progress or has completed, are reviewed in a report which has just been issued. The descriptions are brief and clear, and bring out the important practical objects in view.

The programme of work appears to be well suited for co-operative effort, and supported as the Association is by the active interest and advice of industrial scientific leaders, its members may look forward to results which should not only assure the progress of their present manufactures, but lead to the formation of new industrial developments.



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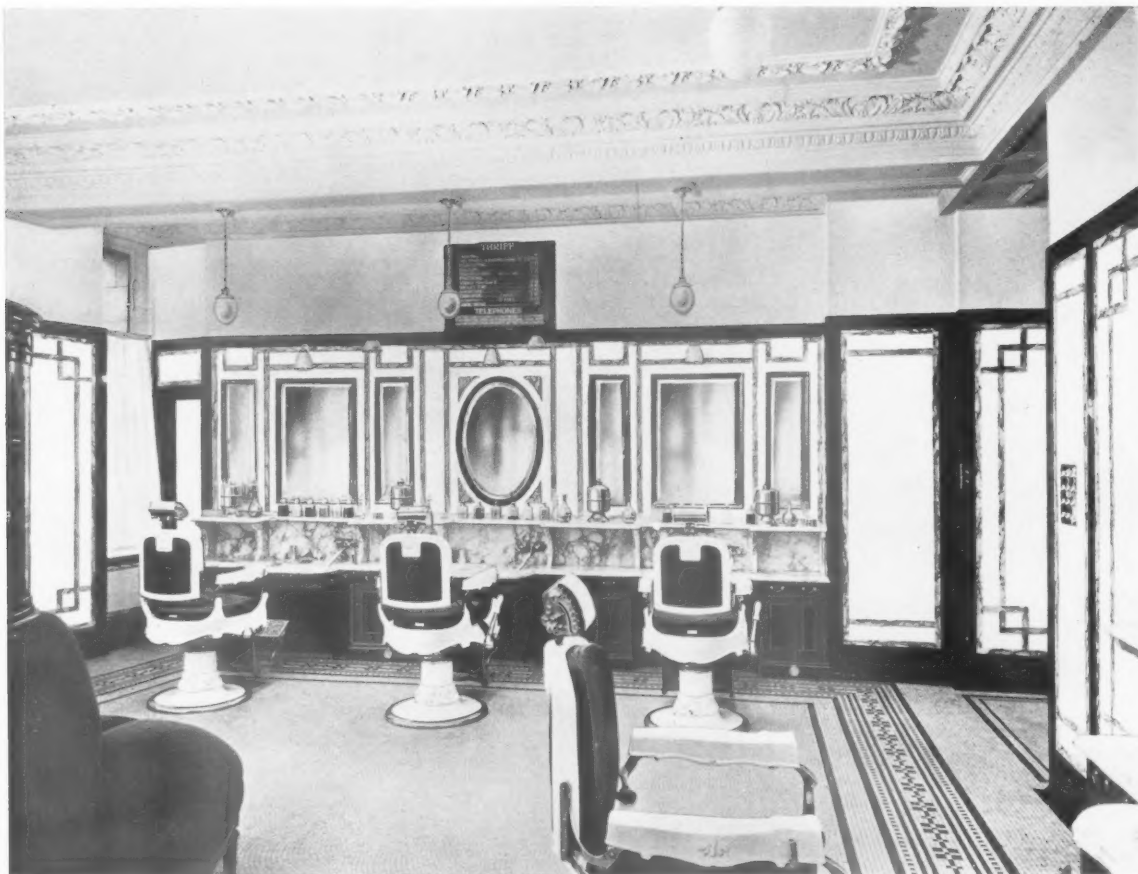
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VITROLITE

THE Hairdressing Saloon at the Lyons' Corner House, Piccadilly Circus, adds another striking example to the many beautiful effects secured by the use of Vitrolite.

The large panels of white Vitrolite, unbroken by joints and bordered by black Vitrolite, give an immediate impression of absolute cleanliness, and a pleasing decorative effect is achieved by all the white Vitrolite panels being inlaid with Marble in keeping with the Marble tops of the basins. It would be difficult to conceive a happier combination of utility, hygiene, and beauty.

The installation was carried out by us in collaboration with Messrs. John Stubbs & Sons, Liverpool, who supplied the Marble.

The Hairdressing Saloon was designed by the Architectural Department of Messrs. J. Lyons & Co., Ltd.

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THE ARCHITECTURAL REVIEW.

Liverpool Cathedral.

We have received from Messrs. G. N. Haden and Sons, Ltd., of Trowbridge, London, etc., a well illustrated booklet describing the heating and ventilation of Liverpool Cathedral which was carried out under the direction of the architect, Sir Giles Gilbert Scott, R.A. The photographs are well reproduced, and represent many details of importance in connection with the Cathedral. Architects are invited by Messrs. Haden to send for a copy of the booklet.

An Automatic Disinfector.

We have been informed that the manufacturers of the Lewbart Automatic Disinfector have experienced certain difficulties in connection with their business affairs during the last four or five months, the consequence being that the activities of this company have been somewhat curtailed. We are informed that the difficulties are now entirely removed, and that the firm is placing on the market with renewed vigour their 1925 Improved Model Lewbart cleanser, deodoriser, and disinfector. We may mention that the Royal Sanitary Institute has recognized that such a product as the Lewbart disinfector is a necessity on all sanitary systems, and not a luxury, because after the instrument was subjected to very severe tests by the council of judges they saw that it deserved recognition and granted their bronze medal to the company.

Man-o'-War Garden Furniture.

An interesting brochure is to hand from Messrs. Castles' Shipbreaking Co., Ltd., which contains illustrations of all kinds of useful and ornamental garden furniture, etc., constructed from teakwood from old fighting and other ships. Messrs. Castles will be pleased to send a copy to any readers interested.

The business of this company was established in 1838, in which year the famous "Fighting Téméraire" was broken up;

the figures of Atlas, which supported the Admiral's Walk, have been preserved, and can be seen in the company's show-room at 160 Grosvenor Road, where there are also other relics and curios from the old wooden walls. More than 800 wooden ships, representing about one-and-a-quarter million tons, have been broken up by Castles.

The timber now being converted into garden furniture, etc., is from "Impregnable," "Hindostan," and "Dido," broken up last year, and from "Ariadne," "Vernon," and "Actæon," now in hand. This old ship-timber is also used in buildings of Tudor style, both exterior and interior. The company undertakes to cut the timber to architects' specification.

The timber is thoroughly seasoned, and therefore requires no paint or varnish. Garden furniture made of old man-o'-war teak can be left out of doors all the year round.

Fullers' New Building, Regent Street.

The wrought iron lift gates, illustrated in Messrs. Baguès advertisement in this issue, were supplied to the order of Messrs. White Allom and Company, George Street, Hanover Square, W.

Change of Address.

We are informed by Messrs. W. T. Henley's Telegraph Works Company, Ltd., that they have removed their head office to 11 Holborn Viaduct, E.C.1. Their London warehouse, which has been for some years situated at 18 New Union Street, E.C., has also been transferred to the new premises.

The change of address has been necessitated by the inadequacy of the accommodation at Blomfield Street (where the company have been housed for the past twenty-one years) for the needs of their greatly increased staff. The new premises have been rebuilt internally and decorated under the direction of Sir Henry Tanner.



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THE ARCHITECTURAL REVIEW.

Artistic Bridges.

The Ministry of Transport has sent a circular to local authorities on the subject of the design of bridges, in the course of which it is stated :—

There are few features, whether of countryside or town, which attract more notice than the bridges carrying roads over streams and watercourses. Many of them possess historical and archaeological interest. Some illustrate the fitting use of local materials by our forefathers, while others provide pleasing examples of modern methods of construction. Of recent years the rapid increase of traffic has impelled highway authorities to undertake the strengthening of many ancient bridges and the building of many additional structures, with the aid of substantial contributions from the Road Fund administered by this department. So far as the strength of such structures is concerned, your council will be aware that for some years past certain regulations have been prescribed as a condition of a grant from the Road Fund. But it is possible for a bridge to comply with these regulations and yet fall short of the legitimate expectations of the public in the matter of architectural design and suitability to its surroundings.

Colonel Ashley accordingly wishes to impress upon all local authorities who are contemplating the alteration of ancient bridges or the erection of new ones the great importance of securing at the outset reliable expert advice upon the design—not merely from the standpoint of the stability of the structure, but also of its proportions and artistic character. Seeing how long a life may be anticipated for public monuments of this class, it will hardly be questioned that every care should be taken to build bridges and form their approaches in a manner which will display the sound judgment of the days in which we live.

With this end in view the Minister wishes it to be generally known that when receiving applications from local authorities for assistance from the Road Fund he will require to be satisfied that the foregoing considerations have been taken into account. There is no reason to assume that the observance of these principles will add to the cost of construction, for past experience shows that bridges are more frequently criticized for undue elaboration than for well-proportioned simplicity.

Preserving Ancient Structures.

In a further announcement the Ministry says :—

It is thought that considerable public interest may attach to the action taken by the Minister in drawing the attention of local authorities to the national importance of the preservation of ancient structures and of ensuring that artistic ability of high order is displayed in the building of new bridges, so that future generations may form a favourable opinion of the ability of the designers of to-day. The recent efforts of Scapa to preserve the landscapes of the country from unnecessary injury by hoardings and advertisements are evidence of the general determination of the public to safeguard the beauties of the countryside, and there are few features which play a greater part in making or marring the landscape than bridges over streams and railways. Not only is it essential that the utmost respect should be paid to the ancient structures, but that the highest skill should be invoked in the design of the new bridges which are being erected all over the country as a result of the ever-growing range and weight of motor traffic.

The Case of Clopton.

Assistance of the kind covered by these announcements has recently been given by the Ministry in the case of Clopton Bridge, at Stratford-on-Avon. In this instance, it will be recalled that the proposal originally put forward by the Town Council and the County Council was to remove all the recent unsightly excrescences and then merely to widen the bridge to modern dimensions. As part of this operation it was proposed to re-use the stone facings stripped from the old bridge to form the new facings of the extended bridge, a proposal to which grave exception was taken by archaeological and architectural authorities on the ground that it was falsifying the whole structure. It was held, moreover, that the inclusion of the old portion of Clopton Bridge in the new structure would have the effect of exposing the ancient stonework to the shock and stress of modern traffic, which it was probably incapable of supporting for any length of time.

Various suggestions were made and warmly debated, but ultimately the Ministry of Transport, recognizing that no alternative site for a bridge was available, save at prohibitive cost, put forward a proposal which secured general acceptance at a con-

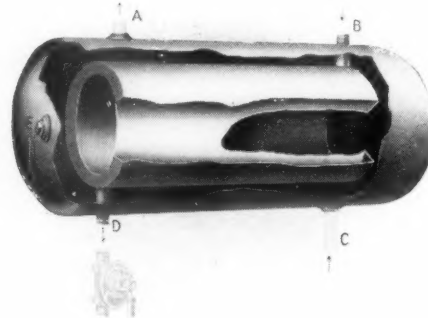
(Continued on page xlviii.)

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An Interesting Quotation

"Good architecture is not a luxury, but a symptom of happiness, energy and foresight, and where it is lacking, there these things are insensibly lessened, even though the mass of men do not know what it is they lack."

Extract from "The Times."

To find interesting articles on architecture in the lay Press must always please architects, for it is by these means that the public is enlightened, and attention is drawn to a great Art.

That good architecture can only be fittingly expressed by good building is an accepted truth, and good building being in a measure a mechanical science, it should never be lacking in any type of structure.

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THE ARCHITECTURAL REVIEW.

ference of the authorities interested in the bridge. It involves the removal of the unsightly iron footway and the reconstitution of the bridge in its original narrow form with a parapet on each side, the intention being to reserve the old bridge exclusively for foot traffic, so that there shall be no risk of damage by vehicular transport. By the side of this structure there would then be erected a general traffic bridge consisting of a carriageway and another footway. This work would be carried out in the lightest form of twentieth-century reinforced concrete, so designed as to obscure as little as possible the features of the ancient Clopton Bridge. It is anticipated that the piers of the new structure would be opposite every second or third pier of the old bridge so as to mask the ancient masonry to the least possible extent. One of the advantages of the use of reinforced concrete is that owing to the comparatively small scale of the structural members there is the minimum of obstruction to view.

The details of this revised scheme for Clopton Bridge are now being considered by the local authorities concerned. If it is adopted, visitors to Stratford-on-Avon will be able to walk the whole length of the bridge restored as nearly as possible to the form in which it was left by its original builder, Sir Hugh Clopton, in Shakespeare's day. Its identity will not be destroyed, and the reinforced concrete structure will proclaim itself to future ages as a typical product of our times, just as each generation in turn has made additions in its own style to the ancient cathedrals of our country.

British Museum Acquisitions.

A number of interesting curios and prints have been accepted by the trustees of the British Museum. They include a collection of prints and engravings from the Contemporary Art Society and a number of ceremonial Thibetan articles collected by the late Major T. H. Lewin and presented to the Museum by his widow.

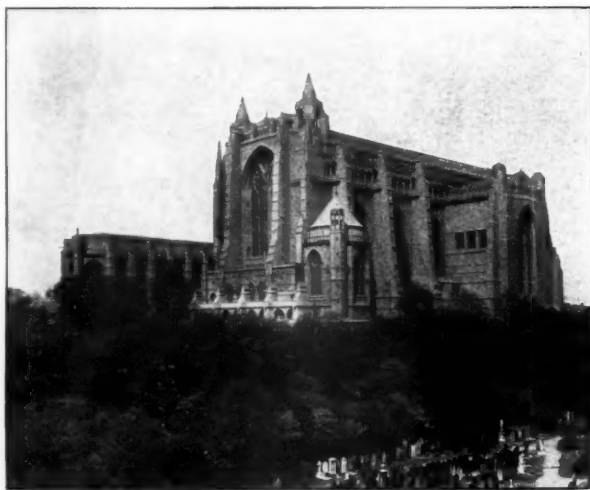
Among the acquisitions, perhaps those to which the most human interest attaches are two pieces of English glass of the eighteenth century. The first is a Yard of Ale glass, a very long and slender vessel, like an unduly elongated flower vase, which presumably holds exactly the measure indicated. The holder

of the glass was required to drink the contents at one draught, and to ensure that failure should be unquestionably manifest, the glass was so devised that if he stopped to take breath the inrush of air into the glass would squirt the contents all over his face. This particular specimen has a flat base, so that it can be stood upright, but some specimens used to have a round bulb at the end, so that, once filled, they had to be held until emptied. As the length made the glasses very liable to accident there are not many specimens left. The other piece of eighteenth-century glass is a drinking vessel on a diminutive scale. It is shaped like a boot and was made expressly for the purpose of drinking "damnation to Lord Bute."

The collection of engravings, dry-points, etchings, and colour-prints presented by the Contemporary Art Society includes one engraving about 27 in. by 26 in. by Job Nixon. Forain is well represented, and among his lithographs is one of M. Caillaux standing on a spring-board and labelled "Le Tremplin." Vlaininck, Steilen, Laurencin, Brouet, Chalandre, Fred Richards, Bormaun, Lang, Degas, Gauguin, Segonzac, and Picasso are also represented, and there is a portfolio of sixty-four etchings by Sir J. C. Robinson, presented by his executors. The Thibetan collection includes a very large ceremonial teapot in silver, which came from the Royal Palace of Chumbi. Most of the articles were collected in the Bhutan and Lushai region, and among them is a silver powder flask, a praying wheel, and a silver snuff bottle with a device attached to the stopper for extracting the snuff. A piece of Peruvian pottery of the Chimu period has been presented to the ethnographical section by Mr. L. C. G. Clarke, of Cambridge.

The Birmingham Advisory Art Committee.

The Report of the Birmingham Advisory Art Committee for the year 1924 shows that their average of submissions was maintained. The effectiveness of the committee's work was put to a higher test than usual on account of the more varied type of submission with which they had to deal during the year. The value of the work of advisory art committees is widely recognized, and many towns are now forming associations of this nature.



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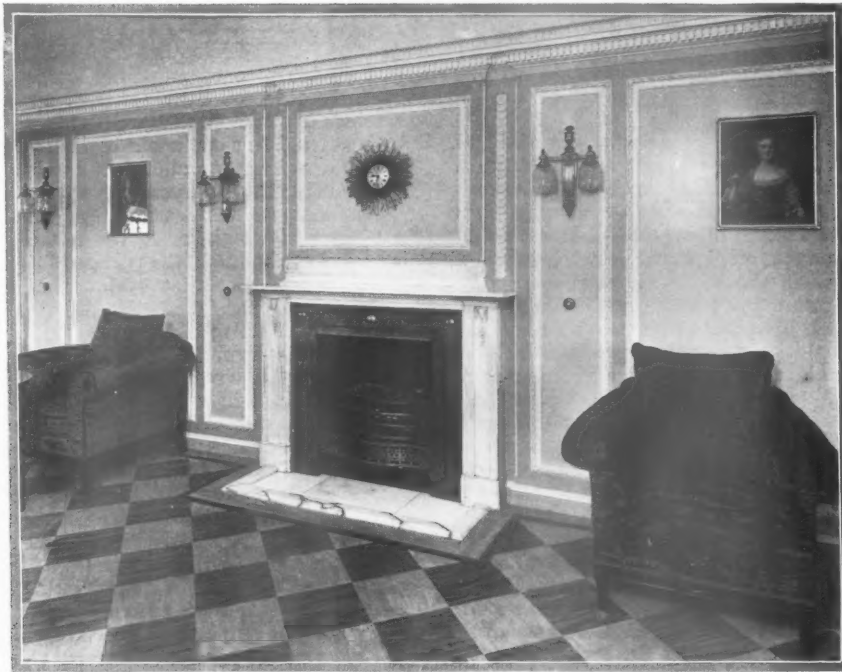
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THE ARCHITECTURAL REVIEW

A Canadian War Memorial.

The Secretary of the Department of Public Works of Canada has requested the secretary of the R.I.B.A. to distribute to British architects likely to submit designs copies of the conditions of the competition of the proposed National Commemorative War Monument to be erected at Ottawa. The cost of the monument is to be £100,000. A few copies of the conditions, together with declaration forms, can be obtained by application to the secretary, R.I.B.A., 9 Conduit Street, W.1.

St. Paul's Cathedral.

Apart from the general question of restoring the fabric of St. Paul's Cathedral, there is a recommendation in the report of the sub-committee of the Special Committee of the City Corporation which has the warm support of the Cathedral authorities. This is the recommendation that steps should be taken to restrict the making of excavations in the soil in the neighbourhood of the Cathedral. The sub-committee pointed out that the whole of the expert opinion they had consulted was unanimous in considering that there would be great danger to the Cathedral from excavations for building operations in the immediate neighbourhood of St. Paul's which might be carried down below the level of the Cathedral foundations.

The point recalls the controversy which was aroused by the proposal in 1913 to bring a tramway line across the projected St. Paul's Bridge and to build near the Cathedral a tramway station with subways underground. In the debate which ended in the decision by the London County Council not to proceed with the scheme, it was explained that petitions against the Bill embodying the project had been filed by the Dean and Chapter and the City Corporation. One of the points contained in the petition by the latter was that Parliament should not pass the Bill unless responsibility for the safety of St. Paul's Cathedral were placed with the London County Council. Later, the Dean and Chapter addressed an official letter to the Lord Mayor inviting the Corporation to enter into a general agreement with them for the purpose of safeguarding the Cathedral against any future schemes of tunnelling in its neighbourhood. This point

is taken up anew in the present report, in which the signatories say: "We are not aware that the Corporation or any other local authority has power at present to prevent this [excavations for building operations], and in our opinion the Government should be asked to take the necessary measures in this respect, to safeguard such a national monument as St. Paul's Cathedral."

Bicentenary of a Famous Church.

The bicentenary of St. George's, Hanover Square, was recently observed by a series of special services. The church was consecrated on 18 March, 1725, by Edmund Gibson, Bishop of London. In some books of reference the year of consecration is given as 1724, no allowance being made for the Act of 1750, which made the legal year begin on 1 January.

St. George's was designed by John James, being one of the fifty churches built under the Act of good Queen Anne. It is an excellent building, the portico of six Corinthian columns being hardly inferior to that of St. Martin-in-the-Fields. Unfortunately Grosvenor Street was diverted to the north, instead of being carried up to the church, and so the fine façade cannot be seen anywhere from the right distance.

Within, the church contains much of interest. The east window, an example of the school of Albert Dürer, was made in 1560 for slender Gothic tracery at a convent at Malines. Originally a Jesse window, it was bought by subscription in 1841 and made to fit the broad, eighteenth-century windows of St. George's. In this operation the pedigree of Our Lord was lost, but the figures that remain are beautiful in colour and execution. During the war the window was removed to the vaults to avoid German bombs, and before it was replaced it was carefully photographed by the Victoria and Albert Museum. Copies of the photographs are kept in the vestry. Much of the carving in the church is attributed to Grinling Gibbons. Not long before the war it was carefully relieved of many coats of paint and varnish. The west door still bears marks of slugs fired at the Gordon rioters in 1780. On the front of the galleries are painted the names of the churchwardens, and the succession is continued on the wall at the back. Many notable family names are in these lists.

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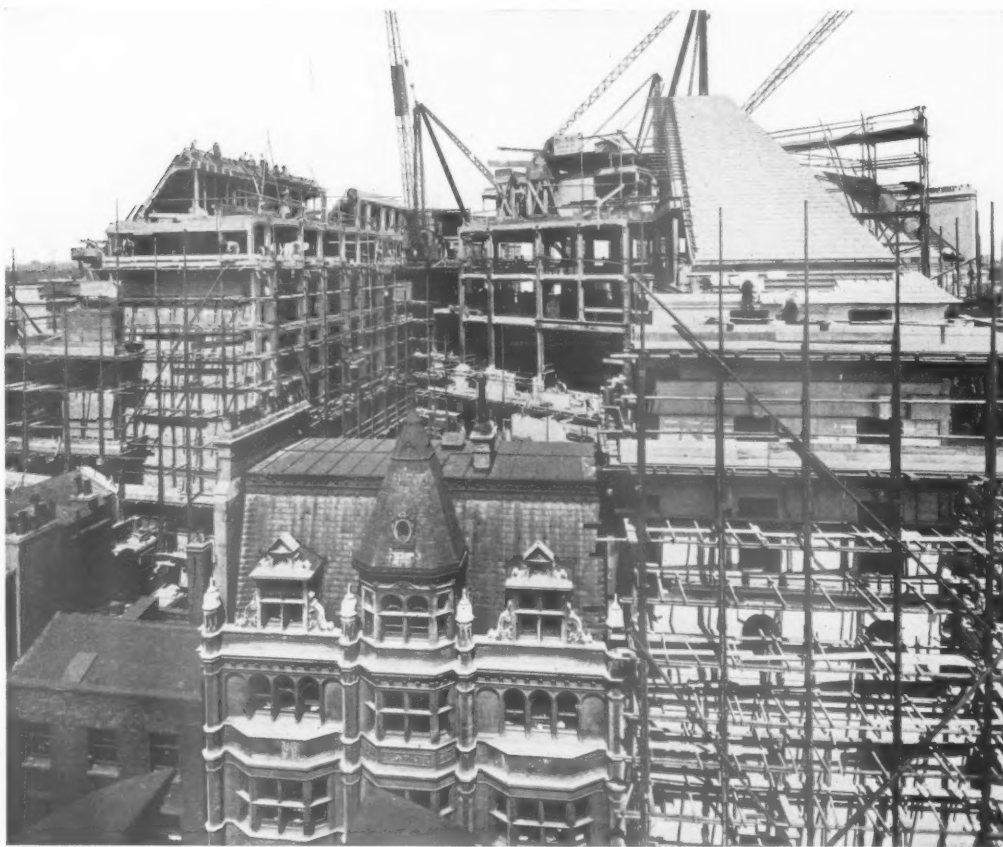


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A Progress Photograph taken during the construction of
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THE ARCHITECTURAL REVIEW.

A Contemporary Record of Old St. Paul's.

The Graffito in Ashwell Church.

The village church of Ashwell, in Hertfordshire, says "The Times," possesses a tower constructed, as is the rest of the edifice, of the local clunch. This material, when protected from the weather, retains its smooth and sensitive texture almost indefinitely, and countless generations of village scribblers and artists have left numerous drawings, prayers, and signatures on the interior courses of the tower walls.

Of these *graffito*, two are of great interest. The first without doubt represents old St. Paul's. It extends over part of two blocks situated some 5 ft. from the floor level, and measures 10 in. in width and 15 in. in height, the clunch being incised to a depth of about a sixteenth of an inch. Almost all the accepted external features of the original cathedral can be recognized. The graceful spire is shown surmounting the tower, as it did before the thunderstorm of 1561. Even the flying buttresses are depicted joining tower and nave, and the small adjacent pinnacles are also visible. The illustration cannot, however, have been true to scale, for the height of the spire would have been totally disproportionate to the length of the building, which all authorities agree was then some 580 ft., while it has never been suggested that the altitude of spire and tower combined much exceeded 500 ft.

Numerous details in the arrangement and design of the clerestory and other windows can be traced, but the assertion sometimes made that the famous rose-window in the choir is portrayed lacks proof. There is certainly a circular window on the left, but its identification turns on whether one is looking from the south or the north. A tower surmounted by a spire is also to be seen on the extreme left, but this might be intended for the church of St. Gregory, which stood at the south-west angle of the cathedral, and not for the detached belfry, a relic of the older church of St. Faith, which survived east of the choir. There is certainly something resembling the choir roof extending towards this tower, which tends to negative the suggestion that the east end has been depicted in elevation. Rather would it seem that the circular window is that of the transept, as in

Hollar's illustrations, and that we are shown this part of the building at a slight angle. Something on the ground level resembling a door adds weight to this contention. The whole design is light and artistic in conception, and as a contemporary record of a famous building it deserves close study.

The other remarkable *graffito* is some 4 ft. higher up. Comprising three lines of Latin, which may be described as verse, it is not only more boldly incised, but is better preserved by reason of its comparative inaccessibility. It runs thus:—

M.Cter X penta miseranda ferox violenta

. . . superest plebs pessima testis . . . in fine secunda ventus validus

oc anno Maurus in orbe tonat. MCCCXLXI.

The following is a rough translation:—

1350. Wretched, terrible, destructive year.

The remnants of the people alone remain in evidence.

Finally in the second pestilence there was a great storm.

In this year Maurus thunders throughout the world, 1361.

An expert authority suggests that "pestis" preceded "superest." "Pestilentia" may also be seen above the first date, 1350 is repeated above "plebs," and on a higher stone there appear to be these words:—

Pestis in MCCC fuit . . . MCCCXLIX . . . in quibus fuit secunda.

The final reference is, of course, to the gale which swept the country on St. Maur's day (January 15), 1361, a year which was also marked by a wide recrudescence of the plague.

Victoria and Albert Museum.

The Victoria and Albert Museum has recently acquired an Italian Marionette Theatre of the first half of the eighteenth century, brought from a palace in Venice. This has now been erected in Room No. 5 of the Woodwork Galleries. The theatre is an imposing structure of architectural design, 13 ft. high, carved, painted and gilt, with an armorial shield, festoons and other ornament. Two scenes can be shown, one, the interior of a salon with figures dressed in the costume of the period and appropriate furniture; the other scene shows a view of St. Mark's Square with figures from the Italian Comedy. The faces of the marionettes are carved with great skill and expression, and the costumes, many of which are richly embroidered, are extremely varied and elaborate.

TO THE DESIGNS AND INSTRUCTIONS OF ARCHITECTS



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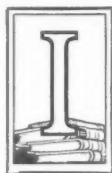
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THE ARCHITECTURAL REVIEW.

Book Announcements.

The Architectural Press are publishing the following books this Spring: "The Preservation of St. Paul's Cathedral and other Famous Buildings," by William Harvey (now ready); "English Rooms and their Decoration at a Glance," Volume I, 1666-1620, by Charles H. Hayward, author of "English Furniture at a Glance"; "Prelude to Architecture," by William G. Newton, M.C., M.A. Oxon., F.R.I.B.A. (now ready); "Caricatures," a series of amusing studies of well-known personalities in the world of architecture, by H. de C.; and "Modern Building Practice," by William Harvey, forming the second volume in the "Little Things That Matter" series.

The Cambridge University Press announces a work by Professor B. Melvill Jones, entitled "Aerial Surveying by Rapid Methods," the main purpose of which is to discuss the possibilities of aerial photography as a means of surveying and mapping the earth, and to record and describe a series of experiments made at Cambridge by the author and the late Captain J. C. Griffiths. In addition to diagrams and tables, the volume includes a map made up of mosaics of vertical photographs.

The Birmingham Chamber of Commerce.

A Building and Allied Trades Exhibition.

The Birmingham Chamber of Commerce has decided to organize a Birmingham and Midlands Building and Allied Trades Exhibition, in Bingley Hall, Birmingham, in September, 1925, which will be under the patronage, and with the support of all the architectural and building and kindred associations of the district, representatives of which, together with members of the Chamber of Commerce Council, will act as vice-presidents, and form the Executive and Technical Committees.

An extensive advertising campaign will be carried out in the Trade Press and in other directions, calculated to assure a large attendance of buyers.

Building Research.

Plans are now being made, says "The Times," for the extension of building research into alternative methods of house construction as was foreshadowed recently by the Minister of Health. Following the example of the Research Association, the Government have obtained possession of an old country house in the neighbourhood of Watford, where ample accommodation will be available for laboratories and research work.

This extension will give an impetus to building research, and may save the country millions of pounds. As at least 120,000 working-class houses are needed each year in England and Wales in order to meet the present deficit, it is obvious that if research can discover some means of saving even £1 on each house for which Government financial assistance is being given, it will save £120,000, and also decrease the capital sum to be raised and the amount of interest to be paid. There are various directions in which, it is believed, economies may be effected. For example, if more use can be made of natural and local resources, substantial savings in cost will result. Chalk used in the west country, in place of brick carried many miles, means a cheaper house.

When the Ministry of Health has at its disposal a properly equipped scientific organization, the expenditure of public money on unduly extravagant methods should be avoided, in addition to the economies that may result from the greater use of natural resources, found by experiment to be suitable for cottage building.

Architects at Dinner.

A unique and interesting function took place recently at Liverpool, when the partners of Messrs. W. H. Smith and Son entertained to dinner forty-two architects who had collaborated in the design of new premises for the branches of this firm throughout the country. Speeches were delivered by Mr. C. H. St. John Hornby, F.S.A., Professor C. H. Reilly, F.R.I.B.A., Mr. C. T. Marshall, F.R.I.B.A., Archdeacon Howson, and Mr. F. C. Bayliss, chief of the Estate Department of Messrs. W. H. Smith and Son. After dinner the party visited Liverpool Cathedral, and later inspected the new premises built by Messrs. Smith in Tithebarn Street, Liverpool, to be known as Hornby House.

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THE ARCHITECTURAL REVIEW.

TRADE AND CRAFT.

Britannic House, Finsbury Circus, E.C.

The architectural features of this building are described and illustrated earlier in this issue, but we feel that some mention should be made of those who were responsible for the actual work and material which has enabled the architect, Sir Edwin Lutyens, R.A., to build upon this very busy city thoroughfare a block of offices graceful, comfortable, and well suited to the requirements of the Anglo-Persian Oil Company which is housed there. It is impossible to give a full description of these various works, but readers may be interested to know of those firms who were intimately connected with the building. The contractors for Britannic House were the well-known firm of Howell J. Williams, Ltd.

Britannic House is considered by many to be the finest of the office buildings erected in the City of London since the war. Presenting vast constructional problems successfully dealt with, this building stands as a monument of the close association of the architect, builder and craftsmen. The beautiful façades, vast interior, and splendid workmanship throughout, are evidence of the organization and co-operation of all those responsible for the building.

The Steelwork.—In designing the structural steelwork for this building, long spans were adopted in order to allow the various floors to be divided up as required. Therefore, in the finished building no stanchions are apparent, except in the main walls. The loads from the stanchions are spread over the blue clay sub-soil by grillage beams and girders, encased in concrete. The interesting part of the foundation work was in connection with the main stanchions supporting the structure above Moorgate Station. It was found necessary to take these stanchions down to foundations below the tube tunnel so as to prevent undue pressure on this tube. The approximate weight of the steelwork for that portion of the building now completed, including filler beams for concrete floors, was 5,000 tons. The structural steel frame was fixed practically complete before the walls and floors

were constructed. This steel frame was designed, manufactured and erected by Redpath, Brown & Co., Ltd.

The stonework for the building was supplied by the Nine Elms Stone Masonry Works; but Joseph Brooke and Sons (Halifax) supplied the York "Silex" Stone for the front entrance steps, pavings and copings; and Brookes, Ltd., the glaze bricks, Terrazzo floors, wall linings and partitions to the lavatories. The blue York stone coping and window sills were supplied by W. Knight & Co., Ltd., of London; the bricks by the London Brick Co. and Forders, Ltd.; the slates by Stirling and Johnson, Ltd.; the asphalt by Salter Edwards & Co. and the breeze blocks by Fredk. Jones & Co., Ltd. The ferro-concrete construction was carried out by the general contractors already mentioned. To continue with the exterior of the building, the guard rails were provided by Bayliss, Jones and Bayliss; and the spiral and iron staircases by Haywards, Ltd., of London; the casements and casement fittings and leaded lights by the Crittall Manufacturing Co.; whilst the whole of the copper glazing to the building was supplied by G. H. Barrett & Co., of Fulham Road; the Falkirk Iron Co. manufactured the iron down-pipes and rainwater heads; and the Luxfer Co., Ltd., were responsible for the work in connection with the pavement lights, etc.; the Bostwick Gate Co. provided the folding gates; J. W. Gray and Son, of London, the lightning conductors; and C. Isler & Co., of Southwark, undertook the work of well-sinking and the provision of the wells. Before leaving the outside, mention must be made of the work of A. Broadbent and Son, of Fulham Road. This firm executed the whole of the carving in marble, Portland stone, and wood, and the carving is well worthy of close study, especially the Corinthian capitals and frieze panels.

On entering the building one is struck by the wealth of decoration in the form of marble. This was supplied by H. T. Jenkins and Son, Ltd., of Torquay, and the illustrations show that no care has been spared in this direction. Another decorative feature is the rubber tiling and flooring. The "Leyland" rubber flooring and tiling in Britannic House was chosen on account of its great durability, silence, cleanliness and non-slipping properties, combined with artistic charm. The tiling, which was supplied by the Leyland and Birmingham Rubber Co., Ltd.,

(Continued on page 1511.)

THE "DEVON" FIRE—several new 1925 models



THE "DEVON" FIRE is an artistic fireplace, scientifically constructed in heat-retaining fireclay so that the maximum warmth is radiated into the room. It saves 25% on the coal bill, and practically eliminates smoke.

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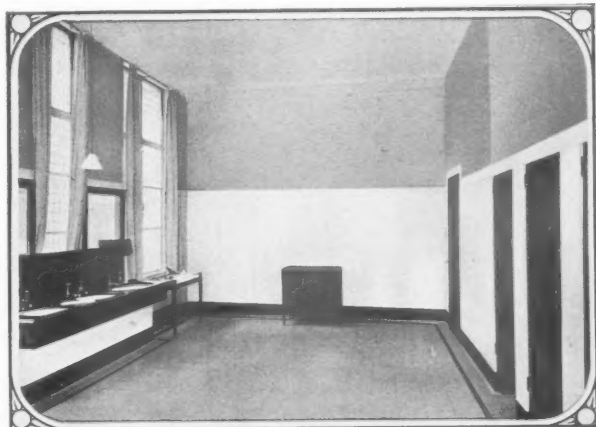
White and Black Vitrolite Dado surrounding Bath.



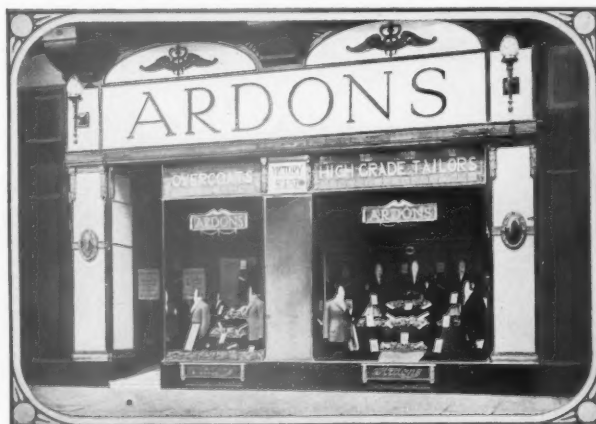
Vitrolite Splash Back, complete with Vitrolite Shelf and white enamelled brackets.



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THE ARCHITECTURAL REVIEW.

covers an area of over 14,000 sq. yds., and the rubber on the staircase is of special quality to endure the wear of concentrated traffic. The four patent micro-drive, self-levelling passenger lifts were supplied and erected by Waygood-Otis, Ltd. The electric-light fittings are also a feature of the decoration, these being supplied by Higgins and Griffiths, who were also responsible for the electric wiring. The partitions, doors, etc., were carried out by four firms, namely, B. Cohen and Sons; the Waltham Cross Joinery Co.; J. Parnell and Sons, of Rugby; and J. W. Falkner and Sons, who were also responsible for the counters in the entrance hall. Messrs. Joseph Kaye and Sons, Ltd., of Leeds and London, supplied about 800 locks and about 500 automatic and safety bolts, lever and lavatory bolts; Thos. Elsley, Ltd., supplied the art metal work; the handrails were made by Carter and Aynsley, Ltd.; and the nameplates by Wm. Morris & Co. (Westminster), Ltd. Muntzer and Son, of London, supplied the furnishings.

The Heating.—The Central Power Plant comprises three high-pressure steam boilers of the Economic type, equipped with the latest pressure type oil-fuel burning apparatus, boiler feed-pumps, hot-well and connecting mains. These boilers supply steam at high pressure to calorifiers for heating the water for the central heating and hot-water supply systems. A low-pressure hot-water system of warming is installed, the circulation from the twinned horizontal calorifiers to the radiators and patent heating "panels" being accelerated by electrically-driven centrifugal pumps. The domestic hot-water supply equipment distributes ample supplies of hot water to all lavatories, etc. The central equipment is duplicated so that in the event of a breakdown in any section of the plant all the services may be maintained. All water used for feed to the boilers and in the domestic hot-water system is treated by a special plant to remove the corrosive qualities and so prevent damage to the interior of the boilers, calorifiers, or pipes. The whole of the steam plant, heating and hot-water apparatus, water-treating plant, and all attendant engineering equipment has been installed by Messrs. Richard Crittall & Co., Ltd., of London. The boiler seatings and horizontal flue in the boiler house were carried out by the Reading Boiler Setting Co., Ltd.

John Bolding and Sons, Ltd., supplied the sanitary ware and fittings; the plumbing and sanitary work being placed in the hands of Stitson, White & Co. The strong-room doors were manufactured and erected by the Chatwood Safe Co. Other sub-contractors and their work are as follows: flag-poles by Stewart and Lloyds; plasterwork by George Rome & Co.; internal telephones by the Relay Automatic Telephone Co.; clocks by the Synchronome Co.; the pneumatic tubes by the Lawson Pneumatic Tube Co.

W. Ingle, of 56 Grosvenor Road, S.W.1, is THE ARCHITECTURAL REVIEW photographer.

Rubber Flooring and Tiling.

The use of rubber tiling and flooring is every day coming into greater prominence and favour. Many of the leading architects are adopting it, and the fact that it is silent, sanitary, and artistic is appealing to all to whom these qualities are of importance. Hardly any of the new buildings which are going up are without it, and many of the older ones are also being supplied.

It has been laid with marked success in many banks, insurance offices, and other public buildings, such as Lloyds—Royal Exchange, the Army and Navy Stores, and Britannic House. At Britannic House "Leyland" rubber tiling has been supplied and laid by the Leyland and Birmingham Rubber Company, Ltd., for the Anglo-Persian Oil Company, Ltd., and it is already proving a great boon, because in addition to its silence, it does not absorb moisture, and is easily cleaned. One particular feature at Britannic House is the black rubber on the main staircase, which is of a special quality to withstand the concentrated wear to which it is subjected in such a position, and the black rubber is in striking contrast to the marble surrounds.

Enlarged Showrooms.

We are informed by Carron Company that they have opened new and enlarged showrooms at 123 Buchanan Street, Glasgow, where they are exhibiting a representative display of "Carron" and "Longden" designs of firegrates in appropriate settings, ranges, gas and electric cooking and heating appliances, baths, etc.

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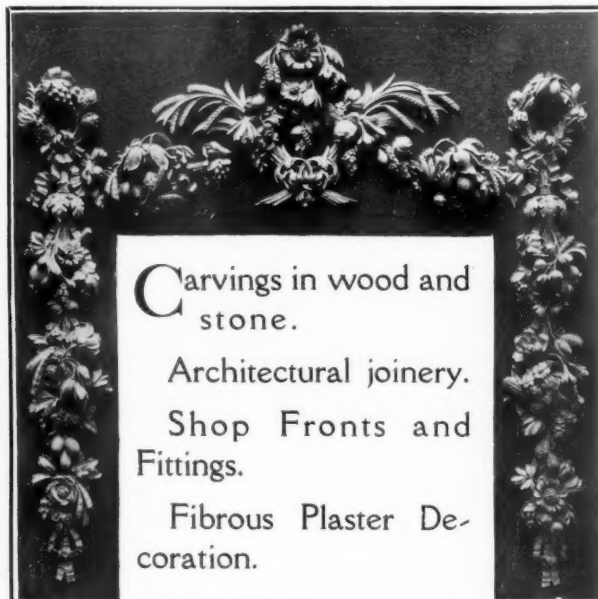
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Obituary.

We much regret to announce the sudden death of Mr. F. Stuart Sage, grandson of the founder of Messrs. Frederick Sage & Co., Ltd., from heart failure following an operation. The funeral took place at Thames Ditton Church.

A New Stone Preservative.

"Cephasite" stone preservative has been used for several of the Scottish banks, and it is being tested by H.M. Scottish Board of Works. It is also being used and tested in several of the Colonies, principally in connection with public buildings. One of the latest buildings upon which it has been employed is the post office at Wellington, New Zealand. Mr. William Anderson, of Messrs. Anderson, Gibb and Wilson, of Edinburgh, the manufacturers of the preservative, has made a study of the subject of stone preservation for many years, and the results of his experiments on the hardening and preservation of sandstone have, it is claimed, been most successful. This process, he says, deals with the matter from a scientific and chemical aspect; it is not a mere temporary protective coating; and tests extending over a period of twelve years have shown his theory to be correct. The action of the preservative in hardening, and so waterproofing stone is caused by a chemical action which, it is claimed, makes the softest sandstone or brick hard and durable. This action, it is stated, is slow, as it takes about four weeks before definite hardening is shown, but the process goes on indefinitely, the stone gradually becoming harder and harder. Some of the advantages claimed for the preservative are as follows: "It does not discolour the stone, unless the latter contains iron, but gives it the weathered appearance of a seasoned stone; it can be applied to damp or dry stone or brick in any kind of weather except frost, and it requires no pressure to drive it into the stone; it is a perfect germicide, totally destroying all lichen and moss growths, and reducing them to a fine carbon, which are quickly disseminated by the wind and the rain, leaving the stone absolutely clean." The application of "Cephasite" is simple. It is applied with an ordinary sash tool, care being taken that

the stone absorbs the liquid, as, if the stone is very dry, it has a tendency to throw the liquid off. Once started, however, the stone absorbs the preservative easily. On very delicate carving the preservative may be applied through a vulcanite sprinkler, or sprinkled on from a brush.

Change of Address.

Owing to the extension of their London business, the Korkoid and Ruboleum Tile Co. have been compelled to vacate their present offices at 26 Coventry Street, W., and seek larger and more convenient premises at Coventry House, 5 and 6 Coventry Street, Piccadilly, W.1. This company are the sole manufacturers of Ruboleum tiles, Korkoid deck and floor coverings, and Corkwood tiling, and have been responsible for many large flooring contracts described and illustrated from time to time in these pages.

Picturesque and Artistic Roofs.

It is interesting to learn that Old Delabole Slates are still much favoured by the profession, and among recent contracts where they have been, or are being, used are the New Pumping Station, Littleton, for the Metropolitan Water Board (architect, W. H. M. Knox, Esq.). Memorial Hall, Royal School for the Daughters of Officers, Bath (architect, Mowbray A. Green, Esq., F.R.I.B.A.). New Hospital, Bideford (architect, H. Dighton Pearson, Esq., F.R.I.B.A.). Vicarage, Ugborough (architect, P. D. Hepworth, Esq., F.R.I.B.A.). Vicarage, Callington (architect, W. D. Caroe, Esq., F.R.I.B.A.). House, Finchley (architects, Messrs. Yates, Cook, and Darbyshire). Barrack Block, Dover Castle, for H.M. War Office. Housing Schemes, Bargoed and Plymouth. New Library, Queen's College, Taunton (architects, Messrs. Roberts and Willman).

An Important Contract.

Messrs. W. H. Gaze and Sons, Ltd., 10 Conduit Street, W.1, and Kingston-on-Thames, have secured the contract for additions and alterations at "Galvea," Lee-on-Solent, for Lord Killanin; the architect is Mr. J. Maclaren Ross, A.R.I.B.A.

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THE ARCHITECTURAL REVIEW.

Period Rooms at Wembley.

Eighteenth- and Twentieth-Century Models.

An interesting new feature of the huge Palace of Arts at Wembley this year is the two Period rooms. One of these is designed to give an idea of the famous Adam style of interior architecture and decoration of the eighteenth century; the other is a 1925 room, designed by Mr. Maxwell Ayrton, F.R.I.B.A., every part of which has some direct connection with last year's British Empire Exhibition.

The Adam room is not a copy of any particular interior, but is designed to give a general idea of Adam's principles of treatment.

The room itself, which is 36 ft. long, 24 ft. wide, and 15 ft. high, has been entirely constructed by Mr. Laurence Turner from the architect's detail drawings. The three medallions on the ceiling are reproductions from examples in the Soane Museum in Lincoln's Inn Fields, those on the walls and the cornice from an Adam house in Portland Place, and the bas-relief on the mantel-piece tablet is also a reproduction. Everything else has been specially modelled from the full-sized drawings. Five panels on the walls, giving an idea of the tapestries used in Adam houses, represent five of the architect's masterpieces—the Adelphi Terrace, the Bridge for Syon, the portico at Osterley, the Record Office, Edinburgh, and the fête pavilion of 1774 at the Oaks, Epsom. They are the work of Mr. Alfred C. Conrade.

A realistic touch to the room is given by the introduction of five life-size figures. Every member of the tea party portrayed was known by, or had special connections with, Robert Adam. They are Fanny Burney, the authoress, Mrs. Thrale, Dr. Johnson, and Boswell, and David Garrick; the figures have been modelled by Louis Tussaud & Co. The dresses are historical, being relics of some of Sir Henry Irving's Lyceum productions. The costumes of Garrick and of Miss Burney are actual originals of the eighteenth century.

The honorary architect is Mr. Arthur T. Bolton, F.S.A., F.R.I.B.A., who is the curator of the Soane Museum and author of the standard book on the architecture of Robert and James Adam.

The 1925 room, designed by Mr. Ayrton, is slightly smaller than the Adam room, measuring 31 ft. long by 14 ft. wide. The panelling is done in stained hemlock. The whole of the material for this has been provided by the British Columbian authorities, a feature of the Canadian Pavilion last year being a room panelled in this style. All the furniture of the room has been lent by Sir Owen Williams. It is constructed of British mahogany and English walnut. The wood block floor is of British Columbian pine stained black and polished. A novelty is the lighting of the dining-room table; this is effected from below, through a semi-circular cut-glass bowl with changing colour effects. All the electric fittings are the work of the General Electric Company.

Concrete entered so largely into the 1924 exhibition that it has been introduced into the decoration of the room. Two delightful busts have been designed by the well-known sculptor, Mr. Doyle Jones, and they have been executed in cement by Cement Manufacturers and form an attractive feature of the decorative scheme. On either side of the fireplace and behind the settee and sideboard the panelling is alternated with beautiful silk hangings. The whole of the table-glass, cutlery, china, and general furnishings have been selected from those firms whose exhibits at last year's exhibition were of outstanding excellence.

The Second Best in Housing.

Major H. Barnes on New Methods.

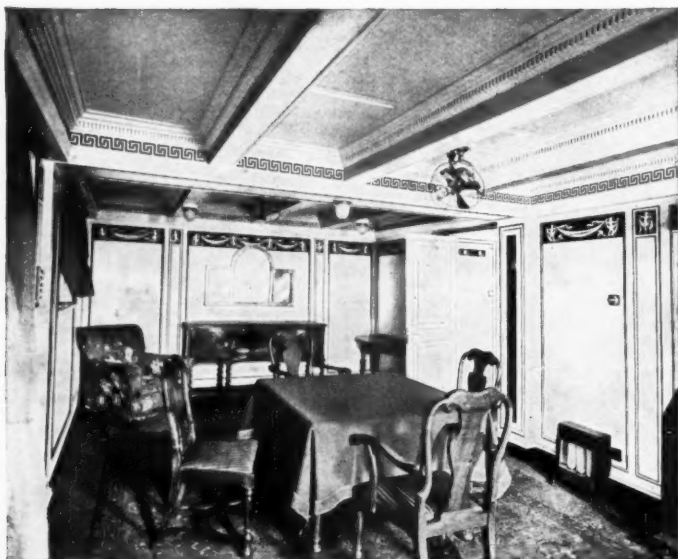
The opinion was unhesitatingly expressed by Major Harry Barnes in a lecture recently before the Surveyors' Institution that there were no building materials which excelled those in common use to-day, and that in the search for new methods of construction they were at most trying to find the second best.

Major Barnes said that there had been nothing like the search for new building materials since the Quest of the Holy Grail, and it was not because the older materials had failed. He did not hesitate to describe this search as a miserable evasion by every Government since 1918 of its real duty and an abject confession of bankrupt statesmanship.

The lecturer, who is a member of the Moir Committee set up

(Continued on page xlv.)

TO THE DESIGNS AND INSTRUCTIONS OF ARCHITECTS



Architect: A. N. Prentice, Esq., F.R.I.B.A.

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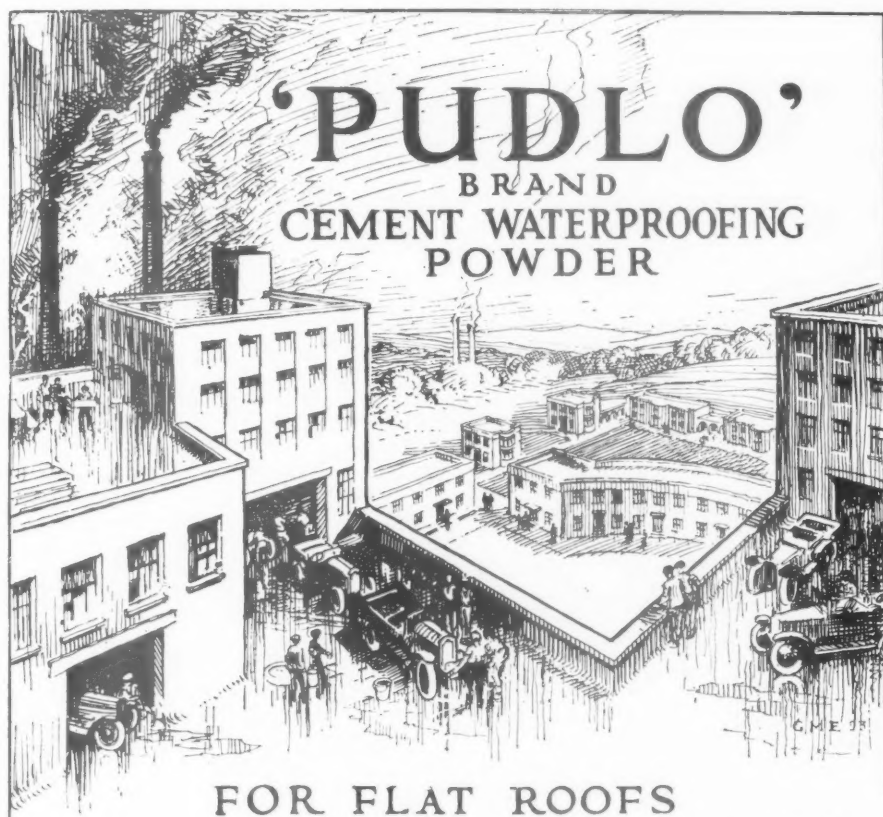
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THE ARCHITECTURAL REVIEW.

to consider alternative methods of construction, reviewed the official efforts made since 1919, which had resulted in the erection in England of some 19,168 houses with various forms of concrete construction, steel framing, timber, or brick and concrete. It had now been reluctantly admitted that the substantial difficulty in the way of housing was a lack of skilled labour, and this had led to the further consideration of alternative methods. The guarded character of the Moir Committee's interim reports was, he said, due to the fact that, without reservation of any kind, there was absolute unanimity as to the supremacy of brick, plaster, slate, and tile construction over any other form that had presented itself. The committee had found no roofing substitute to which it could give whole-hearted endorsement.

The outstanding feature of the committee's reports was its approval of *in situ* concrete construction, which had led to the Ministry of Health competition for the best type of shuttering. Concrete was wonderful, but was dull and drab, and insistence should be laid on its being cleanly clad in rough-cast. Whatever material was used, they wanted a dry, warm building in which vermin would not lodge, and scientific tests showed that a timber house gave most warmth, that five kinds of brick construction came next, and that the first concrete house showed 47 per cent. more heat transmission than the first brick house.

A description of the Weir and Burney houses followed. After a tribute to the masterly way in which Lord Weir had applied himself to the problem, Major Barnes said that there was a Spartan simplicity about the Weir house that appealed to him more than the Corinthian profusion promised by the Burney product. Lord Weir had done a service by the attention he had concentrated on the details of small house design, and he would give Lord Weir any number of orders on one condition—that he used no steel. If Lord Weir would, in this emergency, give them a weather-boarded, wood-lined house, he promised him a market beyond his dreams, and if it were of wood he would join in urging that the Government should give substantial guarantees to secure mass-production.

The shifts they were being driven to were due to not taking steps to increase their provision of the materials and labour they had so long employed, and there was no evidence to show that

the new methods were likely to be any more economical than the old. His conclusion was that it was not really courageous or wise to chase these will-o'-the-wisp substitutes, which would lead to nothing but difficulties and disappointments. No selfish interest, either of capital or labour, should be allowed to deprive this country of a form of construction native alike to its resources and its needs.

The Roman Villa at Bignor.

Deterioration of the Mosaics.

One of the reasons why the remains of the Roman villa at Bignor in Sussex are so impressive, says "The Times," is because to the inexpert they are in such an unlikely place—the crown of a rolling meadow on Mr. Tupper's farm. The village is a handful of houses and cottages, and the way to it for the stranger is from Pulborough through narrow and winding lanes. Only the pavements of the Roman villa remain, and part of one of the mosaics is showing signs of deterioration—a matter of much concern to archaeologists.

What is left of the villa was first discovered when the land by which it was covered was being ploughed in 1811. The entire site measures about 650 ft. by 350 ft., and perhaps half of it was occupied by the villa itself. The pavements have been preserved by general treatment and by the construction of a number of barns giving them protection from the weather. These barns are walled with stone and roofed with substantial thatch; they were built by the Tupper family, whose present representation keeps them in sound repair.

The remains are so well known and have been visited by so many people, despite their remote location, that they need not be described here in detail, but some account should be given of the principal pavements, of which there are three. The first is that of the triclinium, or dining-room, which is in two parts; the second is a smaller pavement, ornamented with a symbolical head, which is thought to represent Winter; while the third is decorated with scenes from the amphitheatre, with cupids as gladiators, and

(Continued on page xlviii.)



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a female head, either of Venus or of Juno. It is the pavement round this head that appears to have got into disrepair. Disintegration, not yet on an extensive scale, seems to have begun in the soil immediately under the pavement, and a number of the *tesserae* have become separated and shifted. The damage may have been caused in the first place by damp, or by the presence of a root deep in the ground. Mr. Tupper pointed out in other parts of the floor how decay had been arrested with greater success by refashioning the deteriorated pavement than by using cement.

With regard to the question of repairs and renovation in the present instance, Mr. Tupper said that he would give every facility to any responsible body or individual who would undertake the work, and that he would be glad to see it done. His family had preserved the remains from wind and weather by the provision of the protective sheds, and that they would continue to do. He agreed that it was most desirable that some competent authority should investigate the causes of the damage, and find a means of preserving the mosaics. At present the damage is not extensive, and renovations could easily be done that might later on be carried out only with great difficulty and at considerable cost. Various bodies have interested themselves in the villa in the past, but just now it is not receiving what may be called "official" attention.

London Museum Acquisitions.

The London Museum at Lancaster House now has an average of 5,000 visitors a week. During last year 268,000 people passed through the turnstiles, and many of them were visitors from abroad. The museum is particularly popular with Americans, who are attracted by the unique display of royal relics, but also find numerous other exhibits to interest them.

The collection has been considerably enlarged since the museum went to Lancaster House in 1913. New gifts are constantly being received, and at the present time five cases in the spacious entrance hall are filled with recent acquisitions. One case contains the pale blue silk vest worn by Charles I on the scaffold. The garment, after the execution, came into the hands of Dr.

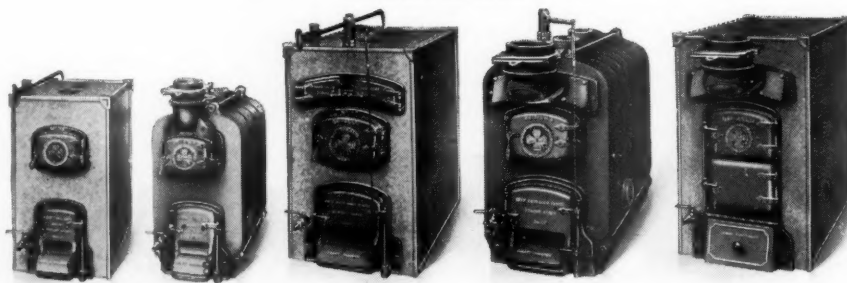
Hobbs, the King's physician, who was in attendance on the unhappy monarch. It was presented to the museum by Mr. and Mrs. Ernest Makower, of Holmwood, Binfield Heath, who are now intending to send another contribution in the form of a sword. This is inscribed: "Presented by the London Foot Association to Barnard Turner, Esq., their Inspector-General and Commandant, for his unwearied endeavours to preserve the peace and tranquility of this Metropolis, his earnest desire to render this service compatible with the duty of the citizen, and for his constant regard to the honour and discipline of the Corps. Unanimously voted the 21st June, 1780." The sword is accompanied by a sash and knot worked by the ladies of the City of London.

Another of the cases reserved for new exhibits is quite filled at present with a varied assortment of small articles, ranging from a bronze spear-head recovered from the Thames and Roman pewter tankards to a couple of monthly season tickets for the "Peerless Pool Baths," which notified the users that towels were supplied only once a day. The tickets are dated 1868. There is an interesting example by Rundell and Bridge, dated 1820, of beaten silver work, showing the Prince Regent seated, the plaque being a reproduction of a well-known painting. Just by this is the Duchess of Cambridge's opera-box token, and near by a pack of playing cards of the George III period, which came to the museum recently. Attention is caught by some beautiful examples of Victorian jewellery, including three massive bracelets, four earrings, and a richly-jewelled locket. Two Roman spoons in bronze were found in London, as were the Roman glass, flint implements, and other articles gathered in this little corner of the museum.

Prominent in the next case is a sword of the rare Landsknecht type, which was found when excavations were being made forty years ago on the site of the New Scotland Yard offices. It was intended then that the late Mr. Mapleson should build an opera house there, and it was in carrying the foundations down to the London blue clay that the interesting relic was discovered. The clerk of works took it to the office of the architect, Mr. F. H. Fowler, whose property it remained for some years. Eventually

(Continued on page 1.)

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the sword came into the possession of Mr. Edward Street, who has given it to the trustees of the museum. This case also contains fragments of Roman glass bowls of the time of Nero, a lunatic's collar of the late seventeenth century marked "Bethlehem Hospital," an elaborate English steel lock, the wards of which form the date 1664, and specimens of mediæval pottery.

A fourth case is devoted to recent discoveries in Westminster and Moorgate of sixteenth-century leather work—straps, shoes, and apprentices' hats. These had been preserved in the peat from which they were excavated, and are in quite good condition. The fifth case has for its most interesting objects the china replica of Henry VIII's hunting lodge at Chelsea, and a china model, vividly coloured, of Chelsea Embankment. "The Wonderful Village." These were given by the Queen. The case also contains the book "Postilla in Epistolas Pauli," by Nicolaus de Lyra, bound in cuirbouilli, from the library of the Prince of Wales, afterwards King Edward VI; a set of nine Battersea boxes, showing views of London buildings; and a silver medal commemorating the committal of the Seven Bishops to the Tower in 1688.

In course of time, as more new acquisitions require space, the exhibits in the cases will be transferred to other rooms according to their proper classification. Meanwhile they epitomize by their variety and range the history of London life through centuries dating back to the Bronze Age.

Victoria and Albert Museum.

An unusual influx of important acquisitions has been the occasion for a new departure at the Victoria and Albert Museum which should greatly add to the convenience of visitors, who wish to see at a glance the more recent additions to the national collections. The central court, directly opposite the main entrance, has been set aside for the temporary display of important new acquisitions from all departments of the museum. The first exhibition of this kind contains objects of exceptional interest and beauty.

Mr. and Mrs. Rees Price have presented to the nation the magnificent collection of English glass, which has been on loan to the Victoria and Albert Museum for some years. The collection consists of nearly 500 specimens of rare glasses, many of

them of unique interest, and is the result of many years of patient research and accumulated learning. It is fully representative of the historical development of glass-making in England and includes fine examples of all periods from the end of the seventeenth to the beginning of the nineteenth century.

A piece of English plate which the museum has just acquired will rank as one of the outstanding features of the collection. It is a two-handled covered cup of silver gilt of remarkably fine form. It bears the London hall-mark for 1673-4, and its history is recorded by an inscription added in the eighteenth century: "The Gift of King Charles the Second to Archbishop Sterne, Lord Almoner." It passed again by marriage in 1821 into the family of its late owner. Richard Sterne, Archbishop of York from 1664 to 1683, was the great-grandfather of Laurence Sterne, author of "Tristram Shandy."

At a recent sale at Sotheby's, the museum authorities co-operated with a private collector in the purchase of an album of Mogul paintings or portfolio-pictures, formerly in the Imperial collection at Agra and Delhi. Twenty-one paintings have in this way been acquired by the museum; they are the work of court painters of the time of the emperors Jahangir and Shah Jahan (1605-1658), and thus belong to the period of the highest development of the art in India. Apart from their artistic merit, the pictures are of great historical interest. Marginal comments in the bold handwriting of the Emperor Shah Jahan appear on eight of the portraits.

Another recent purchase is a splendid panel of Persian velvet brocade woven in the time of Shah Abbas the Great (1586-1628), the finest period of Persian art. Technically this velvet is a masterpiece and must have taken a single weaver months, if not years, to complete. Its purchase for the museum was only made possible by a grant from the National Art Collections Fund and the assistance of a small body of subscribers.

Another interesting addition to the Department of Textiles is a very unusual English carpet, of the type known as "Turkey-work." It has in the middle a shield with the arms of Sir John Molyneux of Teversal, Bart. (1623-1691), impaling those of his wife, Lucy, daughter of Alexander Rigby, a Baron of the Exchequer. The date 1672 appears beside the shield.

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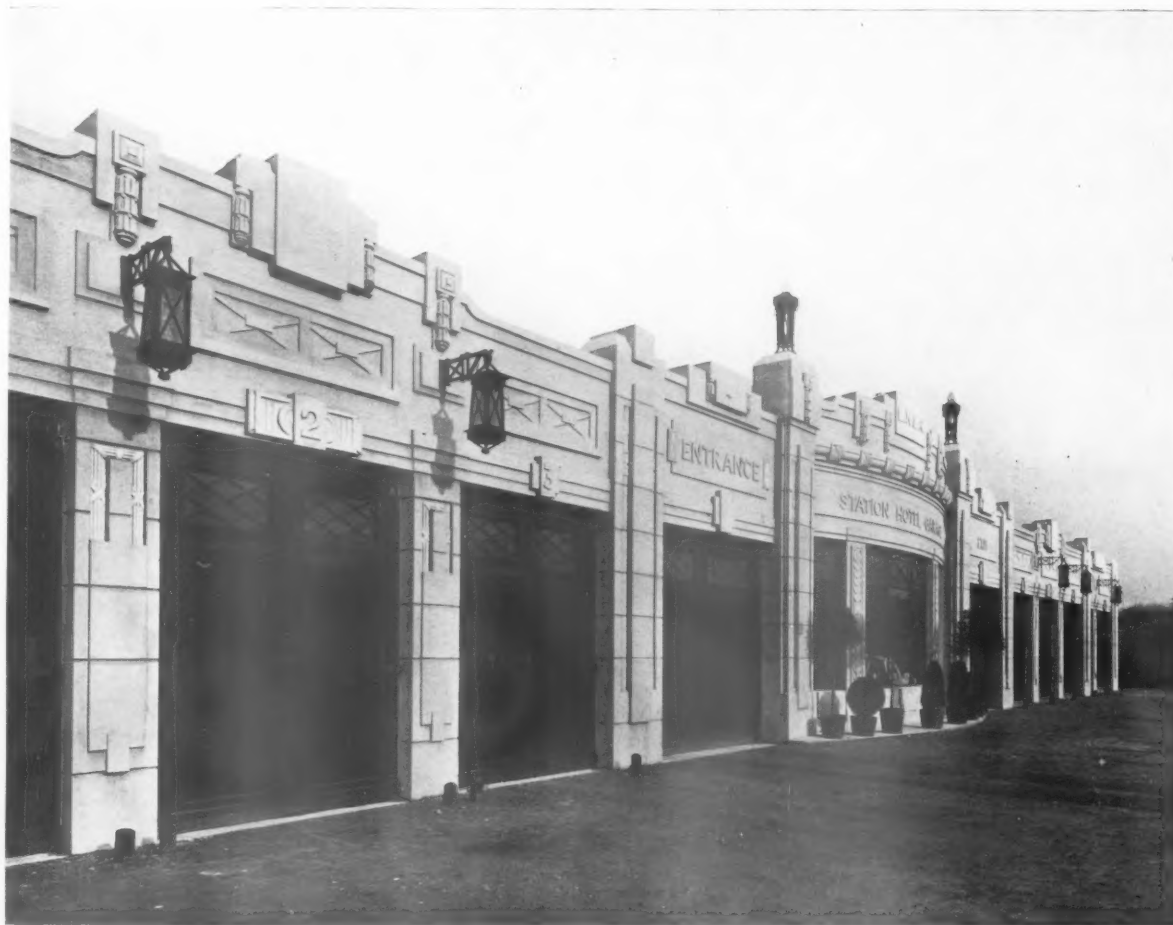
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TRADE AND CRAFT.

Marlborough College Memorial Hall and Precincts.

The front of this beautiful building, as will be seen in the illustrations given earlier in this issue, is Grecian in feeling to conform with the plan which is on the model of the Grecian theatre.

At the back the architecture has reverted to the more English style in the use of the small 2-in. Berkshire bricks, which gives a fine scale to the building and its mellowed colouring in the course of time.

The purpose of the small windows just above the plinth is to light the small music-rooms, while the large windows give to the theatre its natural illumination across the ambulatory behind the tiers of seats.

The Memorial Theatre is situated at the outskirts of Marlborough, justly described as one of the quaintest and most picturesque of English towns. Along its wide and curiously sloping street the observant lover of architectural styles can satisfy his critical faculty with the Tudor, Jacobean, and Queen Anne examples ranged side by side, intermingled with others less easily defined.

Marlborough's claim to beauty is not disputed, especially by the many who have felt the spell of the Wiltshire Downs and the sequestered peace of the great forest of Savernake, one of the noblest of England's wooded by-ways.

The choice of a site for such a building, stately in itself and noble in its purpose, must have caused anxious thought. Although on rather a low level it, nevertheless, has a position of prominence facing the main Bath Road. On the rear side the ground descends to the little River Kennet, and beyond the valley rises the typical Wiltshire Downs with a white horse upon it.

The ground in front of the theatre is laid out as a formal garden with a central area of paved brick, a hexagonal pool in the centre, the colouring of brick and stone blending well together giving an architectural setting to the whole building.

Leading from this garden there is an approach to the school

chapel, one of the finest buildings of its kind in the country. On the town side of this church and at the far end of the three-acre court is the famous Castle Inn, the old home of the Seymours and Somersets, rich in its romantic past, and bearing still much of its noble origin and of the hostelry to which it afterwards descended, which forms an important part in the College's housing accommodation.

Ferro-concrete material has been utilized in the foundations and in the flat roof, the latter being carried by beams in one span with no intermediate supports.

The most minute attention has been concentrated on sound insulation in this building, especially near the stage, where the walls are hollow and in the carefully constructed dome roof of the choir practice room. The important question of sound has been well considered by the use of cork tiling laid in the manner of mosaic along the ambulatory, and on the gangway steps constructed of ferro-concrete and covered with marble mosaic, rubber mats are laid flush with the surface.

No one will doubt that the architect has fulfilled his task in a manner worthy of the great Public School, and has expressed in a beautiful building the spirit of Remembrance to the memory of those to whom it is dedicated.

The general contractors for the building were Messrs. Holloway Bros., Ltd., of Grosvenor Road, London. Messrs. Holloway Bros. also undertook the ferro-concrete construction under Dr. Oscar Faber; in addition they executed all the internal joinery work. Messrs. Ames and Finnis, of London, provided the tiles for the roof of the hall, with their "Lombardic" half-round tiles, which present a neat appearance, as will be seen in the photographs which appear earlier in this issue. The flooring work was carried out by three well-known firms, namely, "Decolite" composition flooring by Messrs. Bell's United Asbestos Co., Ltd., and "Ruboleum" tiling was supplied and laid in the circular gangways by The Korkoid and Ruboleum Tile Co. of Glasgow and London. In the latter case the colour scheme selected was plain biscuit, and the ruboleum was laid with special adhesive direct on to a cement base. This tiling is $\frac{1}{4}$ in. thick and presents a silent, non-slippery surface. In addition to this, The Art

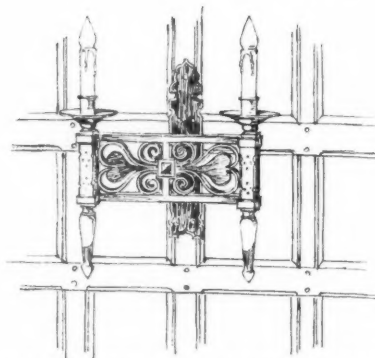
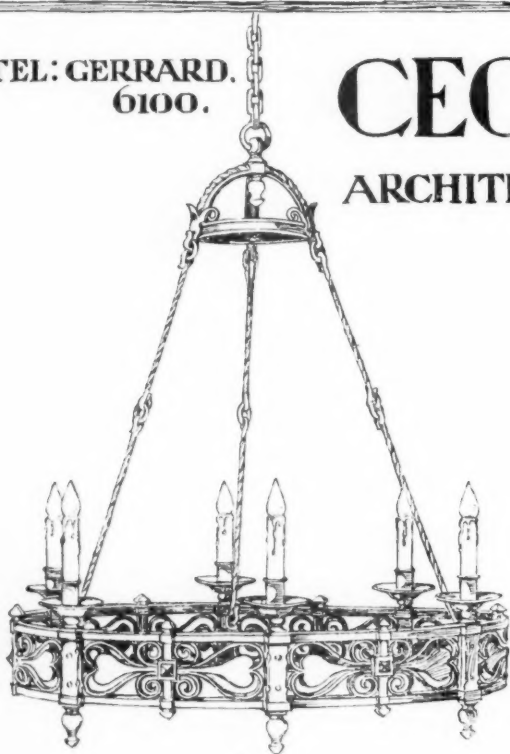
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Pavements and Decorations, Ltd., supplied their "Korktiles" for a portion of the flooring. Messrs. G. Matthew, Ltd., of London, provided certain special fireplaces for the architect. The whole of the decorative plasterwork was done by Messrs. G. Jackson and Sons, and the plain plastering by Messrs. G. Rome & Co. Messrs. A. C. Davis (Holborn), Ltd., were responsible for the door furniture; whilst the special handle for the main doors were provided by The Birmingham Guild, Ltd. All the hangings and curtains were supplied by Messrs. Heal and Son, Ltd., of London, and Messrs. Waring and Gillow, Ltd., provided the special chairs for the hall. Other sub-contractors were as follows: Messrs. J. Long and Sons, of Bath, the forecourt; Messrs. Rendell, of Devizes, undertook the work of the rose garden; whilst the shrubs and trees for the rose garden were supplied by Messrs. Hillier, of Winchester. The Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt work; Thos. Lawrence and Sons, of Bracknell, the bricks; the carved stonework was done by Mr. Esmond Burton; and the carved lettering by Mr. Lawrence Turner. The Ancaster stone for the frieze of names came from Thompson's Ancaster Quarries Co., Ltd., and the dressings of the doorways between the vestibule and the hall were supplied by The Hopton Wood Stone Firms, Ltd. Messrs. Wenham and Fowler, of Croydon, provided the casements and casement fittings, and undertook the electric wiring; the bronze fanlights and lead downpipes, Messrs. Thos. Elsley, Ltd. Messrs. John Bolding and Sons, Ltd., supplied the sanitary ware and fittings. The electric light fittings were provided by Messrs. Faraday and Sons, Ltd.; Mr. Esmond Burton; and Mrs. Stabler. The seats were supplied by Messrs. Cornish and Gaymer, of North Walsham.

Advice on Concrete.

Free technical advice and the use of the finest laboratory of its kind in Europe have become available to the public by a scheme of centralization of effort organized by the British Portland Cement Association. With the object of improving the advisory side of their work, this Association which is a non-trading body, has arranged for the transfer of several existing laboratories to their premises in Westminster, and the concentration at one headquarters will add greatly to the usefulness of the work.

The new organization is intended to advise anyone on any subject connected with concrete or on cement in its application to concrete.

A Resignation.

The directors of Messrs. Siemens Brothers & Co., Ltd., greatly regret to announce that owing to advancing years, Mr. George Chauvin has resigned his position as managing director of the company, a post he has held since April, 1899, during which time the works and manufacturing activities of the company have been very largely expanded, as indicated by its increased and paid-up capital, which, including debenture stock, has been raised from £425,000 to £2,854,300. The company, however, will continue to have the benefit of his experience and advice, as he will retain his seat on the board as a director.

The board has appointed Mr. Francis Hird, B.A., M.I.E.E., to succeed him as managing director. Mr. Hird has assisted Mr. Chauvin for many years in the management of the company, and for the past three years has held the post of general manager of the company.

Innovation in Coloured Pencils.

An innovation in ordinary coloured pencil manufacture—the production of thin leads instead of the large diameter leads hitherto employed—has been made by the American Lead Pencil Co. This change adapts the coloured pencil to a great variety of architectural and town-planning uses, especially in connection with maps, plans, charts, and diagrams. The colours available in the thin lead pencils are blue, red, green, and yellow. The pencils are named "Unique," and the composition used for the leads permits sharpening to a fine point and prevents the frequent breakages of leads. Many uses for the new pencil will readily suggest themselves, particularly in connection with city planning lay-outs, the mapping of streets and sub-surface structures, such as sewers and water, gas and steam-pipe lines, transit systems, traffic studies, progress diagrams on construction work, and organization and personnel diagrams. Samples of the new thin lead pencils can be obtained from Alpo Pencils Limited, 173-175 Lower Clapton Road, London, E.5.

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THE ARCHITECTURAL REVIEW.

Floodlighting a Newspaper Office.

The spectacular possibilities of floodlighting are becoming more widely recognized every day. The architect and the business man are both beginning to realize that the appearance of the exterior of a beautiful building is a very valuable asset to the tenant, and that any means whereby the architectural features may be made visible at night-time is an advantage to everybody concerned. This is the *raison d'être* of floodlighting, in so far as



A NIGHT PHOTOGRAPH OF THE "SHEFFIELD TELEGRAPH" BUILDING.

it is applied to the illumination of business premises, public buildings, monuments, etc.

The recent installation of floodlight projectors to illuminate the tower of the "Sheffield Telegraph" building is a noteworthy example of this particular application of floodlighting. This building is situated in the High Street, and is right in the centre of Sheffield. Owing to the fact that it is constructed of glazed light-coloured stone it lends itself particularly well to floodlighting.

The installation, which consists of eleven B.T.H. floodlight projectors, was designed by the British Thomson-Houston Co., Ltd., and the work was carried out by the Borough Billposting Co., of 57 Long Acre, London, W.C.2.

The "Sheffield Telegraph" building stands on high ground, and the tower is visible in the day-time for a considerable distance in all directions. As a result of the floodlighting this tower is even more of a landmark by night than by day, and affords a most excellent means of impressing the name and local habitation of the newspaper upon the people of Sheffield.

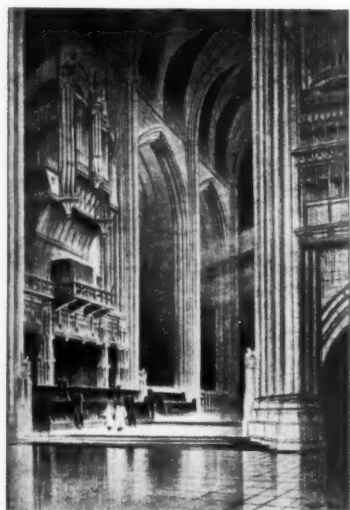
Floodlighting was originally introduced into this country by the British Thomson-Houston Co., Ltd., who have carried out many notable installations. The projectors used for this work are available in a number of types, with tripod, bracket, and other forms of mounting. All are completely weatherproof. Those employed for the "Sheffield Telegraph" installation are fitted with projector type lamps, but in the case of other B.T.H. projectors standard Mazda gas-filled lamps may be used.

A New Brochure.

Messrs. Melville, Dundas and Whitson, of Glasgow, have sent us a copy of their new brochure, in which particulars are given of a number of important contracts carried out in reinforced concrete by this firm. The works range from simple concrete flooring contracts to engineering structures of a varied character. The illustrations, the names of architects and consulting engineers, and a list of contracts secured by Messrs. Melville, Dundas and Whitson, are impressive evidences of the nature and quality of the work they are doing.

A Reconstructed Company.

We are informed that the business of Light Steelwork, Ltd. (in voluntary liquidation) has been acquired by Mr. J. Charles Moore, late manager and director, and that a new company entitled "Light Steelwork (1925), Limited," is in process of formation, of which Mr. Moore will be managing director. The offices of the new company are situated at 25 Station Road, Harlesden, N.W.10 (close to Willesden Junction Station).



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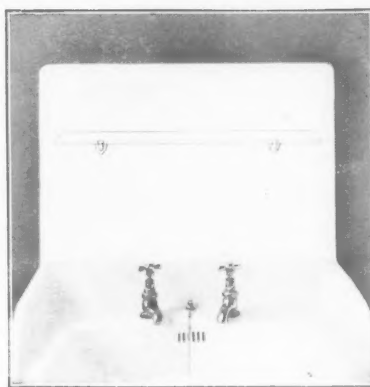
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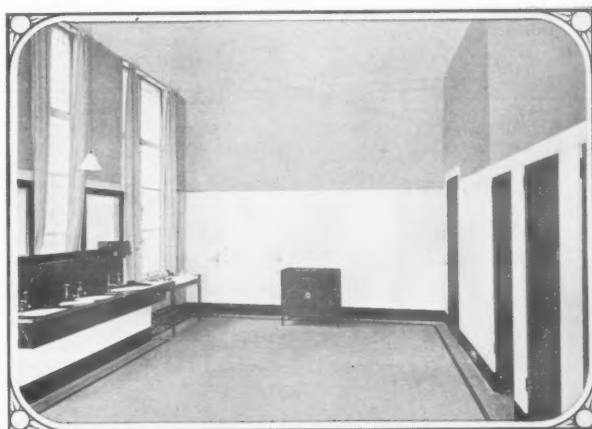
White and Black Vitrolite Dado surrounding Bath.



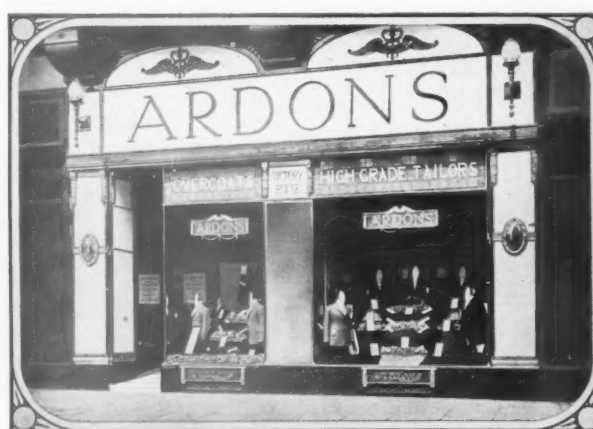
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The New Rapid-Hardening Cement.

Expert's Report on a Recent British Discovery of a New Cement.

A critical report has been made by Dr. Oscar Faber, consulting engineer to H.M. Office of Works, and one of the leading British authorities on cement, upon the recently-discovered rapid-hardening British Portland cement "Ferrocrete," a material by means of which many English local authorities are already shortening the period of work upon house-building, road-making and repair, etc., by many days.

Tests made under Dr. Faber's supervision at the City and Guilds Engineering College, South Kensington, revealed that concrete cubes made of the new cement have crushing strengths $3\frac{1}{2}$ times as great as ordinary cement at four days, $3\frac{3}{4}$ times as great at four weeks, and $2\frac{1}{2}$ times as great at three months. Reinforced concrete beams made with the new cement will stand a breaking load approximately 3 times as heavy at four days, twice as heavy at four weeks, and $1\frac{1}{2}$ times as heavy at three months as beams made with ordinary cement. There is indication, he adds, that these last-mentioned ratios (in each case) are maintained at greater ages.

The results of the tests indicate, he concludes, that rapid hardening "Ferrocrete" is a product of very great practical importance indeed. Not only will it have special importance in cases where an early strength is required (for example, in the case of road construction, special surface finishes requiring to be subjected to wear at an early date, and places where early removal of centering and temporary supports are required, as well as where ferro-concrete piles are required to be driven at an early date), but the greatly increased strength of the material, even at later dates, should justify substantially greater working stresses with this improved material, and so make it specially useful and economical for reinforced concrete columns, beams, and structures generally.

Its use for this purpose will, of course, depend to some extent on its increased cost, and as it is understood that this is quite moderate, there are many places where its use would be entirely justified.

It will, of course, be important to get local authorities to make provision for higher working stresses for this stronger material before full advantage of its valuable properties can be taken in many structures subject to such regulations, and this is a matter which ought to have the prompt attention of scientific bodies.

Copies of the report are available free of charge from the British Portland Cement Association, 20 Dartmouth Street, London, S.W.1.

The Lure of Wembley.

Movement, more than anything else, attracted the crowds last year at Wembley. It is safe, then, to predict that the second edition of the Gas Exhibit, now prepared in the same pavilion as before in the Palace of Industry, will receive much attention; for it is full of movement.

Prominently displayed on the main gangway a motor manufacturing exhibit is arranged, showing the important industrial uses of gas in that industry; while a similar space on the other side of the pavilion entrance shows two gas engines—one of them of 150 horse-power and over 9 ft. high—continuously at work, and among other duties supplying the power to a gas wafer-baking oven from which is produced no less than 100 tins of wafers daily.

What with the addition of daylight cinemas illustrating the thousand-and-one domestic and industrial uses of gas, and cookery demonstrations and lectures, there is no fear of the gas industry having an exhibit which lacks life.

An Announcement.

Mr. Walter Cassey, having resigned his position as London Manager for Messrs. Tonks (Birmingham) Ltd., has accepted a Directorship with Messrs. A. E. Davis (Holborn) Ltd., Wholesale Ironmongers, 64 High Holborn, London, W.C.1.

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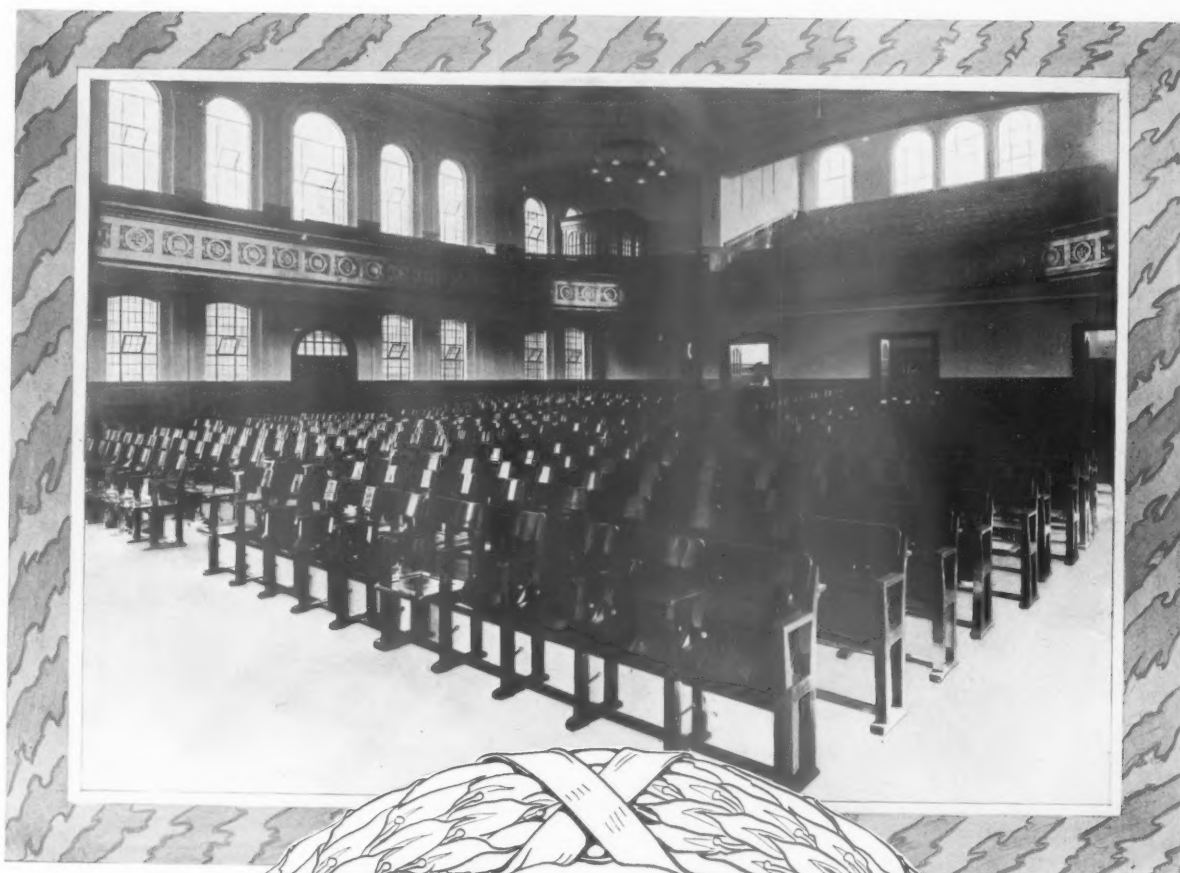
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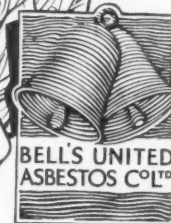
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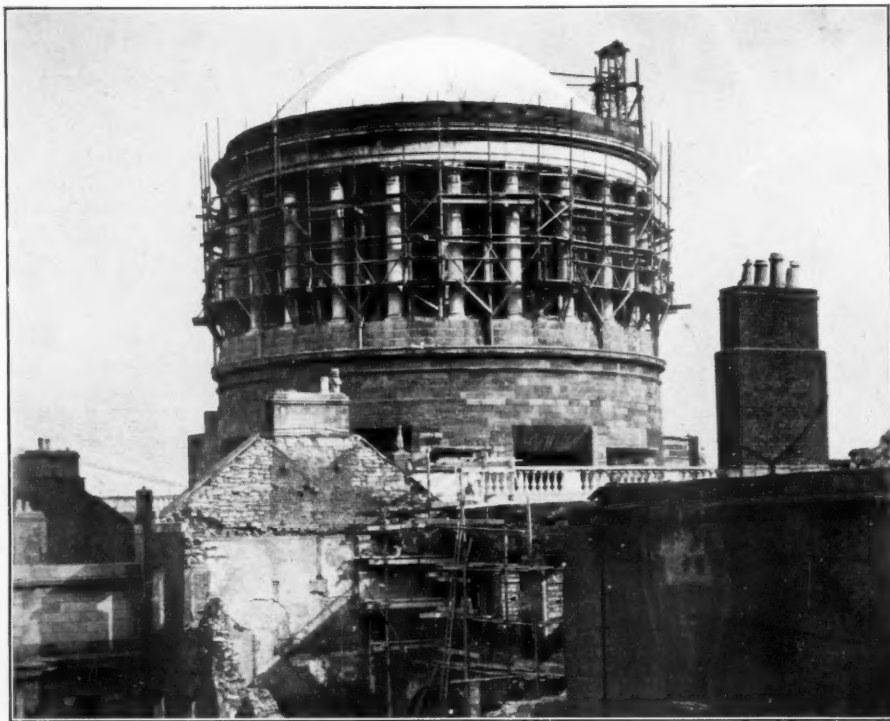
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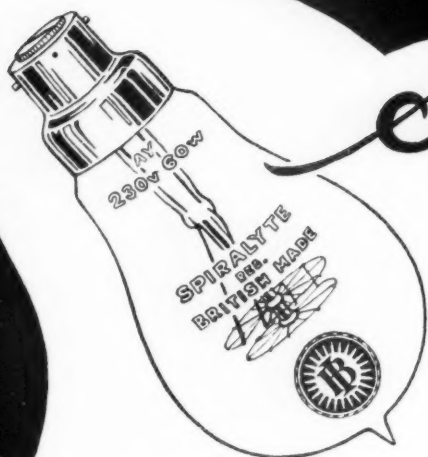
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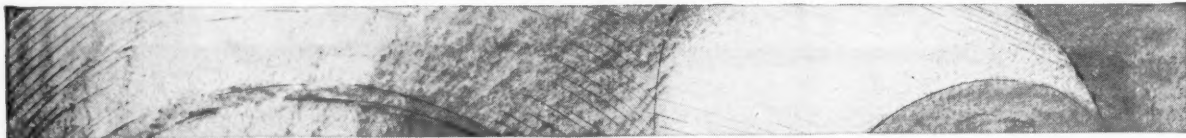


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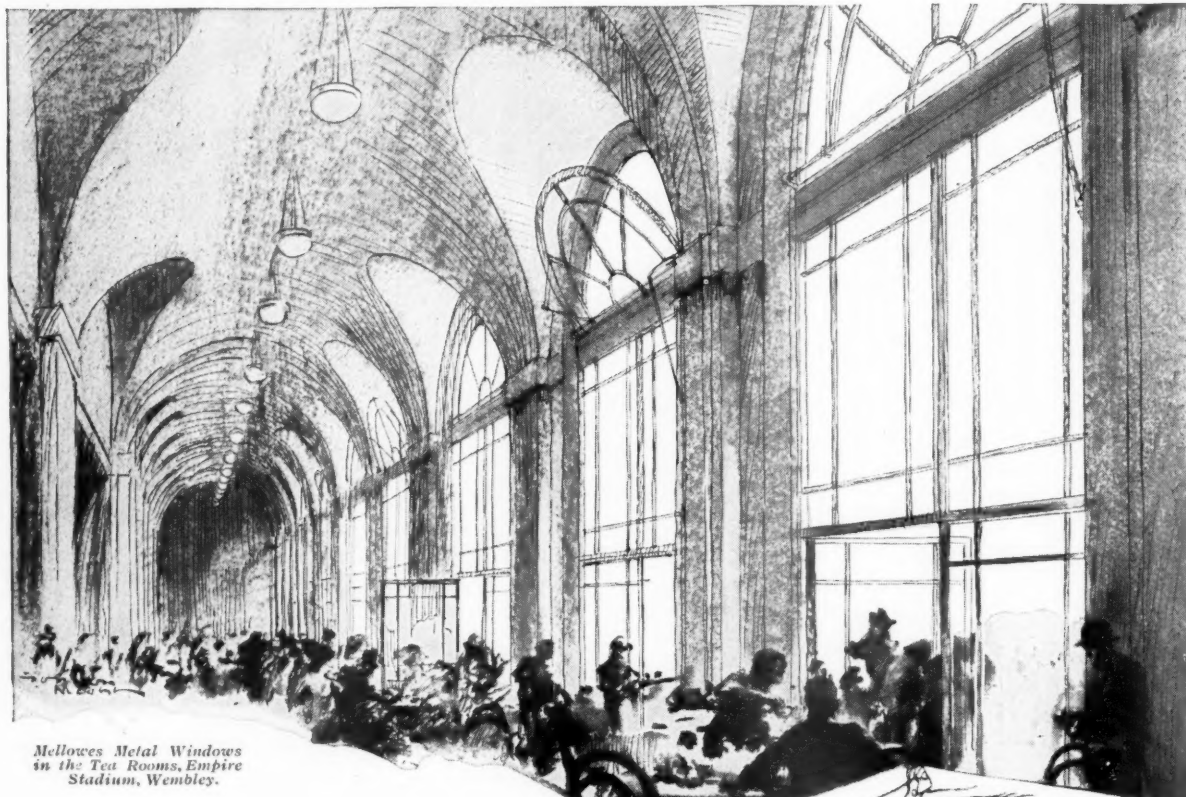
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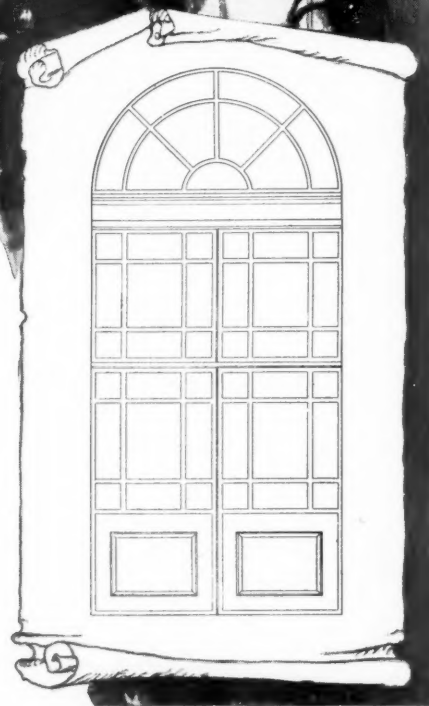
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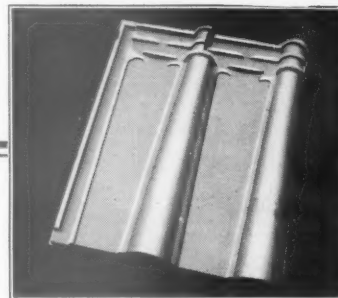
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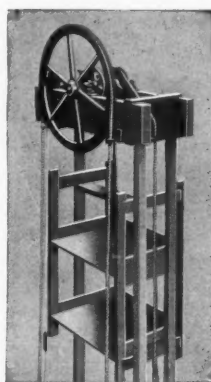
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