Wednesday, December 3, 1924 Vol. LX. No. 1561.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

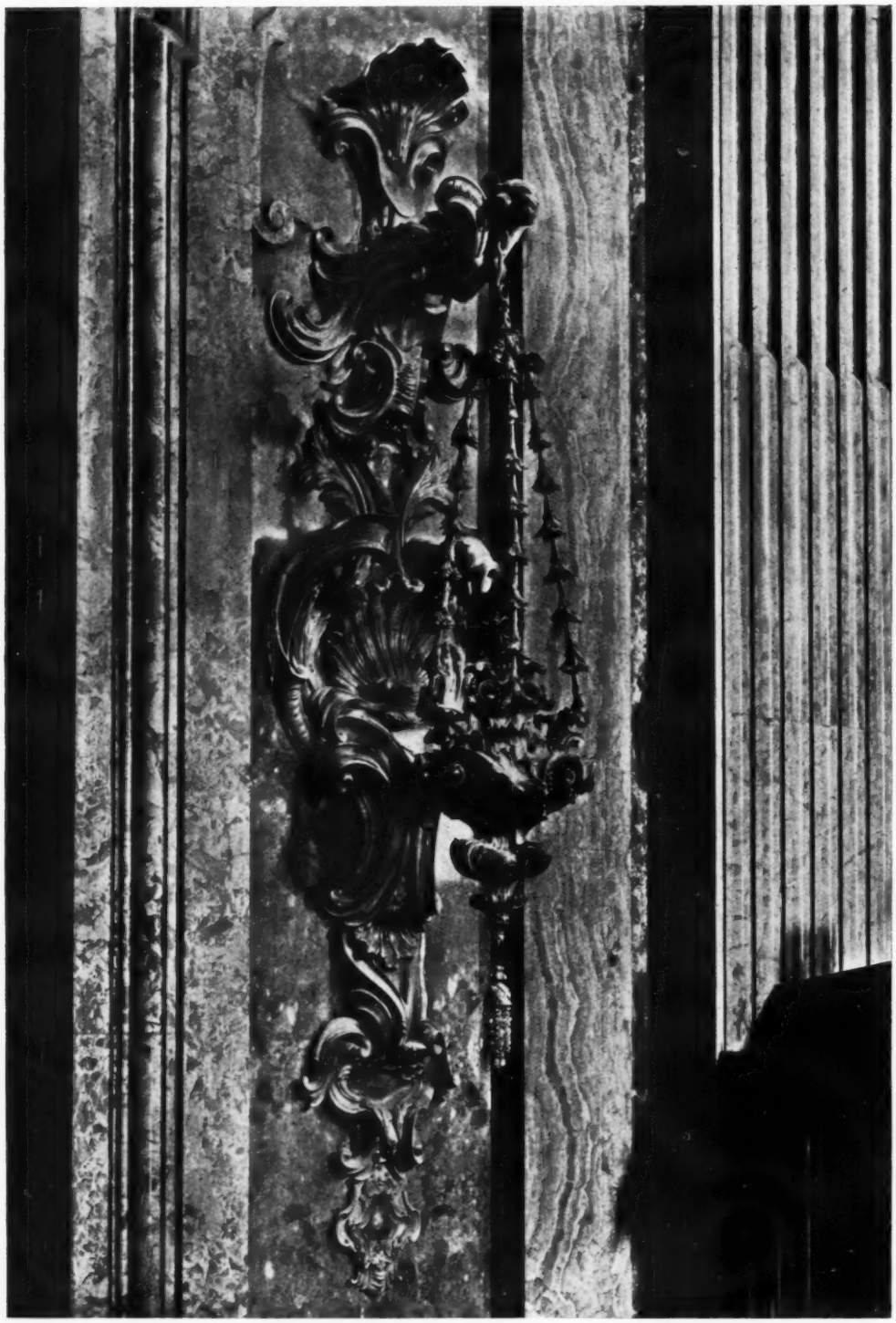
To Penshurst.

Thou art not, Penshurst, built to curious show
Of touch or marble, nor can'st boast a row
Of polished pillars, or a roof of gold;
Thou hast no lantern, whereof tales are told,
Or stair, or court; thou stand'st an ancient pile,
And, these not grudged, art reverenced the while;
Thou joy'st in better marks—of soil, of air,
Of wood, of water; therein art thou fair.

Ben Jonson.

27-29 Tothill Street, Westminster, S.W.1.

Details of Craftsmanship. 29.—Bronze Lamp-Bracket in the Church of Christ, Rome



This lamp-bracket, with its hanging lamp, revealing Italian Renaissance craftsmanship at the height of its power, is to be found in the Chapel of the Madonna, the Church of Christ.

THE

ARCHITECTS' JOURNAL

27-29 Tothill Street, Westminster, S.W.1.

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The Return to Civic Architecture

IF anyone were to-day to make the assertion that there is evidence of a return to those ideals of civic architecture which were lost sight of during the industrial revolution, he is likely to be violently contradicted, especially by those who are witnessing the transformation of London, which is now taking place. The evidence to the contrary seems overwhelming, for in many quarters of our towns we are destroying such civic architecture as we have inherited rather than creating new examples of it for the benefit of posterity. As Professor Reilly has pointed out, "Regent Street was our one definitely metropolitan street, and what we have achieved in its place is but a few isolated, disconnected and singularly unfortunate attempts at unity and a street which is no more and no less than any other shopping street, a cockpit for competing shopkeepers." It is a tragic spectacle. In a few days the County Fire Office will be no more. Not so long ago it had been freshly painted, and it looked quite débonnaire. Brightly clad, and with a cheerful countenance, it has met its end. The rest of the noble architectural company to which it belonged have already perished. None of them were old or useless buildings, but to the very day of their decease they appeared to be instinct with youth, beauty, and vitality. In trying to understand the significance of these events it may be useful to assume an exaggerated naïveté as of a stranger coming from some remote world whose inhabitants are accustomed to judge things by their simple appearances. If such a person had seen the Quadrant, the County Fire Office, and Swan and Edgar's shop, and had also looked at the miscellany of vulgar buildings on the east side of Piccadilly Circus, and had been told that it was proposed to demolish the former and leave the latter standing, he would have declared that a people capable of such an act must be stark mad. Yet we are not mad. We merely need criticism and guidance of the right kind, having suffered too long from false criticism and wrong guidance. The two important books by Professor Reilly, which have just been issued by the Liverpool University Press, go far to provide the standards of criticism by which urban architecture shall be judged. He passes under review all the chief types of modern building, private houses, shops, banks, and railway stations, pointing out where they seem an adequate expression of our civilization, and where they fail. The vigorous modernity of his outlook, however, does not prevent him from paying tribute to the extraordinary genius displayed in the architecture of the eighteenth and early nineteenth centuries.

Nobody would have the right to utter a word of protest against the demolition of old Regent Street if architects of to-day had been able to collaborate in the design of a street equal or superior to that stretch of golden stucco which seemed to contain within itself the very soul of London. Because at the present moment civic architecture has not sufficiently recovered from the maladies which afflicted it during the last century, it is all the more necessary to cherish every example of noble building which still remains to us. The time may come when with a good conscience we can dispense with the tuition of our Georgian forefathers, and shall have learnt from them the lesson of architectural manners, but that time seems still rather distant. Meanwhile everywhere the leases are falling in and beautiful buildings designed a hundred years ago are now in jeopardy. It is not too late to save many of them. These buildings should be saved, not because they are old, but because they are beautiful; not because they are behind us, but because they are ahead of us, and embody certain qualities urgently required in the architecture of to-morrow. Yet there is no need for anyone to decry the uses of destruction. Modern reformers might with very great advantage destroy and re-design the vast majority of buildings belonging to the period between 1850 to the present day. If, however, we cannot destroy them, we must hold them up to obloquy, so that it may be counted a crime to erect new buildings in a similar style. It is a great merit of Professor Reilly's books that they perform this service most admirably. We are all only too familiar with the kind of building which he describes in the following words: "It is a vast cellular structure, the cells of which, elaborate as they are, appear to have no organic relation to one another. Study this street front as you will you cannot discover the law of its composition. Windows, turrets, balconies, and gables are scattered about in endless confusion. Some of the windows are square-headed, some round-arched, sometimes they are single, sometimes in pairs, some are oriel windows, others are bays, but why they take these varied forms and what is the law of their periodicity no man knows. The disorder of the general outline and detail is not helped either by the multiplicity of the materials used. They are yellow-glazed terra-cotta, brown-glazed bricks, and polished granites. All these, while adding to the general complexity, give the resulting *mélange* an oily, gluey texture to which the soot of the town sticks in some places but not in others."

This is a masterly example of that special kind of description which with light and sure touch yet passes an irrefutable judgment. The significance of this passage and of many others of equal wit and appositeness which are

to be found in Professor Reilly's books lies not only in the value of the opinions expressed, but in the fact that they have been published by a great newspaper such as the "Manchester Guardian" for the weekly edification of its readers. That is the ground for considerable optimism as to the trend of modern architectural development. Professor Reilly seeks out and exposes to ridicule what is inane, pretentious, or vulgar in modern building, but he is also careful to commend what is good. There is, however, only one Professor Reilly, and only one "Manchester Guardian," and a truly formative criticism of architecture requires that many more newspapers should print the frankest comments on every important new building erected either in London or in provincial towns; and not only the important buildings, but what are seemingly the unimportant ones should frequently be passed under review in order that these also should be made to conform to civic standards. For, as Professor Reilly says, "There is every reason that the public should take as keen an interest in its new buildings as it does in new books and plays—more reason, indeed, because the latter need not be seen, and the buildings must. No man builds to himself alone."

A. TRYSTAN EDWARDS.

Steel Houses

At a time when the supply of houses is seriously behind the demand, every proposal to make up the deficiency must receive careful and sympathetic consideration. This is the justification of the issue last week of an interim report on steel houses by the committee appointed by Mr. Wheatley to inquire into new methods of house construction. After a careful and critical consideration of the Weir type of house, the committee have come to the conclusion that it is "deserving of encouragement and might form part, at least, in the meantime, of the structures that go to house the people, particularly in cases where cheap land is available, where foundations are doubtful, and where for any reason more permanent types of buildings cannot quickly be provided." Architects cannot be expected to wax enthusiastic over the steel house, even when it receives the blessing of an important committee. (We note, by the way, that Major Barnes, a member of the committee, is not among the signatories to the report.) The standardized steel house, with its suggestion of the mining camp, is not a solution of the housing problem that can be regarded as satisfactory either from the æsthetic or the sociological point of view. We say this without any prejudice against the Weir house, which, in the view of the committee, is at least a practical proposition. What we would urge is that the long view must be taken. As the committee shows, the life of such houses would be shorter and the maintenance charges heavier than in the case of brick or concrete buildings. These practical disadvantages, together with the admitted æsthetic deficiencies, make up a total on the debit side of the account that reduces the credit side to inconsiderable proportions. But the steel house may yet do much to expedite the solution of the housing problem. The prospect of seriously diminished prosperity as a result of the widespread building of steel houses, should induce those who engage in the provision of houses on conventional lines—both manufacturers and operatives—to abandon the pursuit of selfish sectional interests, and set to work on giving the country the houses that it really wants.

Brick and Concrete

"Custom dies hard" is a saying that is nowhere more convincingly illustrated than in the building industry. As Sir Owen Williams has lately pointed out, our housing difficulties are largely due to the fact that we are not using concrete in commercial building to the extent that it could be used. Instead, we continue to use up in such work millions of bricks that might well be released for housing. Conservatism is an excellent thing so long as it conserves; but when, in one direction, it merely produces waste, and in another paralyses an essential building service, it ought to give way to a more progressive order of things. Sir Owen Williams urges that our housing difficulties would be enormously reduced if (1) concrete were used up to the damp-course level in all houses; and (2) brickwork were restricted solely to domestic architecture, or elsewhere in walls not exceeding 9 in. thick. Architects and builders, through their organizations, might well investigate the possibility of evolving and putting into effect a national building policy on some such progressive lines.

The Empty House Scandal

In the Boreham Wood and Elstree neighbourhood much indignation is felt just now at the action of the Barnet Rural District Council in commandeering one of the new Council houses, erected under the local housing scheme, and in sub-letting a room to the overseers of the parish. "What is one among so many?" is the thought that springs to mind. It is the principle that matters, of course, and in protesting against an action that unnecessarily deprives the community of one house at a time of acute housing shortage, the residents of Boreham Wood and Elstree have done well. Far too much housing accommodation is being wasted to-day. In many suburban roads numbers of empty houses are to be found, the landlords having turned the tenants out in the hope of being able to sell the houses at extortionate prices. It ought not to be possible for landlords to take so unfair an advantage of public extremity. If the residents of districts in which such a state of affairs exists would protest vigorously to the local M.P. the Government might be moved to put an end to what, in view of present difficulties, is nothing less than a public scandal.

The City Churches

Lord Knutsford, in a letter to "The Times," reproves Sir Reginald Blomfield for not pointing out in a communication to the same newspaper that although Lord Phillimore's committee proposed to destroy the churches of St. Botolph, Aldgate, St. Michael, Cornhill, and St. Magnus, they had recommended that the towers should be preserved. It is not a very material point. Some of Wren's towers still exist where the churches have been destroyed—notably St. Mary Somerset, and St. Olave, Old Jewry, and very melancholy they look in their isolation. These towers are admittedly a factor in the City's picturesque sky-line, but without their churches they are no more than the floating masts of ships that have gone to the bottom. Let us have no more of this dangerous talk of preserving towers. We want to preserve the churches. Even if, as Lord Knutsford suggests, St. Michael's and St. Peter's become hidden by tall buildings, this is assuredly no argument for their demolition.

Architects and the Press

We have noted with pleasure the growing interest of the daily Press in the subject of architecture. It is quite a common thing, nowadays, to find whole pages devoted to the description of modern buildings. Also, alas! it is quite a common thing still to find no mention of architects' names. In a recent issue of "The Westminster Gazette" there was a long illustrated description of a new building for the Midland Bank at Bristol. The work of the specialist firms of contractors is described in detail, and, although there is an approving reference to the policy of commissioning architects to design these buildings, it is apparently assumed that their names are of no consequence, for in the case of the Bristol bank they are not mentioned. The architect, though a modest, is a very human being, who is quite properly pleased when his existence is acknowledged, as we hope it will be in all future articles in "The Westminster Gazette."

New Towns for Old in Palestine

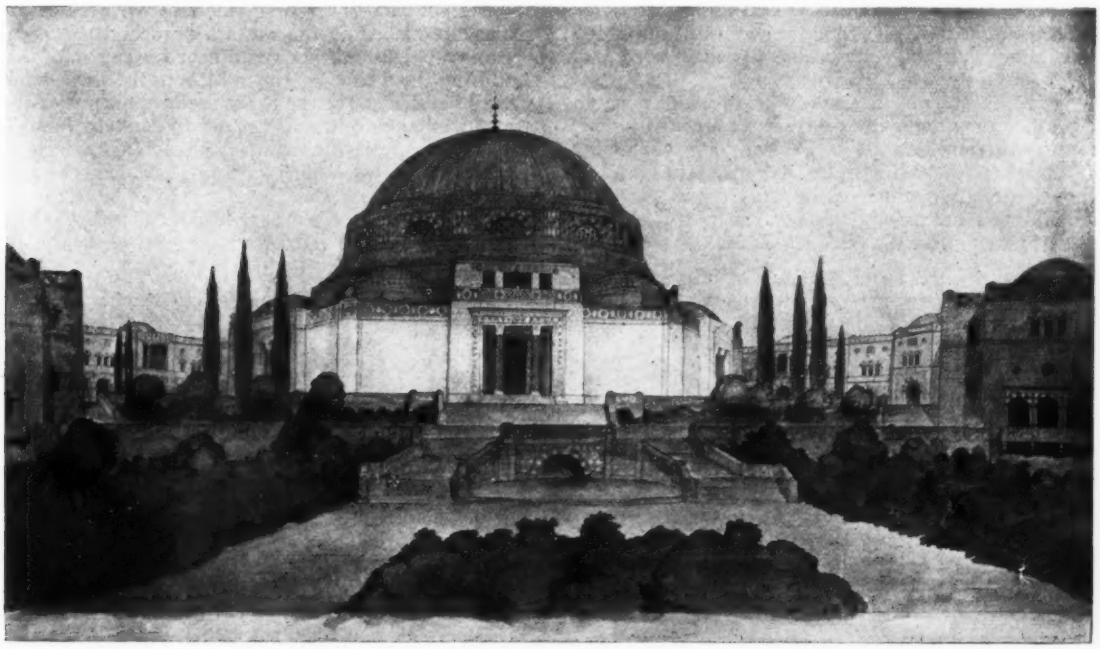
By MABEL MAAS

THE HEBREW UNIVERSITY OF JERUSALEM

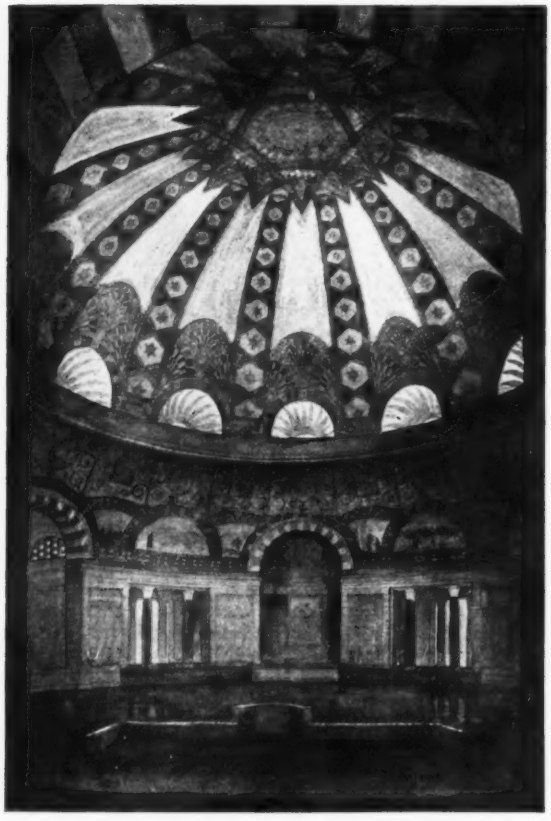
THE style of architecture in Palestine is in an embryonic stage; it presents incongruities, which have led the Government to require all plans to be submitted for approval, but it has a group of brilliant devotees, Jewish and Christian, and now, through the immigration taking place from west to east—the east requiring light arcading and cool interiors, the west serviceableness—the uncertainty about its adolescence is at least intriguing.

Of the new town plans for Jerusalem those respectively by Geddes and McLean are important. As both divide the city into "zones," i.e., areas according to occupation, etc., their fate will depend on the public spirit of the citizens; and as McLean takes the railway for the centre, assuming the city to grow from that point, whereas Geddes's hypothetical centre starts from the future university on Mount Scopus, neither plan can be selected until it is ascertained whether the political side of Jerusalem will predominate or the cultural. Professor Geddes and Mr. Mears, the Edinburgh architect, spent the autumn of 1919 working out beautiful and grandiose designs for this proposed university, which is to be so grouped that each building as it is erected will be complete in itself. Several schemes have also been draughted for a citadel garden in Jerusalem, and a rampart walk that will form the centre of a park system and set the Holy City in its midst.

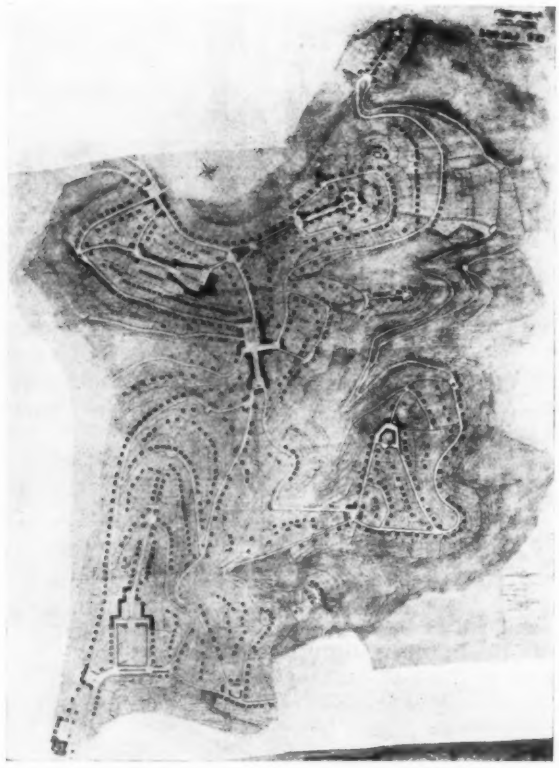
Owing to their population the old towns will not be easy to improve, but the stream of Jewish agriculturists calls for settlements in new country quarters, and scope is given to Richard Kauffmann, architect for the Palestine Land Development Company, to apply his two ruling principles to villages and garden cities. First, to throw into relief the physical beauty of the country, he subordinates his designs to the features of the land he is laying out. Secondly, as he himself puts it, "Whatever human settlements have in common, and should elevate, must be grouped together in monumental edifices, both the practical and the ideal." Accordingly he enthrones educational, civic or



THE CENTRAL HALL OF THE HEBREW UNIVERSITY OF JERUSALEM.
PROFESSOR PATRICK GEDDES AND F. C. MEARS, JOINT ARCHITECTS.



THE HEBREW UNIVERSITY: THE CENTRAL HALL.

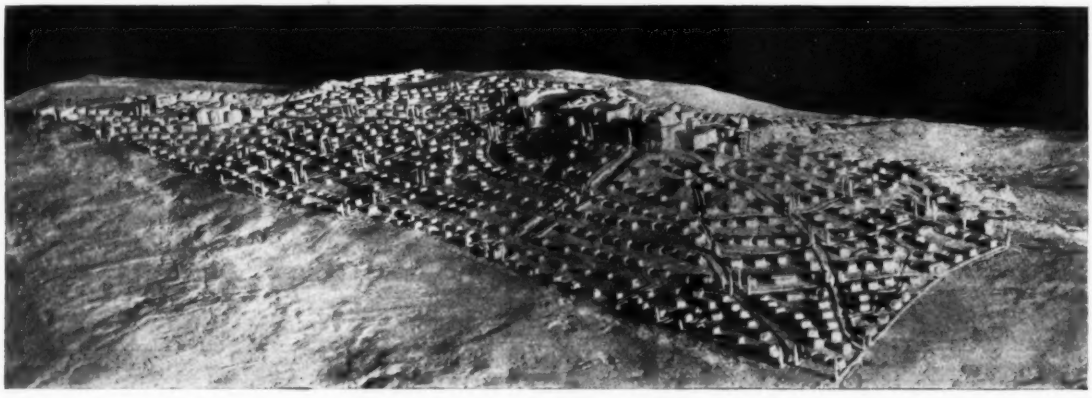


KAUFFMANN'S GARDEN CITY PLAN FOR MOUNT CARMEL.

communal institutes on his highest eminences. Literally and figuratively the inhabitants look up to them. In the Palestine Pavilion at Wembley was a model of his village of Nahalal. The village is constructed on a round hillock rising gradually above an expansive fruitful plain. The ground on the summit is devoted to the school, the co-operative stores, and the communal office. To show that this and no other is the pivot of the settlement the various forms of occupations and livelihood are grouped round it in a series of inner and outer rings, and the main road leads up here.

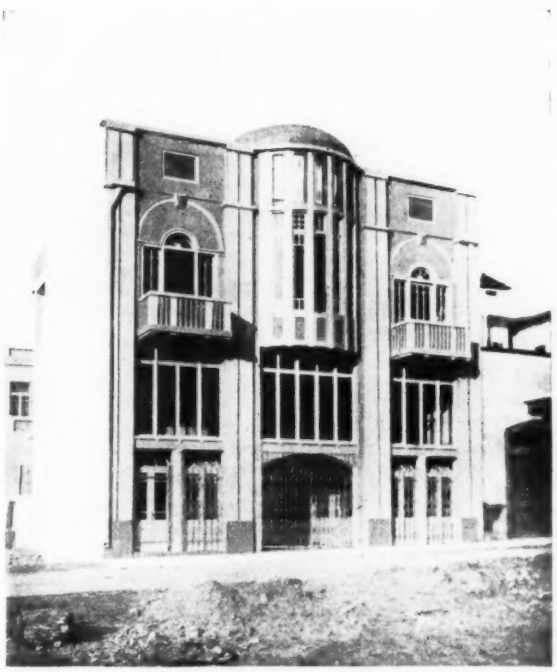
In the pavilion hang his designs for a garden city waving in and out of wadies and embowered in the wooded terraces of Mount Carmel, and his plan for Talpioth, a future suburb-city of Jerusalem, which further points his system. Roads and houses are already begun on this rising tableland, which allows for a net area of 1,294,658 sq. pics (801,488 sq. metres), private plots with houses. At the left entrance, in the architect's design, are the hotel and immigration office, co-operative stores and market, post and municipal offices, accessible by a broad thoroughfare and intersecting arteries, as are also the hotel and immigration hall, etc., at the right entrance to the town, which is approached from Bethlehem. While sports ground (area 21,936 sq. pics —12,600 sq. metres) and parks and plantations (area 160,892 sq. pics—92,450 sq. metres), with cafés and tea-rooms, are placed on the western borders, the school building and a second market stand near the centre of the town. And from this point, bearing a little to the right, what there was of parallelism in the roads inclines to impressive semi-circular sweeps; all roads appear to converge, and for one purpose—to fall into a spacious avenue which ascends to the altitude whereon is planned the domed academy of arts, the synagogue, and town hall.

In Palestine there is a dearth of wood; silicate bricks are used, cement, and reinforced concrete, but the building



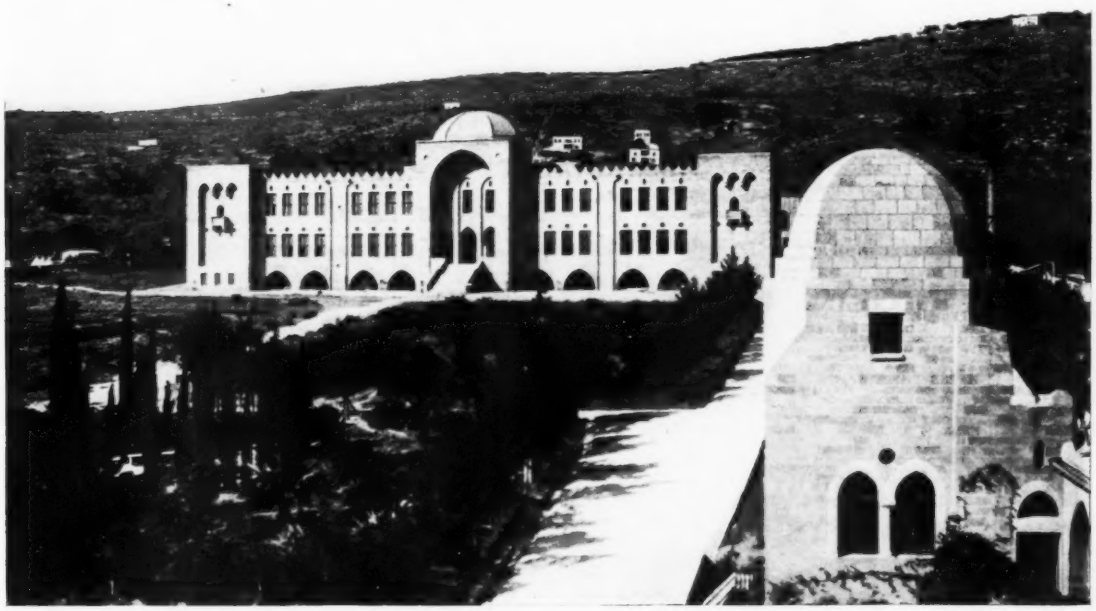
KAUFFMANN'S PLAN FOR TALPIOTH.

THE PLAN OF NAHALAL.



A BUSINESS HOUSE.

material supplied in many parts by nature is limestone. At Wembley were exhibited specimens of Palestine stone, and a crocus gold marble with slanting rosy veins. The quarries are worked by the Jewish Co-operative Building Association, which is trying to become independent of the foreign market. The guild also hopes to develop the industry from an æsthetic standpoint, and when the Pro-Jerusalem Society will have further revived the crafts of mosaics (to catch warm rays !) and coloured tiles for friezes and for framing doorways and important windows, or for incrustation of arches, richer effects should be forthcoming in dwelling-houses. Public buildings fare better. The Technical School at Haifa is the work of the architect Baerwald, whom the Zionists can be proud to have. Flanked at each end by a square tower with an arched opening in the wall and projecting balcony, the principal building is a solid oblong, elongated to the eye by a double range of square-set windows barred with iron, carried over a base of arched semi-vaults. The broad flat lights of this surface are broken by a very deeply recessed entrance. It is in the shape of an arch taken round a whole upper tier of three windows and the pillared hall, to which a flight of steps leads up. And while this porch is crowned by one of those cupolas which secure a measure of grandeur in small masses of light, it draws to itself a breadth of shadow—the keynote of a trenchant style.



THE TECHNICAL SCHOOL, HAIFA. BAERWALD, ARCHITECT.

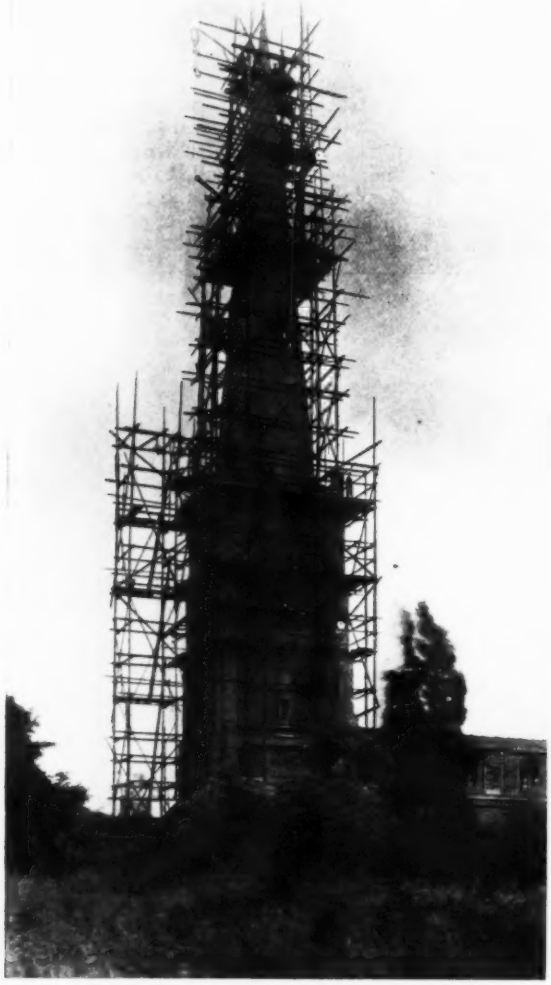
St. Ives Parish Church, Huntingdon: The Rebuilding of the Spire

LESLIE T. MOORE, F.R.I.B.A., Architect

THE rebuilding of the spire of All Saints' Church, St. Ives, Huntingdonshire, which was wrecked on March, 1918, by a British aeroplane, has been completed. The aeroplane dashed into the spire and fell into the north aisle, the pilot being instantly killed.

About 50 ft. of the spire fell in two portions, into the west end of the north and south aisles. The spire was cut in half; the pinnacles and battlements of the tower ruined; about 30 ft. of the north and south aisles were open to the sky; the nave roof was full of holes; the bell-wheels and frames were smashed, the bells lying on the floor of the belfry; about forty of the beautifully carved oak seats in the western portion of the aisles were broken; the stone flooring, marble monuments, memorial tablets and inscriptions were damaged; one of the statues on the nave pillars was thrown down; and the organ was full of dust and could not be used.

The height of the tower and spire is 151 ft., and that of the spire about 80 ft. The latter has been often seen in pictures in London and other exhibitions. In 1745 the spire was rebuilt; in 1822 and in 1845 it was restored; and in 1880 it was rebuilt by Sir A. W. Blomfield—the thickness of the stonework throughout varying from 5 in. to 4½ in.



THE SPIRE SCAFFOLDED FOR RE-BUILDING.

THE DAMAGED SPIRE.

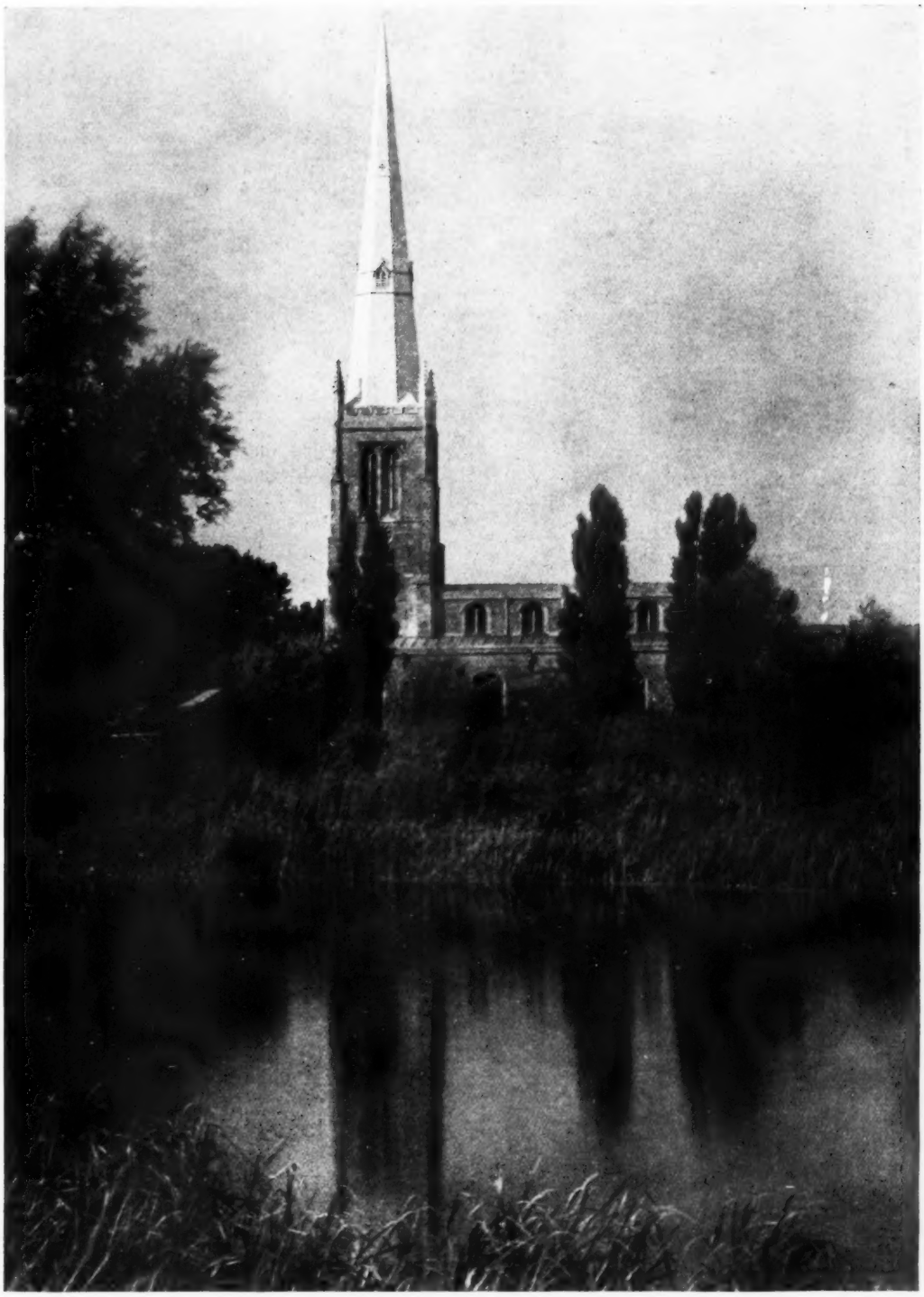
The present church dates from about 1460, and is a good example of that period. The design of the tower standing within the building is somewhat exceptional. The lower stage consists of four large piers arched over at a height of about 25 ft. The west window fills the outer arch, and those to the north and south, strengthened by lower arches ranging with those of the arcades, open into the aisles; probably to permit of processions besides architectural effect, which is enhanced by the vaulting over this lower stage of the tower. The large belfry windows are very probably later insertions, and the manner in which the jambs are bonded to the ashlar facing is remarkable.

The design of the former octagonal broached spire, which was built of Weldon stone in 1880, has been followed in the rebuilding recently carried out, but all the new stonework is from the Clipsham quarries, and varies in thickness from 8 in. at the base to 5 in. The mediæval squinch arches at the angles of the tower under the broaches are beautifully built, and still serve their purpose, though a reinforced concrete floor has been introduced at the base of the spire to form a horizontal tie, in which the tower was deficient. Internally the tower wall has been grouted, and in part refaced where damaged.

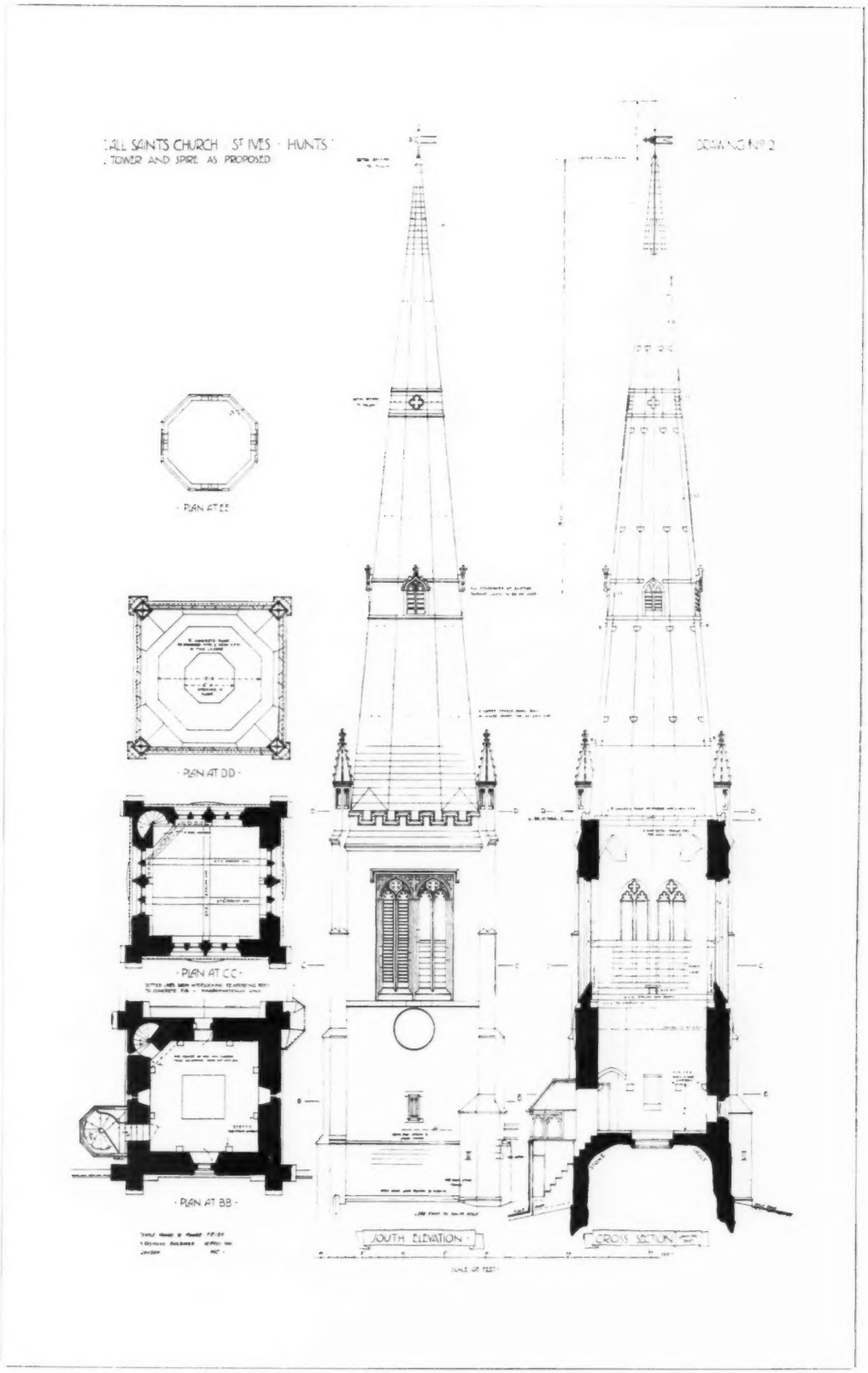
The registers of the church date from 1561, and the vestry book contains a signature of Oliver Cromwell, who was overseer in the town for five years.

The work of rebuilding has been carried out by Messrs. E. Bowman and Sons, of Stamford, Lincs.

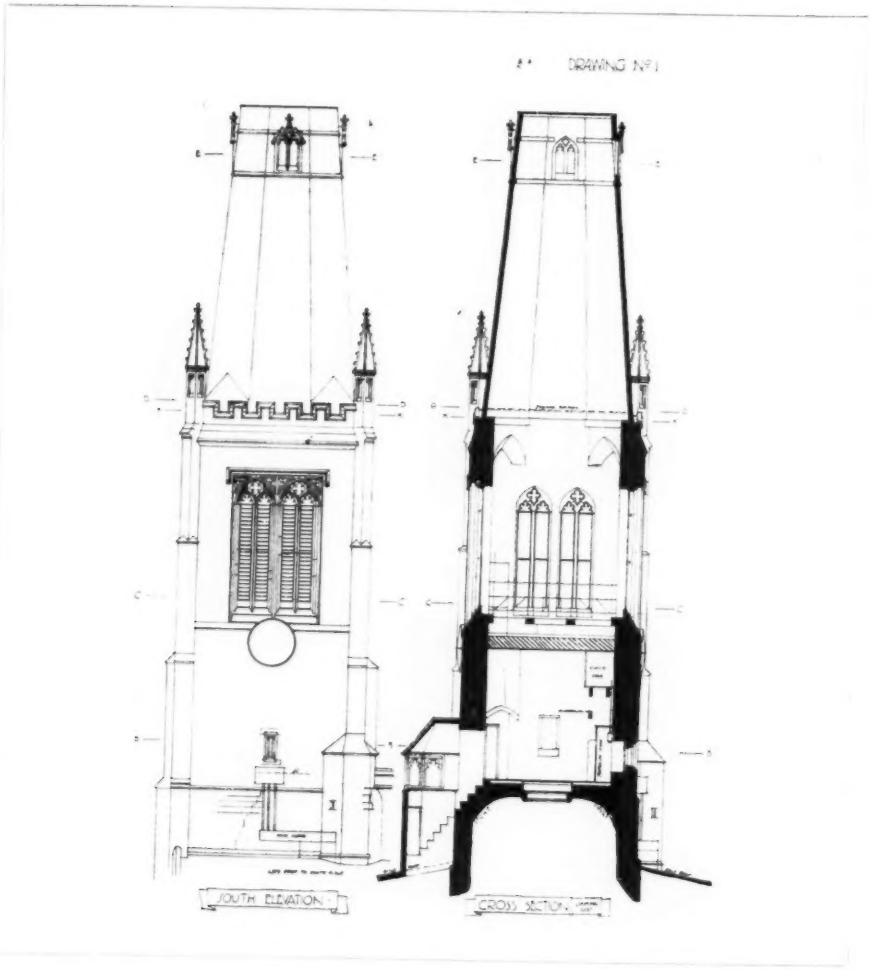
All Saints' Parish Church, St. Ives, Huntingdon



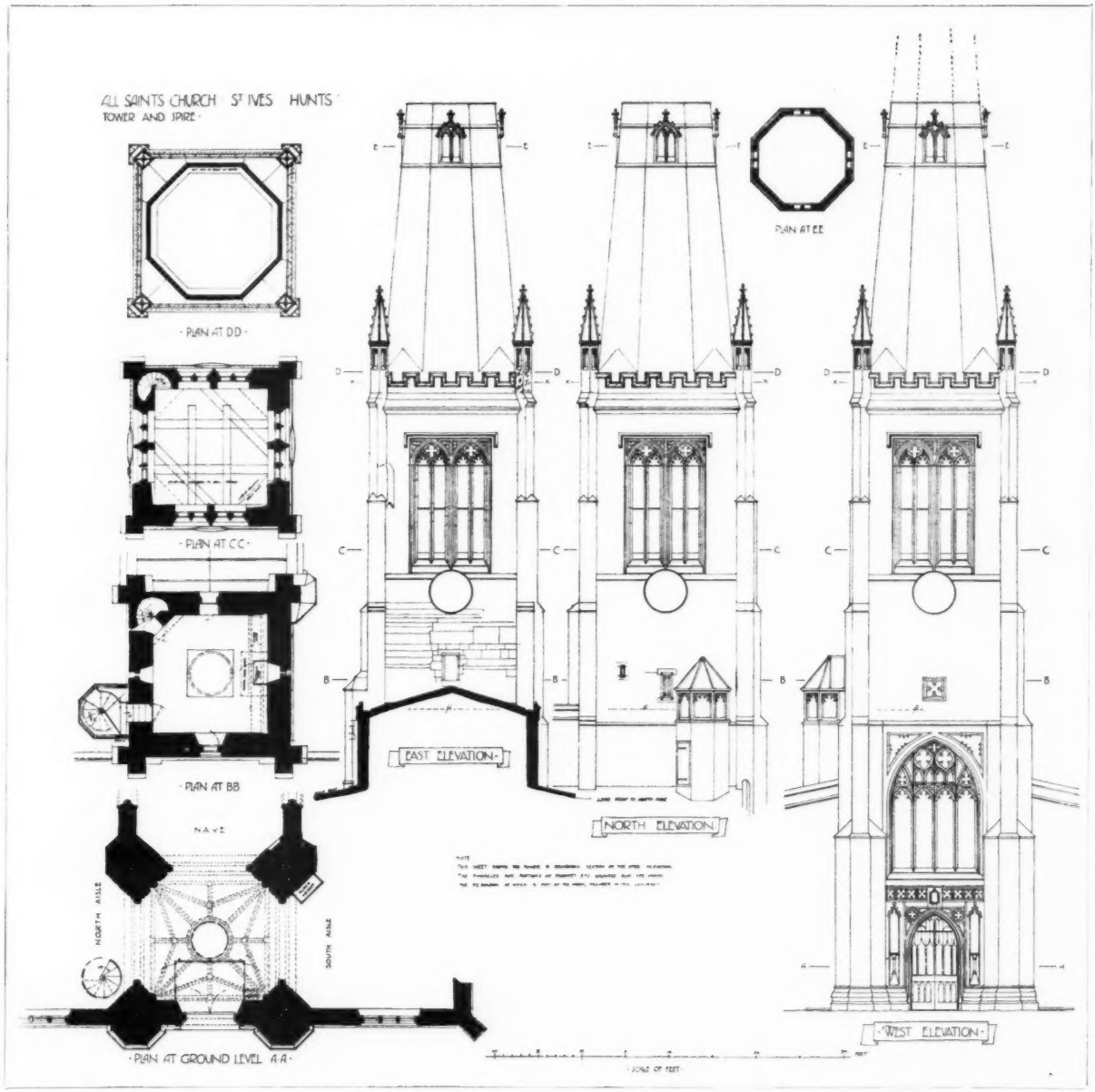
This church dates from about 1460. In 1918 a British aeroplane crashed into the spire, "topping" it of 50 feet. Its rebuilding has now been completed under the supervision of Mr. Leslie T. Moore, F.R.I.B.A.



ALL SAINTS' PARISH CHURCH, ST. IVES, HUNTS: THE TOWER AND SPIRE.
LESLIE T. MOORE, F.R.I.B.A., ARCHITECT.



ALL SAINTS' PARISH CHURCH, ST IVES, HUNTS: THE DAMAGED SPIRE



ALL SAINTS' PARISH CHURCH, ST. IVES, HUNTS: THE SPIRE AND TOWER BEFORE REBUILDING.

A Masonic Temple

WARREN, KNIGHT and DAVIS, Architects, and HARRY B. WHEELOCK, Associated

A recent issue of the ARCHITECTURAL FORUM (see page 840) illustrates the remodelled Masonic Temple at Birmingham, Alabama.

An architect meets few problems more difficult to solve than the remodelling of a building, especially where occupancy continues during the work. Such was the case with the Masonic Temple at Birmingham, Alabama, where the original building, occupying a corner lot, 50 by 100, was kept almost intact and used for Masonic purposes during the operation of remodelling and enlarging the building to occupy a lot 175 by 190.

The first plans, which showed new wings on both sides, left the original building unchanged. But before tenders were received on the first scheme, the architects persuaded the owners to make the completed work appear as a single building. For the sake of sentiment and because of other reasons it was decided to leave the old building practically unchanged as to interior plan. As it was undesirable to repeat the type of design of the exterior of the old building in the new addition, the original front was changed to conform to the new design and to make the entire exterior of uniform appearance. The preserving of the interior plan of the old building and making a new exterior to give the effect of a single building was a difficult problem. The width of the bays on the two street fronts of the building as well as the story heights, had to be preserved. This was accomplished by the use of double pilasters and a high entablature and attic, executed in severe Classic detail. As the entrance at the centre of the old building had to be retained, a second entrance to balance it was placed at the other end of the main façade.

Although the various rooms and auditoriums of the interior remained unchanged in plan, they were completely built over and given an architectural, decorative treatment in harmony with the Classic character of the present transformed exterior design.

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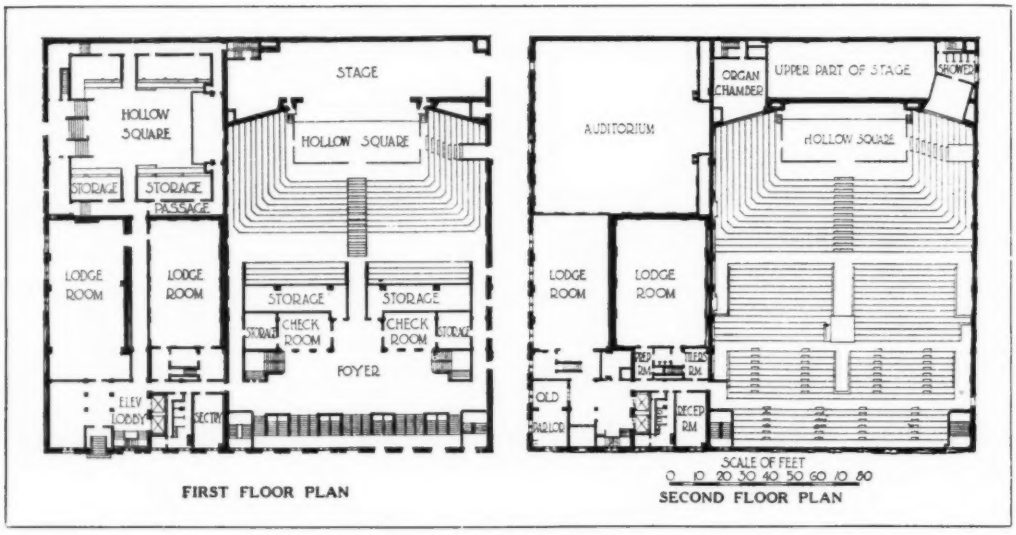


THE MASONIC TEMPLE, BIRMINGHAM, ALABAMA.

WARREN, KNIGHT & DAVIS, ARCHITECTS; HARRY B. WHEELOCK, ASSOCIATED.

(*From "The Architectural Forum."*)

The Business of an Architect

16.—Bonds. 17.—Authorities and By-laws

By C. MURRAY HENNELL, F.S.I.

IN works of any magnitude the contractor is often required to enter into a bond, with at least one surety, and in contracts for a public body or for trustees such a bond is generally a legal necessity.

The following is a common form of bond, and can be altered and adapted to meet circumstances :—

KNOW ALL MEN by these presents that we and carrying on business in co-partnership under the style of at in the County of (hereinafter called "the Contractors") and of (hereinafter called "the Surety") are bound to of in the County of (hereinafter called "the Employer") in the sum of to be paid to the Employer or to his attorney or attorneys, for which payment we bind ourselves and every two and one of us jointly and severally by these presents.

Sealed with our respective seals. Dated this day of 19....

WHEREAS the Contractors have by the written Indenture hereto annexed made between the Employer of the one part and the Contractors of the other part, entered into a Contract for.....(the nature of the works).

NOW THE CONDITION of the above written Bond is such that if the Contractors shall duly perform and observe all the terms, provisions, stipulations, and agreements contained in the said Contract and on their part to be performed and observed

AND SO that any alteration which may be made by agreement between the Employer and the Contractors or their successors in interest in the terms of the said contract, or in the nature or extent of the works to be executed thereunder, or the giving by the Employer or the Architect mentioned in the said Contract of any extension of time for performing the said Contract or observing any of the stipulations therein contained and on the part of the Contractors to be performed or observed, or any forgiveness or forbearance on the part of the Employer or the Architect to the Contractors or their successors in interest, shall not in any way release the surety or his heirs, executors or administrators from his or their liability under the above-written Bond

THEN the above-written Bond shall be void or otherwise shall be and remain in full force.

Signed sealed and delivered by the above named } Repeated according to the number of parties to the bond.

in the presence of

The sum or amount of the bond varies considerably, according to the views of the employer's advisers, and according to the relative stability of the contractor, for a greater financial guarantee is likely to be required from an unknown builder than from one of high repute and recognized substance. However, in ordinary cases a sum representing about 5 per cent. of the amount of contract is usually considered adequate.

17.—Authorities and By-laws

Having now dealt with all the contract documents connected with ordinary building works, it is necessary to go back a few stages, and to consider other preliminary steps that have to be taken before any actual construction can be done. For the purpose of the safety, health, and well-being of the public, there exist certain laws relating to building works, and to comply with these laws, or to obtain permission to break some of them, is one of the architect's early and necessary duties when proceeding with the carrying out of a commission.

The first essential is to have detailed knowledge of these laws as enforced in the district in which the building is to be erected. When an architect's work is confined to one neighbourhood this is a comparatively simple matter, for in the course of practice he will gain not only an intimate knowledge of the local by-laws, but also the acquaintance of the officials who administer them. This latter is of considerable importance, and the architect will almost invariably find that amicable relations with the surveyor to the local authority are of the greatest possible value. These surveyors, despite their surrounding entrenchments of by-laws and officialdom, which sometimes make them appear almost unapproachable, happen to be human beings, and are susceptible to attention and consideration. Many of them are very good fellows indeed, and will gladly give unlimited help and guidance to the architect who seeks them out, and will very quickly show what can and what cannot be done in their particular districts.

Unfortunately, there is lack of uniformity in the matter of building by-laws in this country, and if one's practice is scattered a constant study of those obtaining in different districts is necessary, and it will very soon be found that what one must do in one place is entirely *verboten* in another.

Under the Public Health Act, 1875, the "local authority" means the urban sanitary authority or the rural sanitary authority, but there are other authorities with which we have to deal. In the metropolitan area of London, the London Building Act, emanating from the London County Council, and administered by the district surveyors, holds sway, and although the building regulations and by-laws are the same in all metropolitan boroughs, a fact which saves the London architect a certain amount of trouble, there are always two authorities to be appeased—the borough council as the sanitary authority, and the district surveyor as representative of the London County Council in all structural matters.

In London the architect can appeal to the London County Council against what he considers any unduly harsh treatment, either in the district surveyor's interpretation of a section of the London Building Act, or against the application of certain sections of the Act in particular cases, and the officials of the London County Council who deal with these matters will be found extremely considerate, long-suffering and forgiving. Most of them have been trained as architects, and have sympathy and understanding. There is yet a further source of appeal under the London Building Act to the Building Acts Tribunal, but the reasonable-minded architect will seldom find it necessary to resort to that, as he will probably get all that can be expected as a result of his representations to the Council.

With local authorities in the provinces matters are somewhat different. The building committee is not likely to sanction anything that the surveyor has turned down, and it is useless to appeal to the council for reversal of a decision of its technical committee. The central authority is the Ministry of Health, but the Ministry cannot interfere with the action of a local authority so long as the latter is behaving properly within the Acts of Parliament which govern it.

However, sections 24 and 25 of the Housing, Town-Planning, etc., Act, 1919, should be carefully studied, as these permit the relaxation of by-laws in certain cases. Sub-section (3) of section 25 gives the building owner, or the architect acting on his behalf, right of appeal, and reads as follows :—

"If any person feels aggrieved by the neglect or refusal of the local authority to give such consent or by the conditions on which such consent is given, or as to the period

allowed for the use of such buildings for human habitation, he may appeal to the Local Government Board, whose decision shall be final, and shall have effect as if it were the decision of the local authority, provided that the Board may, before considering any such appeal, require the appellant to deposit such sum, not exceeding ten pounds, to cover the costs of appeal as may be fixed by rules to be made by them."

("Ministry of Health" should now be read for "Local Government Board.")

Extension has already been given to these sections to December 31, 1924, by the expiring Laws Continuation Act, 1923, and it is probable that still further extension will be granted.

Many architects have had dealings with the Ministry of Health under the Housing Act, 1919, when this department, with all its housing commissioners and regional architects, grew to colossal size, demanded submission of plans, specifications, etc., in duplicate, and even in triplicate, required endless reports and returns to be made, and, furthermore, had to concern itself with the fees that were to be paid to architects for their services. This was then an authority indeed!

Under the subsequent Housing Acts of 1923 and 1924, the Housing Department of the Ministry of Health has shrunk to more modest dimensions, and the practising architect who has housing work to do under these Acts will probably not come into contact with that department at all, most of the responsibility for details being left to the local authority where it belongs.

There are many other authorities with whom the architect will have to treat in the course of his practice, and with whose regulations he must comply, for instance the Ecclesiastical Commissioners and the Governors of Queen Anne's Bounty in regard to ecclesiastical works and parsonage houses. Bodies who hold the purse strings naturally require works for which they are finding the funds to be erected according to their own standards, and well-conducted estates under development, such as the Letchworth and Welwyn Garden Cities and the Hampstead Garden Suburb, have strict building regulations of their own, which are enforced with the object of obtaining sound structures of suitable appearance and arrangement, and harmonious grouping.

It is one of the architect's first duties on obtaining a commission to discover all the by-laws and regulations to which his building will be subject, and he will probably save himself much work and many troubles by getting on friendly terms as soon as possible with their administrators.

Correspondence

Individuality in Housing Design

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I do not think anyone can have greater sympathy with Mr. Baillie Scott's appeal for individuality and picturesqueness in housing design than I have myself, but I do feel that his letter in your issue for November 19 scarcely does justice to the many good housing schemes which have been carried out. Amongst these are numbers where the architects have triumphed over limitations which often must have seemed devised to hamper them. Cottages have been produced in great variety which combine utilitarian simplicity with traditional form free from that cheap ornament which is so destructive of quality. Perhaps the greatest architectural development during the last twelve years has been in these sound, honest, and seemly dwellings, for the restrictions imposed as to space, materials, and cost of building have proved searching tests of the ability and ingenuity of the designers.

Mr. Baillie Scott's objection to standardized rooms is difficult to follow, for if these have been brought to a high state of perfection, they cannot become less satisfactory even if repeated in a hundred houses. Such duplication of interiors is free from the objection which would lie against tiresome repetition of external forms, simply because the interiors are not seen collectively.

To build hundreds of new dwellings on an open site without trees or other natural features will necessarily disfigure a landscape, but one must remember that any new house in the middle of an open field appears stark and raw until the garden and trees planted about it have matured. Similarly, in fifteen or twenty years' time, trees which have been planted in the new streets and roads, together with the furnishings of gardens, will provide that setting which is essential to architecture, and which should be part of every housing scheme. The only things which can ruin the prospect of a satisfactory result are embellishments (which, generally, have been avoided) and the use of imported materials, such as Welsh slates and Broseley tiles, instead of local products. It cannot be too often repeated that the use of local materials, externally, is essential to such buildings, and will ensure their taking their places in the landscape in a natural and pleasing way not otherwise obtainable. There is also the further weighty recommendation of saving transport and decentralizing production.

Housing schemes are not so modern as might be supposed. The two illustrations are of the village of Milton Abbas, in Dorset,* rebuilt 140 years ago in its present poistion. There are thirty or forty standardized pairs of cottages, with cream-coloured walls and thatched roofs, and having common entrance doors. The street winds up the slight incline of a narrow valley; half-way up is the church, and opposite it a row of almshouses. At the top of the street is the inn. The situation and arrangement are admirable, but, notwithstanding the picturesque thatched roofs, the general effect must, at first, have been as unattractive as a modern housing scheme. Provision, however, was made for suitable setting by planting a horse-chestnut tree between each pair of cottages. Though these have now grown almost too large they must, a few years after planting, have provided the proper natural environment for the standardized buildings. One feature of this village, which I am sure Mr. Baillie Scott will also appreciate, is the unfenced, rough grass in front of the cottages, through which paths have been trodden as required. Here are no untidy scraps of gardens, and no derelict fences between the cottages and the road: just 20 ft. width of natural grass margin, and the importance of its village character can scarcely be over-emphasized.

These features do not exhaust the instruction afforded by analysis of those little elements to which our old villages owe their charm, the intelligent observation of which is one of the legitimate ways of learning from that past which is the Englishman's heritage.

Northiam. NATHANIEL LLOYD.

Planning for Good Acoustics

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Owing to a mistake in revising the proofs, for which I am myself responsible, the three contributing factors toward the good acoustics of the Greek theatre are given incorrectly in your report of my paper. They should read as follows:—

(1) The sound was intensified near the source by a number of useful reflections.

(2) The sound had a clear passage from speaker to listener, and reached the listener at a wide angle.

(3) There were no long reflected paths of sound back from audience to stage.

I should be glad if you would publish this correction.

HOPE BAGENAL.

* Described by Professor S. D. Adshead in "The Town Planning Review," October, 1916.

THE VILLAGE OF MILTON ABBAS, DORSET.

(From photographs by Nathaniel Lloyd.)

The Preservation of Ancient Monuments and Historic Buildings

The Methods of H.M. Office of Works

SIR FRANK BAINES, C.V.O., C.B.E., in reading a paper before the Northern Polytechnic Department of Architecture, Surveying and Building, on "The Preservation of Ancient Monuments and Historic Buildings," referred to the provisions of the Ancient Monuments Act, and explained the duties and responsibilities which it imposed upon private owners and upon the Government in respect of buildings scheduled as ancient monuments. He referred to the extraordinary historic interest and importance of many of these buildings, and indicated the necessity for their preservation from many points of view. He then showed a series of slides of various buildings indicating the condition of the masonry and walls when they were transferred from private ownership to the custody of H.M. Office of Works. The lecturer showed the serious disintegration and damage caused by the extensive growth of ivy, trees, and other herbage, as well as the damage caused by time, and the use of these buildings as quarries for the erection of surrounding houses and other structures.

Tintern Abbey

Passing to the consideration of individual buildings, reference was first made to Tintern—one of the great Cistercian Abbeys. The date of the existing work was generally that of the end of the thirteenth century, when the present church was built to the south-east of the older church. The most serious difficulty which the preservation of this abbey presented was the support to the south arcade wall which was 68 ft. high, 5 ft. 6 in. thick at the top, and was unsupported. This wall was out of plumb, and bowed in the centre : the eccentric loading of the piers thereby created had brought the load per foot super on some of the masonry to a dangerous point, and some of the piers were actually failing by crushing. In order to reduce this load without resorting to the use of unsightly and obstructive buttresses, a horizontal steel girder of N type was designed. This was anchored down at the ends into the wall of the south transept, and to the wall of the west gable, and connected to the south arcade wall over the centres of the piers. Connecting bolts were employed to reduce the overhang, an operation which was carried out in four stages, separated by intervals of one month, stress recorders being fixed at a number of points. By this means the load on the piers was reduced, the masonry was rendered safe, and Tintern was preserved for all time as nearly as possible in the condition in which it was handed over. A view was shown of some of the tracery. This had been repaired by copper bands to keep it in position indefinitely and prevent further destruction.

Rievaulx Abbey

From Tintern the lecturer passed to Rievaulx, the earliest Cistercian House in the country. It dates from 1131. Rievaulx came under the jurisdiction of the Government in an extremely difficult, almost disheartening, condition. Much of the plan of the abbey was invisible owing to the mass of debris which was piled up over the top of the pier stumps and pavement. This debris was removed, and the plan exposed to view. The masonry was repaired to the extent demanded by the needs of preservation, and views were shown of the abbey in its present condition.

The next view was of Carnarvon Castle, one of the most magnificent of the mediæval castles in existence. It was commenced by Edward I, and its date is 1285–1322, to guard the Menai Straits, and as a means of overaweing the Welsh people. Built as a purely defensive structure it had remarkable architectural attributes. Its massive walls of coloured stone, its fine outline, and beautiful proportions marked it as an architectural achievement of the highest interest and importance. Views were shown of, and particular reference was made to, Queen Eleanor's Gate and the Eagle Tower.

Whitby Abbey

Whitby Abbey next claimed attention. This abbey was founded in A.D. 657, but the portion which remains dates from the thirteenth century. This abbey was officially scheduled as a historic building in 1914, and before any attempt at preservation could be made the war broke out and suspended all work on ancient monuments. In 1914 the Germans bombarded Whitby and, incidently, damaged the abbey, destroying certain portions of the tracery and other masonry at the west end. This damage resulted in further falls of masonry during the ensuing years so that when, after the war, Sir Frank Baines commenced the task of preservation, he found the remains in a far worse condition than at the time of handing over. This incident of the German bombardment resulted in a departure from the normal policy of the Ancient Monuments Department. Its almost invariable policy was to avoid restoration or reconstruction, and to concentrate only upon preservation, but in view of the "accidental" character of a large amount of the damage at Whitby it was decided that some of the masonry should be replaced, save only that where new work must be added for purely constructive reasons, and this new work should be clearly indicated. In the case of Whitby, therefore, a combined scheme of restoration and preservation was carried out, and the abbey was visible to-day practically as it was in the early part of 1914, except that it was now rendered safe from further depredations by the weather or other forces. In addition to this work at the west end, certain excavations were carried out which exposed the plan and the remains of some of the walls and piers.

Kirby Muxloe Castle, an old fortified manor house of Tudor times, dated from 1480, and was another of the monuments which had fallen into such extensive disrepair, that it had almost ceased to have architectural interest. The moat was re-excavated, a bridge was constructed on the site of the original drawbridge and some of the old piles were exposed and now remain standing in their original positions.

Views of Byland Abbey, another of the historic churches, were thrown upon the screen. This abbey was remarkable for its fine carving and ornament, which would be difficult to rival. In the floor of the abbey was found the remains of a fine coloured tile pavement of excellent design and colour.

Goodrich Castle

The condition of Goodrich Castle was even worse than that of other cases mentioned, and after instructions had been given to commence work upon the north-west curtain wall, a collapse occurred whereby hundreds of tons of masonry were dislodged. It appears probable that if this collapse had occurred a month later when scaffolding had been erected, it might have involved serious injury or loss

BYLAND ABBEY BEFORE RESTORATION.

of life to the workmen. The remaining portion of the wall was, however, shored up and repaired; the overgrowing vegetation was cleared away and Goodrich is now permanently preserved and is able to be seen with some indication of its ancient glory.

At Netley Abbey another of the difficult problems of isolated walls was encountered. In this case it was necessary to find some means of stiffening the top of the wall in such a way that it would resist wind pressure and the normal disintegration to which it was subjected by ordinary weather conditions. To this end a reinforced concrete beam was built into the wallhead, pinning it down to the more solid masonry at each extreme end. A detailed view of one pier was shown and the process "coring" explained in detail.

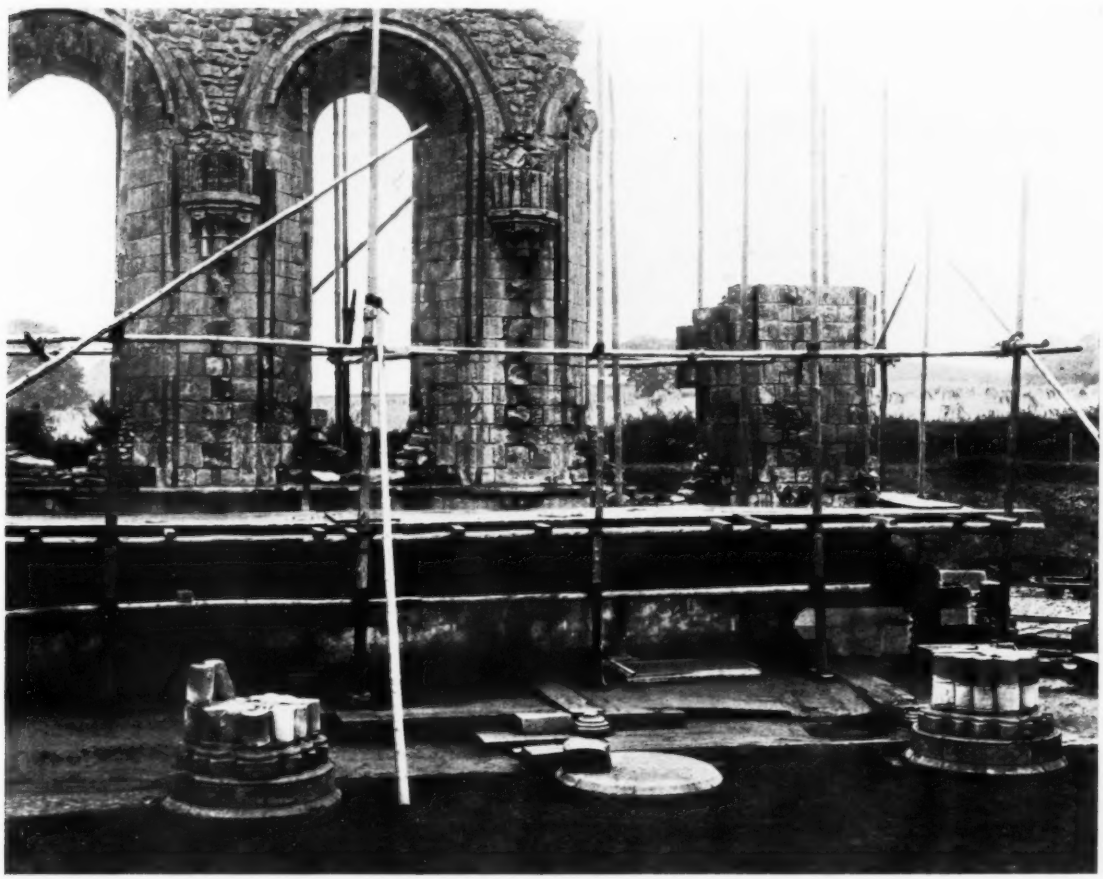
Hampton Court Palace next claimed attention, being shown first by means of a general view from the air, and next by detailed views of the woodwork of the hall roof. Sir Frank commented upon the fact that much of the carving was apparently carried out by the ordinary workmen engaged on the work and that this carving was considered to be a task which they could accomplish without the aid of specialists or carvers. Some views were shown of the Westminster Hall roof with an indication of the destruction wrought by the beetle *Xestobium tessellatum*. The lecturer referred to the almost unbelievable destruction which this small grub had caused, and gave some views of the grub itself and of the beetle which eventually evolved.

A general view was shown of Richmond Castle, one of the great Yorkshire strongholds, and views were given of Stonehenge, with some extremely interesting details of the condition of the stones of the Inner Circle and evidence of the existence of an Outer Circle of a much earlier date.

Sir Frank concluded his lecture with a view of Maiden Castle showing a gigantic fosse constructed with immense labour by men of the Stone Age; a fosse, which for size and importance, had no equal in any other part of the country. In this case considerable destruction had been brought about by rabbits, a pest now kept within bounds by constant ferreting.

Sir Frank said that the principle of the Ancient Monuments Branch of H.M. Office of Works was one of preservation only.

Mr. T. P. Bennett proposed a hearty vote of thanks, which was carried with acclamation.



BYLAND ABBEY.

A detail view of the east end of the presbytery after excavation, showing the columns and remains of the floor uncovered during excavations.

Little Things that Matter—42

Walls, Piers, and Buttresses

By WILLIAM HARVEY

OF all the transformations that time has brought about in architecturel style and constructional attainment the wall seems to have endured at least its full share. Built with the double function of enclosing a space and supporting a weight, ancient walls seem also to have been constructed in a way that gratified the pride of their erectors in works of enormous mass.

At the other end of the scale, modern designers have set themselves to produce walls of remarkable thinness as if the saving of every inch of space was a matter of the very greatest importance. The extreme thinness of walls built of reinforced concrete is perhaps excessive in its own way as was the mass of crude brick in Babylonian building or the immense masonry substructure at Baalbec. It is not only that the economic laws governing modern building cause the architect and engineer to take thought in the interests of saving cost. Some part of the thinning down process must be regarded as experimental, and may be due to the rivalry of those who feel the great constructional interest attaching to the full exploitation of the possibilities of design and construction in a new material.

Retaining walls of reinforced concrete having a thickness of 6 in. and panel walls between stanchions of no more than 3 in. of substance are tours-de-force, and time alone can tell whether they will be justified by the safe endurance, without repair, of the buildings in which they form a part. Walls of this nature no longer possess the ability to comply with both the enclosing and the weight-carrying functions (see Fig. 1). Stanchions, buttresses, diaphragms or tensional supports are necessary to assist the light panel to carry its load and the time taken in calculating the dimensions and reinforcement and the shuttering needed to construct the elaborate and composite scheme, absorbs a large proportion of the saving effected by reduction in mass. In all probability this reliance upon skeleton construction has reached a point at which further economy has become impossible and a return to the consideration of the wall as a veritable constructional member will soon set in. When it is recognized that a certain minimum thickness of wall is required to maintain warmth in a building, and that material is required around the reinforcing rods to protect them from destruction by damp percolating through the wall surfaces, the advantage of once more combining the enclosing and the weight-carrying functions in the wall becomes apparent.

The science of triangulation is undoubtedly of the utmost importance to the constructor, but the convenience that it affords of applying concentrated weights at chosen points has blinded his eyes to the fact that there is often no very great primary advantage in allowing weights to become concentrated. The resistance of the earth upwards on the bottom of the foundations is more likely to be suited to meeting diffused than concentrated pressures, and since diffusion must be achieved in the end it might just as well be selected as a guiding principle throughout the design (see Fig. 2). The word "end" in the last sentence refers, of course, to the last resultant of a line of pressures accumulating from the top of the building downwards to the foundations.

Byzantine architecture is pre-eminently the architecture of the wall and of diffused rather than of concentrated pressures. Certain recent inventions indicate a tendency of modern engineers to return to this manner of thought, though it must be admitted that the consideration of adhesive continuity of structure does not come readily to the minds of most Englishmen.

The advertisements of manufacturers who produce standard forms of reinforcement for the bed-joints of brick and masonry walls, have now familiarized the profession with the possibility of imparting to walls of ordinary dimensions an extraordinary degree of strength, but much study and experiment will be needed before the full advantage of this important invention becomes a matter of familiar use. A desire to avoid the expense and delay that is unavoidably associated with timber shuttering for reinforced concrete work has caused a return to the use of the steel skeleton type of construction in the rebuilding of Regent Street; notwithstanding the notable example of reinforced concrete erected there some years back in the new Polytechnic building.

Reinforced brickwork promises a very considerable reduction both in the quantity of steel and in the use of shuttering, and if architects and constructors could experiment jointly with the new material and devise suitable forms to facilitate erection as well as to develop strength, the way would be open for a legitimate improvement in economic and beautiful architecture. The calculation of the strength of walls considered as tenacious elements of construction would not be easy at first and although facts are being ascertained this difficulty prevented the use of reinforcement in one gigantic building, where it was desired to minimize the cost of foundations on a rocky site. The wall line traversed alternately outcrops of sound rock and pockets filled with loose boulders and unreliable soil and débris. To economize on the excavation of every pocket, it was proposed to reinforce the masonry and turn the wall into a deep beam capable of carrying itself over the loose places. Unfortunately no one would accept responsibility for calculating the stresses; the idea had to be abandoned and each pocket in the rocky bed was laboriously emptied, levelled and filled in with masonry (see Fig. 3).

Those who are interested in the possibilities of reinforced masonry and brickwork should conduct the following simple experiments to convince themselves of the united action of reinforcement and masonry, even with uncemented blocks.

With any convenient blocks, such as sample cubes of wood or stone, build a model wall of which the lower two courses are honeycombed with spaces. Above the second course lay two or three strands of straw or raffia and continue to build courses of blocks in contact with one another without further reinforcement. On the removal of central blocks in the lower two courses the upper part still remains intact, though a lighted match applied to the straw brings the whole model down in a heap.

Lateral strength is also very greatly increased by reinforcement as may be seen by rebuilding the model with an overhang on a corbel, applying an eccentric weight upon one side. So long as the raffia in the horizontal joints is intact and spreads the weight of the corbel over a sufficient length of wall the model stands; but falls immediately the tensile connection is burned away (see Fig. 4).

Suitable variations of these models are extremely useful in indicating the best positions for reinforcement to meet special stresses either in new buildings or in dangerous ancient monuments that would otherwise have to be provided with unsightly external buttresses and props.

It is not sufficiently realized that ordinary walls of brickwork and masonry are in fact beams (of extremely low

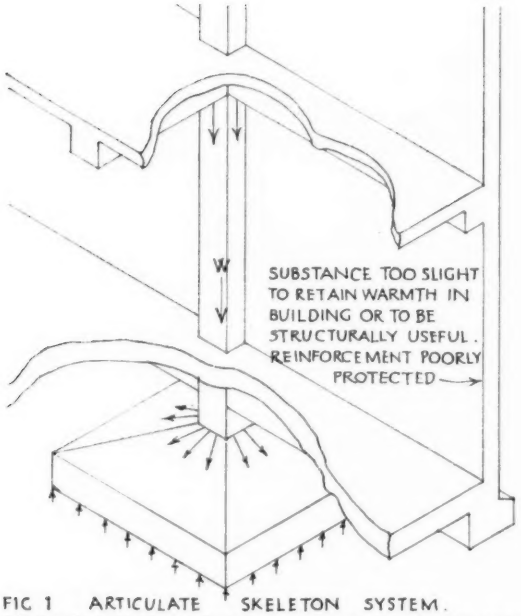


FIG 1 ARTICULATE SKELETON SYSTEM. BEYOND A CERTAIN POINT THINNING DOWN THE WALL SAVES VERY LITTLE PRESSURES COLLECTED AND CONCENTRATED BY GIRDERS & PIER MUST BE SPREAD AGAIN BY COSTLY FOUNDATIONS.

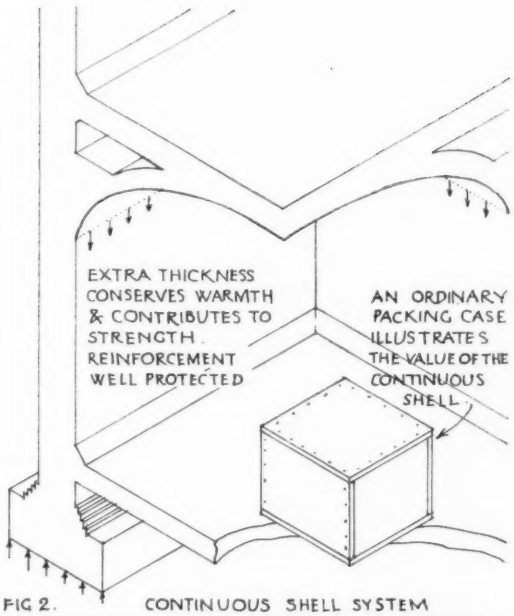


FIG 2. CONTINUOUS SHELL SYSTEM REINFORCED WALL OF MODERATE THICKNESS RECEIVES FLOOR LOADS IN A DISTRIBUTED STATE. LOADS REACH THE FOUNDATION STILL DISTRIBUTED AND NEED NO SPECIAL DEVICES TO SPREAD THEM OVER THE SUBSOIL.

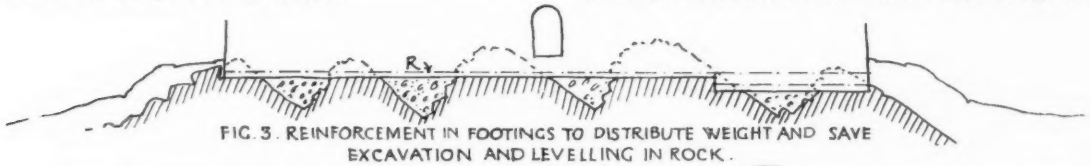


FIG. 3. REINFORCEMENT IN FOOTINGS TO DISTRIBUTE WEIGHT AND SAVE EXCAVATION AND LEVELLING IN ROCK.

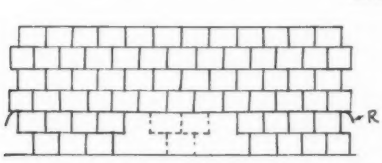
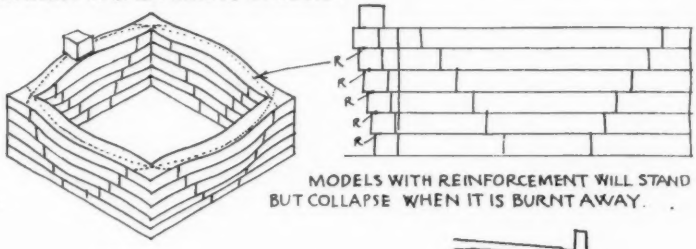


FIG 4. MODELS COMPOSED OF LOOSE BLOCKS AND REINFORCED WITH RAFFIA.



MODELS WITH REINFORCEMENT WILL STAND BUT COLLAPSE WHEN IT IS BURNT AWAY.

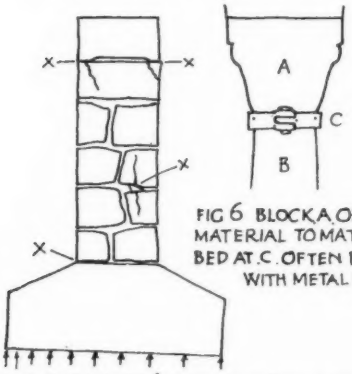


FIG 5 FAULTS (X) IN BUILDING A PIER. ECCENTRICITY SET UP BY POOR FOUNDATION AND BAD BEDDING

FIG 6 BLOCK A OF STRONG MATERIAL TO MATCH SHAFT B. BED AT C. OFTEN BOUND WITH METAL HOOP

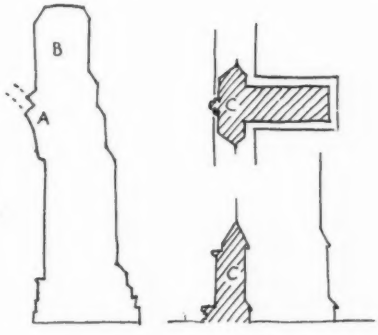


FIG 7 GOTHIC BUTTRESS INCLUDED A CLEVER SCHEME OF CORBELS & BALANCE-WEIGHTS A+B IT DID NOT FULLY UTILISE STRENGTH OF WALL C.

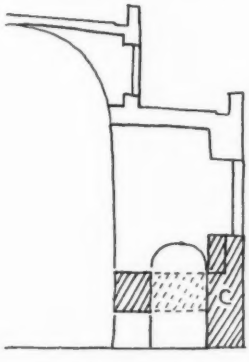


FIG 8 EASTERN INTERNAL BUTTRESS IS STRENGTHENED BY USE OF WALL C. WH. 1924.

LITTLE THINGS THAT MATTER: DIAGRAMS. DRAWN BY WILLIAM HARVEY.

power), whose tension members are represented by the adhesion of the mortar and the friction of the bed joints. A bulging garden-wall often presents points of contrary flexure on plan that should emphatically call up in the constructive mind the value of tensile reinforcement that might have been, but was not, inserted during erection.

Adhesive construction derived from the tradition of Moorish work in Spain has been revived in America in connection with the skeleton girder frame, but such methods are even more suitable for use with reinforced continuous walled buildings (see Fig. 2).

The dome is of course the ideal type of continuity of structure and though considerations of headroom prevent its use in full, domical ceilings of slight rise are often used under fire-resisting floors and flat roofs.

The modern problem will be to bring these several elements of reinforced brickwork and adhesive construction into effective agreement with one another and with forms of design best suited to their plastic character.

The continuity of structure that is desirable in walls is even more important in piers, which may be regarded as the concentrated equivalents of walls, or as Ruskin called them, "rolled up" portions of walls. Piers are almost invariably subjected to stresses far in excess of those applied to walls of the same building. Plain piers of brickwork or masonry are frequently fractured by weights far lighter than the theoretical cracking stress calculated upon the cracking stress of sample blocks of the material, because of irregularities in their bed joints and consequent concentration of all pressures upon a fractional portion of the pier. Eccentricity of loading from any other cause has similar dangers and must be guarded against at the base as well as the top of the pier. Unequal spread of foundations or unequal upward resistance of the foundations from such causes as ill-rammed excavation, soft pockets in the soil and the like, will impose an internal strain upon a pier just as effectually as the asymmetrical application of a load upon its top (see Fig. 5).

Lateral thrusts applied to piers are also liable to have the effect of concentrating pressure on certain parts of the substance and leaving other parts idle or subjected to tension. The prevention of such defects is to be accomplished by well-balanced design wherever possible, but reinforcement may be introduced to bind a pier together in those exceptional cases where eccentricity of load is known to be unavoidable. Just what constitutes good building in a pier has been made the subject of the most contradictory pronouncements. Formerly such devices as jointing the stones with horizontal beds of thin pine-wood slips or of sheet lead were recommended, but a mortar composed of Portland cement and washed sharp sand carefully tamped into all cavities would meet with general approval to-day.

Certain granite piers of a London building erected in the time of our fathers still exhibit fractures that are due to the fact that the sheet lead joints were cut away in the middle just before each successive block was laid, thus leaving the margins to receive all the weight. Where the material is in great excess compared with the loads no great harm might ensue and in the columns of the Parthenon the greater part of the bearing area of each drum is purposely sunk in the interests of obtaining a fine joint at the outer edge. Where an extremely strong material is used for the shaft of a pier and the pressures are great in proportion to its bearing area, the capital and base should also be of the strong material and should be shaped in such a way that they will transform the concentrated pressure in the shaft into diffused pressure above and below it. Pressure at the joint at the underside of a capital employed to bear a heavy load sometimes causes the meeting edges of both cap and shaft to spall and metal hoops were often used in Byzantine work to prevent further trouble (see Fig. 6).

Buttresses are piers that are subjected in nearly all cases to lateral thrusts and are therefore liable to fail by bending and fracture or by crushing at the exterior side of the base unless designed to be of ample strength for their purpose. Tensile reinforcement near the vertical face of the buttress on the side at which the thrust is applied would immensely increase its strength in many cases, though by designing with a proper care for considerations of balance this should not be necessary. Good construction in detail is always needed in the erection of a buttress, for, apart from the danger of its bending away from the thrust when it receives it, there is also the liability common to all buildings, that it will settle on its foundations under its own weight. In any case a buttress is powerless to keep a building quite vertical because, in the nature of things, its full resistance is not developed until a certain amount of movement has taken place.

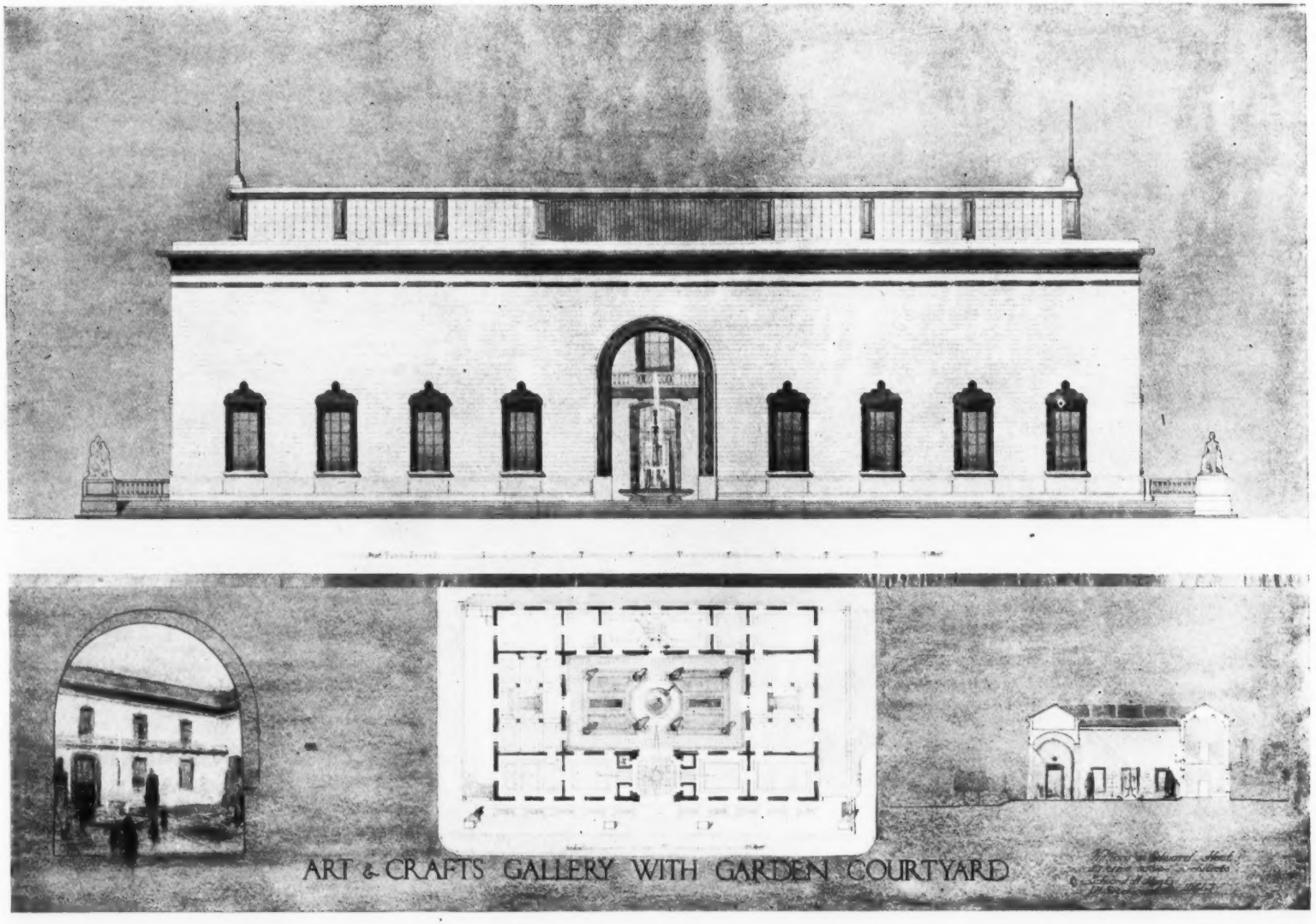
New buttresses erected in conjunction with old buildings frequently show by unmistakable signs that the buttress has settled at a greater rate than the building, and can only be regarded as an insurance policy and not an investment bringing in an immediate return. Even when the old building is known to be moving in the direction of the buttress and to its ultimate collapse, the green masonry often shrinks away at a still greater rate. Repairs of this description demand far more care than is usually expended upon them and must be carried out with the precautions proper to the necessities and danger of the case. The foundations of the new buttress must be taken down to a solid bottom and well rammed over a large area to avoid any unnecessary settlement. The buttress must be built slowly and compressed by loads artificially applied to it at several stages before it is bonded to the existing wall. Bonding should not be attempted for a year after the erection of the buttress and is best provided for by leaving 1 in. of space clear all round the ends of the bond stones and grouting and tamping the space full of rich cement mortar after the settlement of the new work has taken place.

Flying buttresses are still more liable to settlement and to movement than are buttresses attached to the walls they uphold. The flying arch may cripple and its supporting pier may bend as well as subside. Gothic builders recognized these liabilities and allowed for them by adjustments of balance in the out-corbelled tas-de-charge and the pinnacle (see Fig. 7).

Sir Christopher Wren, reporting upon what was then the "present state" of Westminster Abbey, forcibly expresses his views on this subject and ascribes some of the terrible movements in the masonry to the faulty design of "a bold but ignorant architect, who undertakes to build the Cloyster, so that the Buttresses should be without the Cloyster spanning over it. . . . This was a dangerous attempt. The architect should have considered that new works carried very high, and that upon a newer foundation would shrink; from hence, the walls above the windows are forced out ten inches, and the Ribs broken. . . . I was amazed to find it had not quite fallen."

The Roman manner of devising buttresses within the building appealed to Wren, though he permitted himself to use both buttresses and flying buttresses in St. Paul's Cathedral. Like most, if not all, other buttresses, they show signs of movement, and thirty-two buttresses surrounding the outer drum of the central dome beneath the timber roofs of nave, choir, and transepts have all been seriously fractured by the unequal subsidence of the masonry below. Probably Wren felt prepared to face some such state of affairs in the full knowledge that he had at least arranged a very "statick" and "geometrical" building in spite of the propensity of "new works carried very high to shrink."

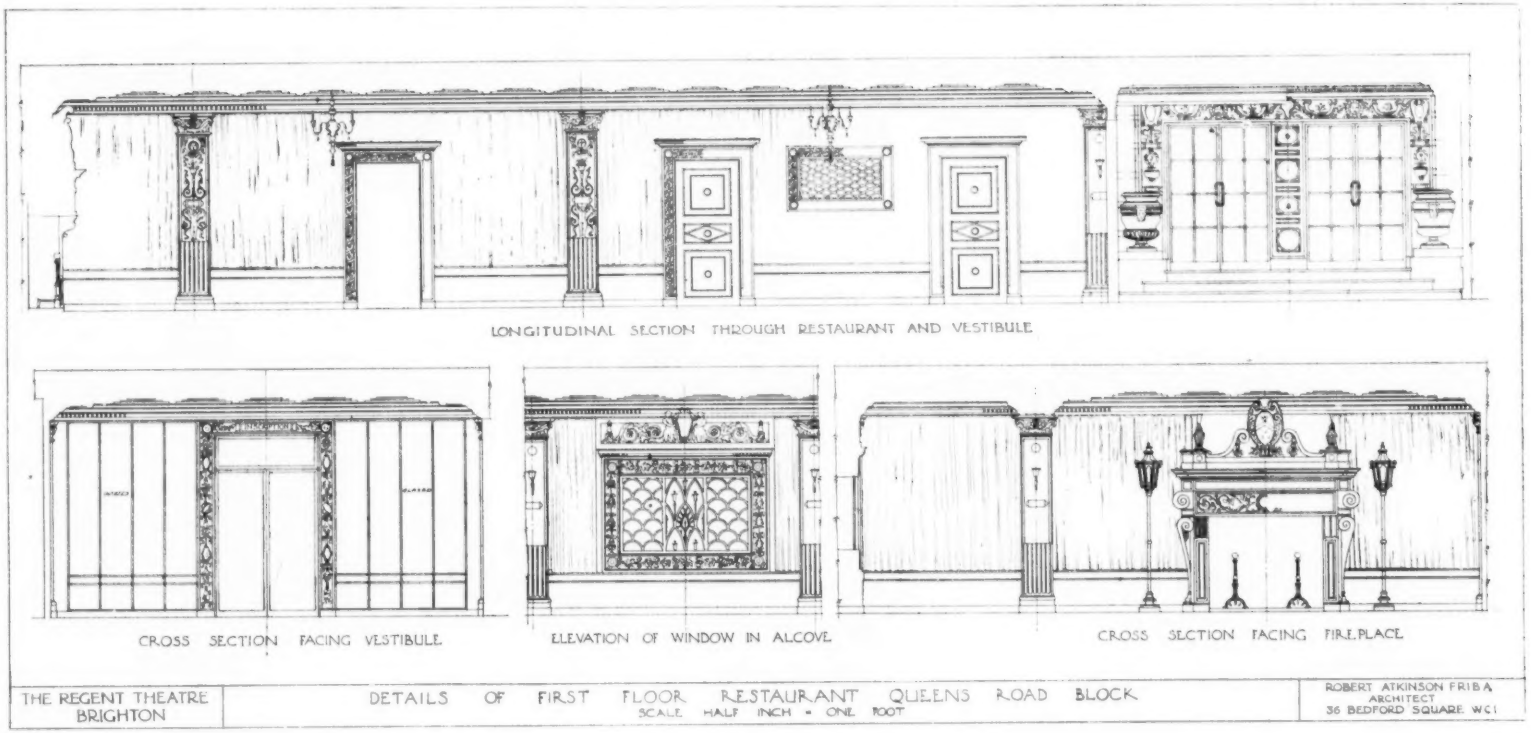
The economy of placing the buttresses inside the building in the Roman manner is now realized, and many modern churches have been designed and built in this way, notwithstanding their general adherence to Gothic tradition in detail. A passage aisle is threaded through arches in the bases of the buttresses and the seating kept free as possible from obstructing pillars. By this means some of the buttress action is performed by the outer wall itself, which increases the area of the buttress at the most important point. This is the exterior of the base of the buttress, where overturning action is most likely to take place and where additional bearing area is valuable (see Fig. 8).

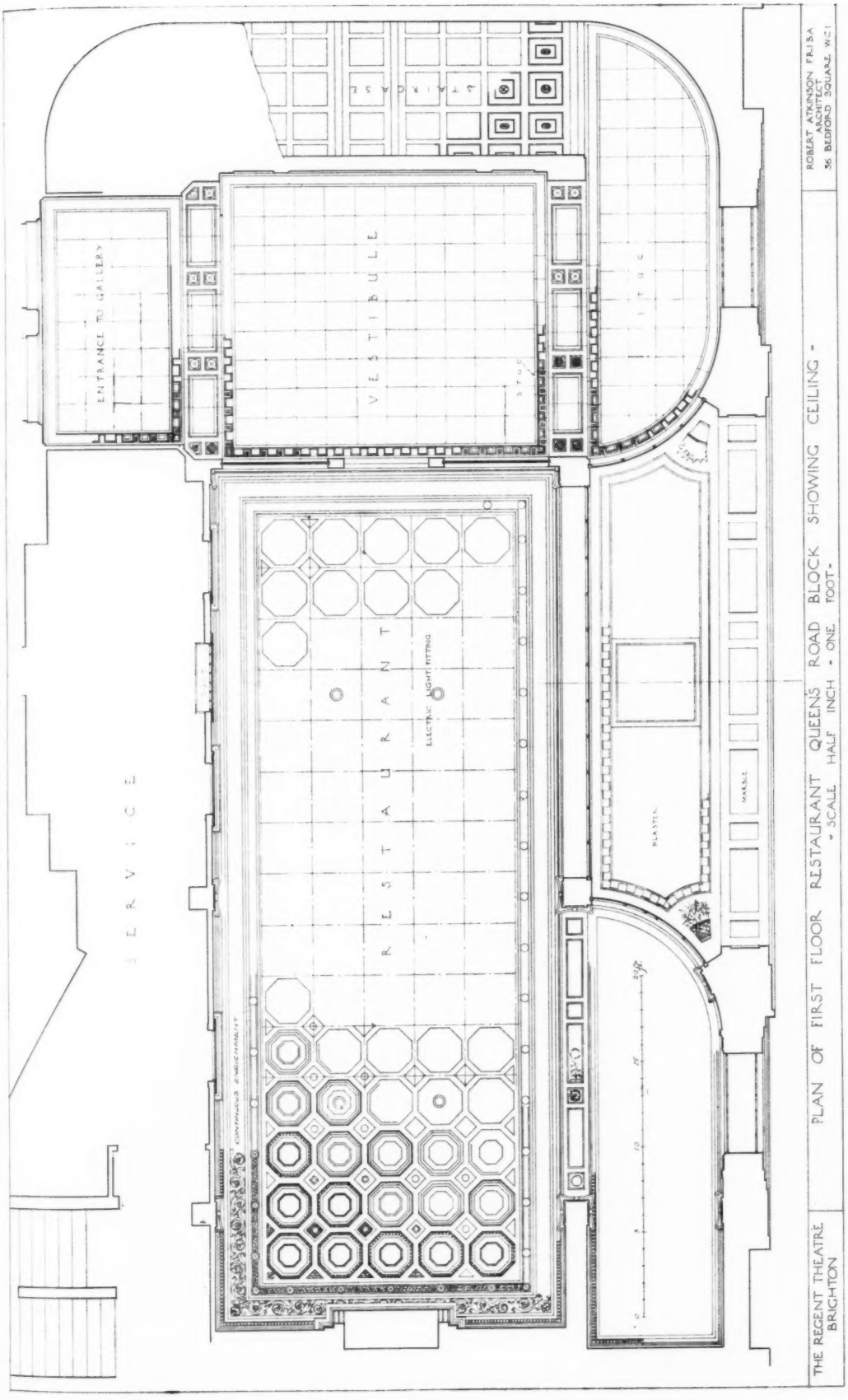


A DESIGN FOR AN ARTS AND CRAFTS GALLERY. WILLIAM AND EDWARD HUNT, FF.R.I.B.A., ARCHITECTS.

Architects' Working Drawings. 91.—The Regent Cinema Theatre, Brighton: Details of the Restaurant and Vestibule

Robert Atkinson, F.R.I.B.A., Architect





The Regent Theatre contains winter gardens, a café, a restaurant, and a tea room. The restaurant, plan and sections of which are shown above, is on the same floor level as the gallery. In decorating the theatre Mr. Atkinson was assisted by Mr. Walter Bayes, Mr. Walpole Champneys, and Mr. Laurence Preston, of the Brighton School of Art.

Steel Houses: Departmental Committee's Report

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's house is essentially a timber-framed house, faced externally with steel sheeting. There is, therefore, nothing very novel in the principle of its construction, and there is abundant evidence that houses made of steel on wooden framing can be considered as a reasonable method of providing immediate housing accommodation. Such houses have been occupied, when properly maintained, either as dwelling-houses or as meeting places of various kinds for many years from the date of their construction.

Lord Weir is, however, 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. As regards speed of construction, we are satisfied that houses of the type proposed can be erected rapidly on the site.

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.

In view, however, of the general opinion of the committee that the life of such houses will be shorter and the maintenance charges will be greater than in either a brick or concrete structure, and on the assumption of an equal income, it is necessary that such houses, if they are to compare on an equal financial basis, should be cheaper in first cost than brick or concrete houses.

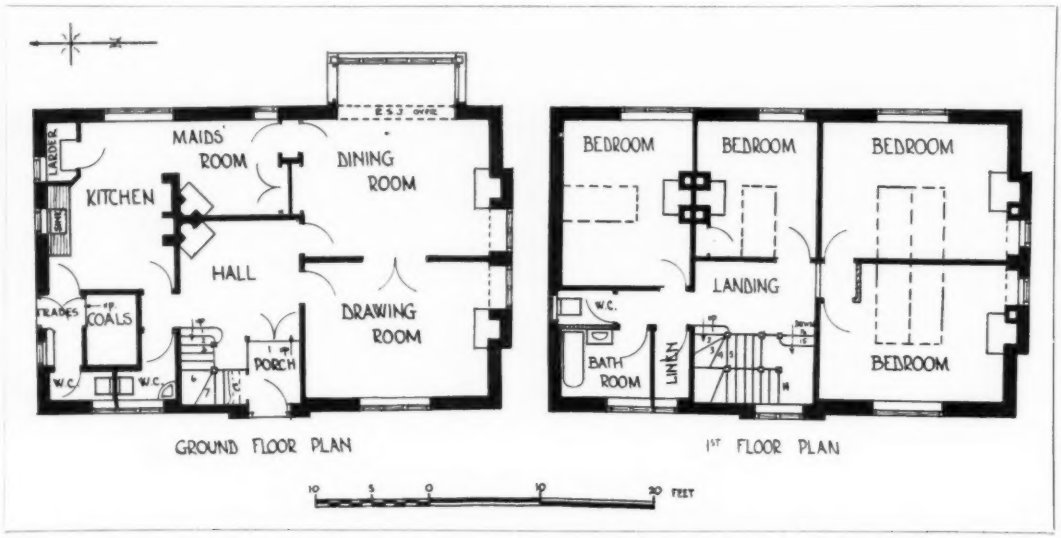
"In view of the very great need for houses, and a hope of some economy in first cost and of a potential life of possibly up to forty years, provided that adequate maintenance and care be forthcoming, your Committee is satisfied that, subject to the criticisms we have made, this type of house is one that is deserving of encouragement and might form part, at least, in the meantime of the structures that go to house the people, particularly in cases where cheap land is available, where foundations are doubtful, and where for any reason more permanent types of buildings cannot quickly be provided. With this object we suggest for consideration that local authorities and others concerned in the carrying out of housing schemes should be encouraged to undertake voluntarily the erection of houses of this type in sufficient numbers to enable the system to be properly tested.

"In conclusion, we should like to put on record our appreciation of the services Lord Weir has rendered to the whole question of housing and his personal endeavour to help to solve a pressing national problem."

The Output of Bricklayers.

Sir Charles Ruthen, Director-General of Housing, has sent us the following communication:

I have seen it stated in the Press [not THE ARCHITECTS' JOURNAL] that the Dutch bricklayer lays 2,000 bricks per day, as against 500 bricks laid by the British craftsman. This statement, published broadcast, and linked to a reference to my recent official visit to the Netherlands, is likely to be attributed to me, and should be refuted. I do not accept the statement as nearly accurate, and further, consider that any comparison between the output of Dutch and British bricklayers requires a deal of careful qualification. The standard Dutch brick measures approximately 8 in. by 3½ in. by 2¼ in., or, roughly, 63 cub. in., whereas the cubical contents of the standard British brick is roughly 122 cub. in. Therefore, it will be appreciated that the Dutch bricklayer must lay double the number of bricks to produce approximately the same cubical contents of finished walling as that of his British brother craftsman. Further, if a very artistic Dutch brick, much used in the Netherlands and exceedingly picturesque in the finished work, is used, the comparison becomes even more impossible. This brick measures 6 in. by 3 in. by 1¾ in., or practically 31 cub. in., and, therefore, nearly four times the number must be laid to produce the same volume of work as that of the British brick. I am not prepared to admit for a single moment that the Dutch workman produces a greater volume of output than the British workman, but would rather state definitely that the quality and quantity of work produced by the British workman in the building industry is equal if not superior to that of the workman in any other country.



PLANS OF HOUSE AT HIGHGATE. C. H. B. QUENNELL, F.R.I.B.A., ARCHITECT

Modern Domestic Architecture. 102—A House at Highgate

C. H. B. Quennell, F.R.I.B.A., Architect

In the design of this house an attempt has been made to provide the maximum accommodation for the minimum outlay consistent with sound work. It is built of brick, with a tiled roof.

Book Reviews

"The Mitre" at Oxford.

The earliest authentic record of "The Mitre" at Oxford dates from 1279, when a survey of the city was made. "In the history of this old inn," writes Mr. R. A. H. Spiers (who is, by the by, a nephew of the late Phene Spiers), "the most remarkable point is that it has remained in the hands of the same owners" (Lincoln College) "for nearly 400 years, and that it has not been bought or sold for over 600 years." Even churches, we comment, are not held so sacred nowadays.

No good history has ever been written of any one thing without some reference to the things around it. The history of even a wooden leg is not so much a tracing-back of the tree from which it was shaped, as some account of the Long John Silver or other personality to whom it may have belonged. Things and incidents are too interdependent and too interknit ever to stand alone. The history of a piece of quarried marble is the history of the whole world. And so a book on "The Mitre" becomes a book on Oxford, its colleges, its churches, and town and gown.

There is fare here, therefore, for everyone—for the architect as well as for the gourmand, and the general reader will be pleased, too, for he is reminded again of such old, though almost forgotten, favourites as "The Adventures of Mr. Verdant Green."

> "Sure never man's prospects were brighter,"
> I said, as I jumped from my perch;
> "So quickly arrived at the Mitre,
> Oh, I'm sure to get on in the church!"

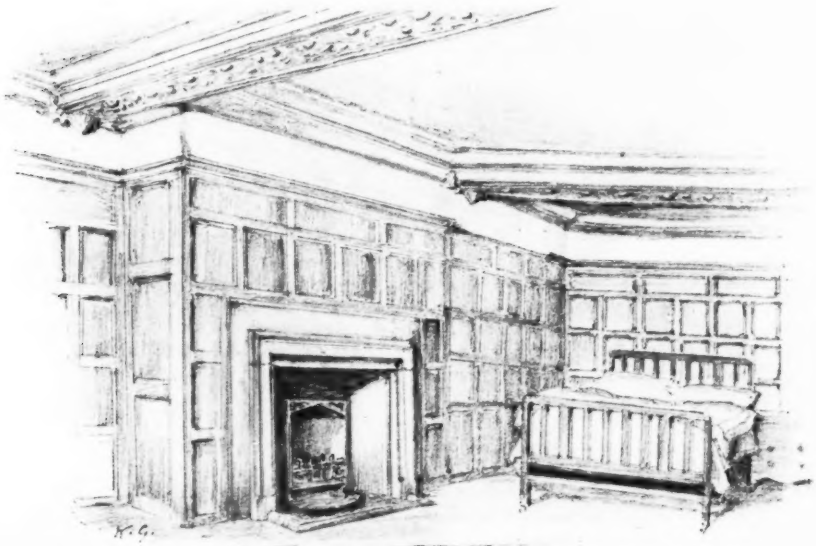
The youth of Oxford is quieter now, but there have been times when Varsity life centred almost as much round the "Mitre" as round the colleges. "It was in front of "The Mitre' that some one of the Jacks-in-office told handsome Lord Skelmersdale to put out his cigar, and was met by the quiet rejoinder, that if he could not enjoy the luxury of the '*herba nicotina*,' he would take his name off the books; a consummation at once effected. And here, about that period, if you had dropped in, you would have found Lincoln, afterwards the ill-starred Duke of Newcastle,

"THE MITRE," OXFORD.

(From an engraving by J. Fisher, circa 1825.)

huge Johnny Malcolm, the two Fiennes, good fellows and good cricketers, Chandos, Leigh, Jack Armitstead, or, perhaps, who knows, Tom Brassey, or Codrington, of B.N.C."

Greater days, however, were yet to dawn for this honest house. Does not Homer aphorize, "As the generations of leaves, so are those of men?" A generation in Oxford lasts, be it known, but for four short years; and he who lingers by the banks of Isis for five or six years, gets to be eyed askance as a sort of academical Methuselah. Now it happened that the hard-reading generation which developed a double-first in the Marquess of Lothian passed away, to be succeeded by a rapider set. "Hastings, he of the Marquisate, not the quiet young Dominus who now is known as Huntingdon, appeared on the scene like a comet; whence followed Albert Edward, Prince of Wales, who rode well to hounds, but was kept in apple-pie-order by General Bruce; and soon after enter, if you please, His Grace of Hamilton and Brandon with poor Harrington." "The Mitre" then got very lively, and you had to order a room for dinner several days in advance, and not vainly did an undergraduate prophesy that of all "Mitres" this would last the longest.



SEVENTEENTH-CENTURY PANELLING AND DECORATED PLASTER CEILING IN "THE MITRE.

As "Gourmet" wrote in his "Dine-about Papers," the old inn, with its charming irregularity and rare cosiness, has held its own right bravely. It compares advantageously with the grandiose "Randolph" and sublimated "Star" (now the "Clarendon"), and has outlived a really beautiful hotel of past days, "The Angel."

The author says that the book is a collection of old historical episodes connected with the inn and its immediate neighbourhood, coupled with a number of interesting and brief notes and anecdotes of Oxford life. We listen to this confession and, so far at least as we are concerned, the author is absolved. For he has brought together within its

pages as goodly a company of the wits and wiseacres as ever donned cap and gown, or scuttled under the tables of the "Mitre" when "The Proctors" was called.

"Within the house, the old dark-panelled walls
Seem to remember Romance with her guests,
Who, royal sometimes, and of low degree,
Left still faint echoes of their ringing jests." J.

"Round About the Mitre." By R. A. H. Spiers. Published by the Author at "The Mitre," Oxford. Price 2s. 6d.

The Romans in Britain.

When, in one of Thomas Hardy's tales, the spade of the archæologist strikes upon Roman paving, buried a few inches under Wessex soil, his friend becomes aware for a moment of shadowy figures, other than their own, moving about upon that ancient spot. Well nigh two thousand years have rolled over the countryside since the Romans were actually in Britain, but still by an effort of the imagination, or the unearthing of a tesselated floor, their forms can be conjured up to walk once more the ground we tread. Secret pathways cut in the chalk of the South Downs, the Great Wall that Hadrian built along the Border, or only a gilded image of Mercury embedded in Dorset clay—meditate upon these, and the country is peopled again with the legionaries of the great Empire, and once again you hear the touch of spear upon breastplate and the spoken Latin tongue.

Some books do this for us, too. And of them Livy is the greatest. Two words in that historian, the oft-recurring "Consul Romanus," so affected De Quincey that, upon hearing them in his dreams, he would see come sweeping by, in gorgeous paludaments, Paullus or Marius, girt around by a company of centurions, with the crimson tunic hoisted on a spear, and followed by the *alalagmos* of the Roman legions.

In their "Everyday Life in Roman Britain" Mr. and Mrs. Quennell tell the story of the little things that made up the Romans' daily life, and which are so often passed over by the big histories as being of no importance. On these "little things" was Rome founded.

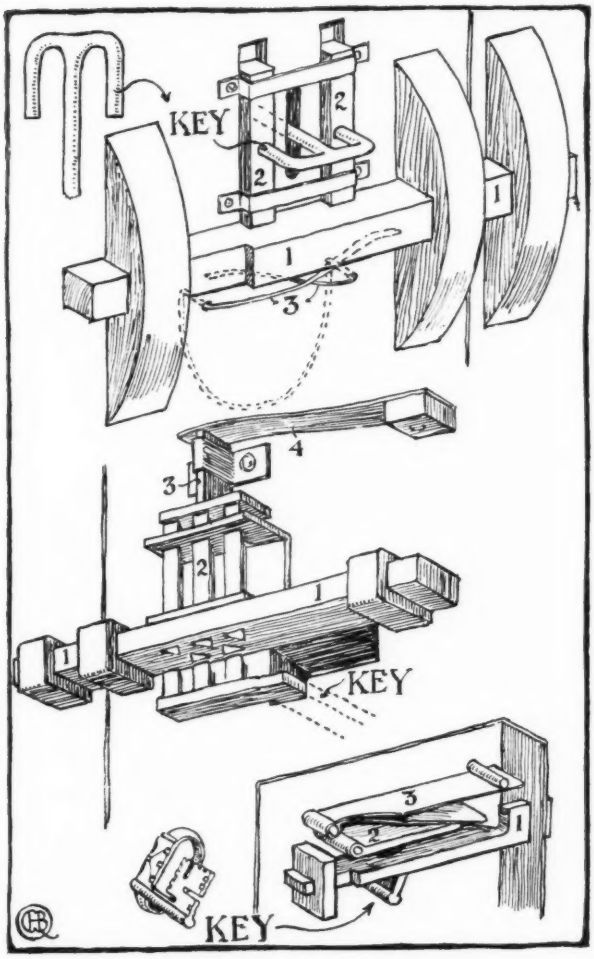
Their account of the City of Silchester is illustrated by a bird's-eye view and restorations, so that we see the forum and basilica, the temple and the little church—the earliest Christian building in England—from outside and in, with Roman surveyors and builders at work. A very full chapter on the people and their houses gives a picture of varied activities—children playing in the courtyard, and we enter to be present at a feast; we can look at the activities of the kitchen, and glance at the making of glass, pottery, and mosaic, with a peep at smiths and carpenters and their tools, the shoemaker, the dyer, ploughing and reaping, with wedding and funeral rites, and the elaborate heating methods of the hypocaust. Shops and workers are included, and all sorts of appliances are figured—pumps, weighing devices, keys and locks. The chapter on the army and travel shows the various types of legionaries, with armour and weapons, and the making of roads.

THE GREAT BATH AT BATH.

(*From "Everyday Life in Roman Britain."*)

And all these details—of no dramatic significance in themselves—have a cumulative importance which brings the Romans to life again as vividly as do the pages of Livy or Tacitus themselves. "The time curtains roll back a little on one side, and we have a walking part in the scene; we may not speak to the principal actors, but we are close to them; we catch the fragrance of Wolsey's orange as he passes along, and the figures of History become, instead of names, men and women of flesh and blood." J.

"Everyday Life in Roman Britain." Written and illustrated by Marjorie and C. H. B. Quennell. London: B. T. Batsford. Price 5s.



LOCKS AND KEYS.
(*From "Everyday Life in Roman Britain."*)

Sir Banister Fletcher's "History."

The seventh edition of this famous "History of Architecture" differs from the last in one or two points—the line drawings are slightly enlarged, room has been found for a few additional illustrations (there is now one of Tut-ankh-Amen's tomb, for instance), and descriptions have been included of some of the more important buildings erected since the going-to-press of the sixth edition. Also, the cloth used for binding is more pleasing alike to the eye and hand.

Perhaps only the reading of the "Arabian Nights," or the possession of Seven League Boots, can do for one just what this book does. Would you visit the rock-cut cave of Elephanta, see the Baths of Caracalla, or stand awed beneath the shadow of the Pyramids? You have only to let these pages turn idly between your fingers and rather more than the Seven Wonders of the World appear before you as in a dream.

The magic of it inspires one to forsake ordinary sentences:—

> Tower and spire before me rise
> As I let the pages slip;
> Campanili in the skies—
> Details of the craftsmanship!
>
> Saracenic—O! the Taj!
> In beauty, almost lyrical.
> The dream come true! the sigh made stone
> In a marble miracle.

How *can* one keep to mere prose on beholding these things? Sir Banister Fletcher has given into the hands of the everyday reader the keys of the Kingdom of Architecture: in addition to all his innumerable other degrees and decorations, let him be appointed, in perpetuity, *The Untiring and Wonderful Slave of the Seven Lamps.*

J.

"A History of Architecture on the Comparative Method, for the Student, Craftsman, and Amateur." By Sir Banister Fletcher, F.R.I.B.A., F.S.I., F.R.G.S. Seventh Edition. London: B. T. Batsford, Ltd. Two Guineas net.

A Hundred Years of Portland Cement.

This volume, it is stated, has been specially written to mark the centenary of the invention of Portland cement in 1824. In addition to a complete history of the growth of the cement industry from the early days until its arrival at its present position as one of the most important industries in the world, a mass of information is given on the different methods of manufacture during the period under review. The value to the consumer of the improved methods of manufacture in modern cement works is shown by the fact that whereas in 1852 the tensile strength of the neat Portland cement on the market was only 100 lb. tensile per sq. in. at seven days, present-day cement has a strength of 750 lb. per sq. in. at the same period. The statement so often made that Joseph Aspdin, a bricklayer of Leeds, was the inventor of Portland cement, as we know it to-day, is not accepted by the author, whose researches have led him to the conclusion that Aspdin was the inventor of the name "Portland cement" only, and that similar cements were made earlier than the date of Aspdin's patent (1824) by Vicat in France and Frost in England.

The volume contains a summary of the Portland cement specifications of the world, and a great deal of information which should be of value to all architects, engineers, and builders who take an interest in the materials they use, and also to chemists and geologists. An appendix gives in full the early patent specifications for Portland cement by Higgins, Parker, Frost, Crampton, Ransome, Stokes, Hurry, and Aspdin.

"A Hundred Years of Portland Cement." By A. C. Davis, M.Inst.C.E.I., M.I.Mech., F.C.S. xxii, 282 pp., 41 illustrations. London: Concrete Publications, Ltd. Price: Cloth binding, 21s.; leather, 25s.

"The Decoration of the Home."

A cheap edition of Mr. Jennings's "The Decoration and Renovation of the Home" has now been published at 12s. 6d. Besides the chapters on decoration proper, there is one on Period Furniture and Appropriate Mural Decoration, by Mr. Herbert Binstead. The book is described as a practical one "for house-owners and tenants, architects, decorators, and others," and there are fourteen coloured plates showing "harmonious colour-schemes for wall decoration, etc."

"The Decoration and Renovation of the Home." By Arthur Seymour Jennings. The Trade Papers Publishing Co., Ltd., London. 12s. 6d.

Town Planning.

In view of the general importance of town planning not only to local authorities and their officials, but also to private interests concerned in the development of land, the part of the annual report of the Ministry of Health for 1923–1924 which deals with this subject has been published separately. The report contains a statement, not only of the position of town-planning schemes throughout the country at the end of the year and of the progress of regional planning, but also of the attitude of the Ministry on a number of points of general importance which have arisen in connection with town planning and with appeals relating to proposed developments. Copies of the publication may be purchased, price 6d., directly from the Stationery Office.

Publications Received

"Sixty-three Years of Engineering, Scientific, and Social Work." By Sir Francis Fox. Price 18s. net. John Murray, 50a Albemarle Street, London, W.1.

"Economics of Iron and Steel." By H. J. Skelton. Second edition. Price £1 net. Stevens and Sons, Ltd., 119 and 120 Chancery Lane, London.

Enquiries Answered

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

DISAPPROVAL OF PLANS.

"Regular Reader" writes: "Plans for a building were submitted to a rural district council, and disapproved. When asked what by-law is infringed, they fail to reply, and give no reason for disapproval. Incidentally, through the local Press it is stated that the chairman of the council had remarked 'that it appeared more steps' would be necessary to the front entrance than were shown on the drawing. Of course, this is no valid reason for disapproval of a plan, as it is mere supposition. After this, however, the council asked for details of the present ground level of the site, and the level of the floor of the building. These details were supplied, but still the plans were disapproved, and no reason was given. Please inform me what is the best line of action to take in dealing with such a council."

—If the plans are not in accordance with the by-laws the council should so state, and should naturally—through their clerk or surveyor—point out what is wrong; one would hardly suppose they would act on a mere whim in such a matter. The remedy is very simple: the building owner should instruct his solicitor to apply for a mandamus of the High Court compelling the council "to show cause, etc." Probably the mere threat will be enough, as it is a rather short and summary process.

F. S. I.

COLOURS ON NEW CEMENT.

"K. J." writes: "It is desired to redecorate the walls of a room, about 25 ft. by 25 ft. by 12 ft. high, and used for small public meetings. At present distemper is applied on the bare walls, but I now wish either to plaster the walls, or render in cement, to bring to a smooth surface, and then distemper and paint. If one good coat of Portland cement is applied, followed by one coat of Keene's cement, will the painted dado and the distemper above lose their colours or flake off? Could you also tell me what the approximate cost will be? I wish to paint and distemper the walls directly they have been rendered, without any waiting, but I am particularly anxious that the colours should not fade in patches or flake off. I understand that with plastering it is best to wait some months before applying distemper."

—Painting and distempering on new plaster or cement is seldom satisfactory, though the use of special paints prepared for the purpose gives a greater chance of success. The work is liable to be adversely affected by a humid state of the atmosphere, and a damp day following the application of distemper to a newly-plastered wall will cause the colour to run in long vertical streaks. By far the best practice is to allow the surfaces to become bone-dry by waiting a year before attempting to apply the colour. The pigments will then adhere quite readily to the plaster or cement and, once the suction has been stopped, successive coats may be added and the surface brought up to any desired state of smoothness.

The following method of painting on new cement has been attended with fair results: Wash the surface of the new cement with a strong solution of zinc sulphate, allow to dry, and repeat the process. When the second coat is dry the priming coat of oil paint is applied. This is mixed with more oil than is used in priming woodwork, to allow for the suction. Four or five coats will be required, and more than usual time must be allowed for each coat to dry before the application of the next, as the green cement contains moisture which will come to the surface and delay the drying and hardening of the paint.

It is sometimes considered practicable to paint upon new "Sirapite" or "Keene's" by applying a coat of paint as soon as the new surface is hard enough to bear the brush. The newly-trowelled surface is lightly sandpapered, and the coat of paint should be made up with little oil, plenty of turpentine, and a little gold size.

In applying washable distempers and water paints to new plaster or cement the makers' instructions must be carefully followed, and only such colours as are recommended for use on new work will have the slightest chance of drying evenly. Undercoats or petrifying liquids are generally required. It is impossible to say just what the operations will cost.

The existing surface will have to be dinged to remove the present colour-wash, and as the cost of the oil-painted dado will naturally be greater than the distempered work above, the proportions of each will influence the total price. W. H.

MATERIALS FOR LINING AN OPEN-AIR SWIMMING BATH.

"Ewell" writes: "What is the best material with which to line an open-air swimming bath? If the sides and bottom are rendered in cement, some form of algæ accumulates very quickly on them, and forms a nasty slimy surface, which is difficult to clean off. Would the same thing occur if the bath was lined with white glazed bricks or tiles? Would these be suitable for the purpose, or would the glaze be apt to flake off? Can you suggest any other material suitable for the purpose?"

—The colour and texture of materials employed in lining the pool should be selected with a view to enhancing the artistic value of the buildings or scenery that will be reflected in it, so that it is not possible to name a single material that will be the best in all cases. A swimming pool formed by damming up the bottom of a rocky glen might be provided with retaining walls faced with local boulders, which would harmonize with the beautiful natural surroundings. Near a manufacturing town or in a populous watering place, where the number of bathers is likely to be great in proportion to the opportunities for changing the water, a clean, smooth finish is desirable for sanitary reasons, and glazed bricks or tiles would be suitable and therefore "best," perhaps, in such cases.

Accumulations of algæ are less liable to form on hard, impervious, non-porous surfaces, which have the additional merit of showing up all deposits of foreign bodies. Objectionable, slimy growths would be easily detected on a glazed brick or tile, and could be cleaned off from time to time before they assumed troublesome proportions.

If glazed bricks or tiles are used, only those that the maker can guarantee against exposure to frost should be selected. A hard, well-burnt body of stoneware type with the glaze applied direct to the surface and well fired is usually considered more enduring than a form of glazed brick or tile in which a clay slip intervenes between the solid backing and the glaze. The ordinary salt glazed brick is an example of the former enduring type.

Tiles are sometimes preferred to bricks owing to the difficulty of replacing a single brick that has been damaged from any cause, but bricks are less likely to become dislodged by frost from their backing on the side of the bath. Whether tiles or bricks are used, a heavy unglazed coping should be provided to avoid the danger of bathers slipping when walking or preparing to dive. Slabs of unglazed vitrified brick of close texture, or of granite not too finely axed, are suitable for this purpose.

Marble slabs or marble mosaics are to be seen in many baths, fountain basins, and pools of southern Europe, even when exposed to frost on the sides of high hills. The marble—particularly white marble—becomes stained by absorbing iron from the water, but this is not necessarily a disadvantage if the final mellow colour is considered in selecting the materials. Marble is handicapped in England by its liability to solution by acids present in our smoke-laden air.

Ceramic mosaic has been advocated as a lining for swimming baths, the mosaic being carried over all surfaces and around all edges which are made to a rounded form for the purpose. Gutters and copings are made in the same material. The fine, but unglazed, surface affords a reasonable grip for feet and hands in diving in or clambering out of the bath, but the large surfaces are liable to show shrinkage cracks which seriously detract from the effect.

The grey and red oil cements used by Moors and Arabs in lining their aqueducts and cisterns would also make adequate surfaces for open-air swimming baths, but expert work and unlimited patience are required in beating in the oil drop by drop, and would render the cost prohibitive in a country where time is money. W. H.

Contemporary Art

An Italian Sculptor.

Lina Arpesani, of the Brera Academy of Fine Arts at Milan, is also the professor of sculpture there. Her most important work is the fine monument for the grave of the novelist Neera, in the Milan cemetery, a place crowded with such sculptural memorials. A nude female figure holds above her head a volume symbolizing the author's work, the column against which it leans is decorated with conventionalized flowers in the Italian sculptuary manner. Nothing so large as this is exhibited in her show at the Beaux-Arts Gallery in Bruton Place, where there are thirty-four smaller works. The largest is the well-known group in bronze called "The Two Mothers," which was awarded a gold medal at Bergamo last year. It is typical of one side of Lina Arpesani's work, the side of sketchy modelling, which may derive something of its inspiration from the work of Prince Troubetzkoy, who at one time had pupils in Milan. Most of the bronzes are like this, an exception being the charming "Baby's Head." There are, however, half-a-dozen works in marble, which are different, and the "Baby's Head," in Gandoglia marble, which got a gold medal at Padua this year, is almost as good as the bronze. "The Birds' Nest," one of those anecdotal pieces generally to be found in conventional Italian work, is interesting, with its simplified drapery. The most interesting of the marble works, however, is the white mask of "Beethoven," with eyes closed as in death. Beethoven's head has a fascination for sculptors, and this is quite a good one. It is very refreshing to see a show of sculpture like this in London.

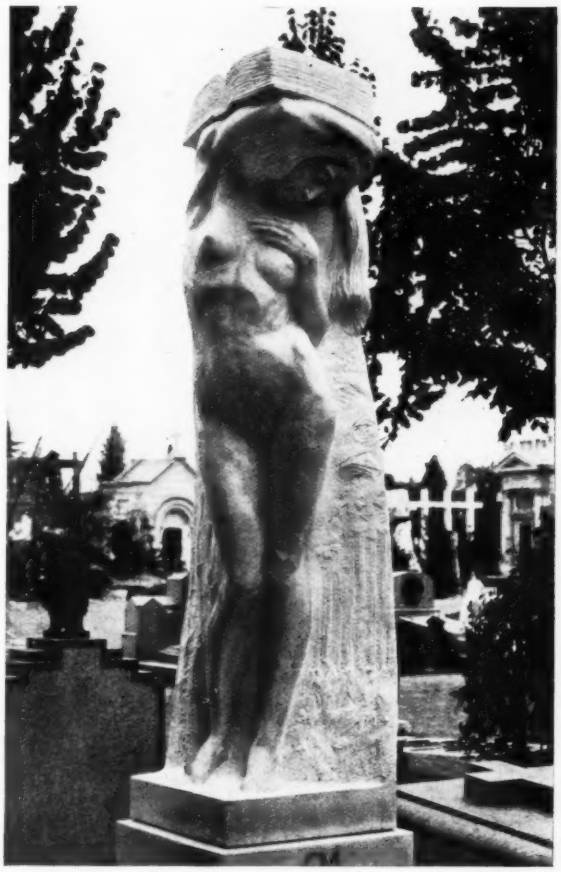
A. Baker Clack's landscapes in oil, water-colour, and pastel at the Beaux-Arts Galleries have qualities. The artist has an obvious love for pigment, and his applications are generally interesting. There is one large picture, "In Provençe," with a range of white buildings enclosing a sort of kitchen-garden, which is admirable, and there is still another, "Arches, Avignon," in which white paint triumphantly predominates. It is a long time since I have seen a picture in which white was so skilfully used as in these two cases. The "Roofs, Avignon," is a good canvas, and there are many other French subjects only less well treated.

Martin Hardie at the Fine Art Society.

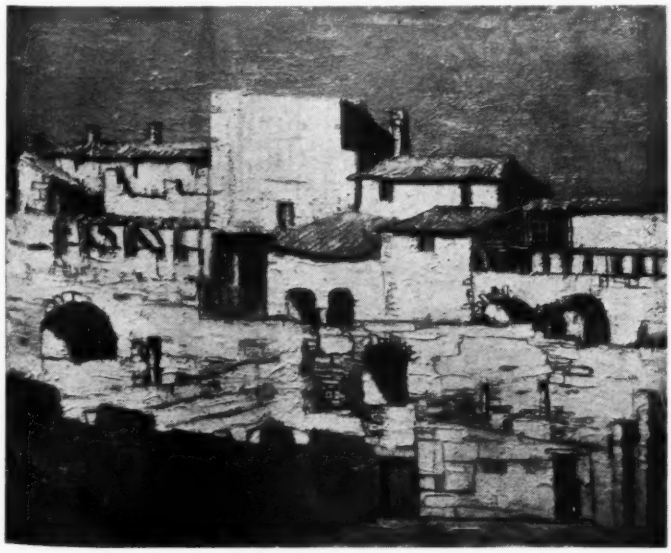
There is a rare and exhilarating feeling about this exhibition with its mastery and scholarship. There is no doubt as to the taste of this half-century of drawings in water-colour—it is perfect. I like all the drawings, but I like the architectural subjects best.

Some Other Water-colour Drawings.

A voluminous exhibition at the Arlington Gallery and a note in its catalogue reveal the honesty of E. Yarrow Jones. The drawings consist for the most part of flat washes without atmosphere. There is practically no light and shade in most of the architectural ones, and from this point of view no other interest. There is some little colour value in a few of the flower pieces, but these are not very important.



THE NEERA GRAVE MONUMENT, MILAN CEMETERY.
By Lina Arpesani.



ARCHES, AVIGNON.
From an Oil Painting by A. Baker Clack.

At Muchmore's Gallery in Great Russell Street, W. Francis Longstaff, the Australian war artist, has an interesting show of dainty spectacular little drawings, often trickily lamplit while the light of day dies away. These are largely of buildings, but in this direction there are much better things among the larger drawings. There is one of the interior of St. Paul's which has distinct character, and York Minster is not bad, while the distant hazy view of the Pyramids (No. 404), with its interesting foreground, is quite good.

At the same gallery Mrs. Gardner McLean exhibits some reminiscences of British Guiana, and there is a good wet sketch among other things by Russell S. Reeve, of "The Riverside, Norwich."

At Walker's Galleries is exhibited a collection of water-colour drawings of England, France, and Italy, by Mary Luttrell. The best are a loose study of "A Valley near Grasse" and the "Gateway of Dunster Castle."

Architectural Etchings.

At Walker's Galleries Mary E. Shelley reveals herself as a careful and loving student of buildings. She is not ambitious enough to attempt anything on the large scale, but her prints of "Fountain Court" and "Lamb Building, Temple," are honest and unostentatious. Even better than these are two of the Winchester plates, the "Chamber Court" of the college, and "The Cloister," the latter an interesting interior. The other etchings are mostly of simple subjects found in France and Italy.

KINETON PARKES.

Societies and Institutions

The A.A. Excursion to Spain.

An account of the A.A. excursion to Spain was given by Mr. E. J. T. Lutyens, A.R.I.B.A., at the last meeting of the Architectural Association. Mr. H. S. Goodhart-Rendel presided, and there was an unusually large attendance.

Mr. Lutyens, who was a member of the excursion party, described the places visited, and the general impressions the party brought away with them. A series of slides from some excellent photographs taken by Mr. F. R. Yerbury, were shown on the screen. With Madrid as a centre, the party made numerous excursions to some of the places of architectural and historical interest in the country. Seville, Toledo, Alcala, Segovia, Escorial and Cordoba, were among the places visited. Throughout the seventeen days covered by the visit, the party were treated with the greatest courtesy and thought by the Spanish architects and authorities, who were anxious, on their side, to make the excursion the success it was. On one occasion the King of Spain personally conducted a party over his palace near Madrid. Mr. Lutyens praised the efforts of Mr. Yerbury, who was responsible for the organization of the excursion and to whom its success was largely due.

A vote of thanks to Mr. Lutyens was proposed by Mr. Stanley Hamp, F.R.I.B.A., and seconded by Mr. J. M. Easton, A.R.I.B.A. Mr. F. R. Yerbury also spoke.

Geography and Architecture.

Sir Banister Fletcher, F.R.I.B.A., gave another lecture on the architecture of Italy, at the Central School of Arts and Crafts, London, and referred to the Gothic period, more particularly of Northern Italy. There, he said, many influences affected the design. The Classical remains in that country preserved the Roman tradition in design, and the Gothic style never took root there, except at Milan and other places in the north, where German influence was sometimes apparent. Again, Eastern influence via the Mediterranean Sea produced a Byzantine element. Sir Banister showed lantern slides of St. Petronio, Bologna, with its interesting unfinished front; of St. Antonio, Padua, with its incongruous domes; St. Giovanni e Paolo, Venice, a simple Northern interpretation of Gothic, with its internal tie-beams to reduce outward thrust; the Certosa, or church of the Carthusian Monastery, at Pavia, a very Romanesque type of design, with its remarkable Renaissance addition; and lastly, that more typically Gothic and impressive cathedral at Milan, whose "height, space, gloom, and glory," were described by Tennyson.

Colour in Italian Architecture.

At a later lecture Sir Banister continued the study of Gothic architecture in Italy, this time dealing with the central and southern parts of that country. He said that the Gothic spirit did not appeal to these southern artists, who retained the rectangular effect of Classic architecture, and indulged in bright splashes of colour in the façades by the use of brightly contrasted marbles. In Rome, basilican churches were sufficient, and S. Maria sopra Minerva was the only Gothic church in the Eternal City. In Florence, however, a new monument arose in the cathedral, dedicated to S. Maria del Fiore, with its slender and beautiful Giotto's Lily Tower, beloved of all great writers on art, and its baptistery, with its bronze gates—all of which were vividly shown by the aid of lantern slides. More purely Romanesque in tradition was the austere pile of S. Francesco, and its monastic buildings at Assisi. It was built by the friars on the death of the noble S. Francis, their founder, who was the greatest and yet the humblest son of that Italian town. This pile formed one of the most monumental monastic groups in Italy, and was an outward sign of a devoted life.

Palaces of Mediæval Italy.

The secular architecture of Mediæval Italy—bridges, palaces, towers, hospitals, and other public buildings—formed the subject of Sir Banister's succeeding lecture. It was noticeable, he said, that few civic buildings exist which were erected earlier than the twelfth century, for the early warfare aimed at the destruction of fortified and civic buildings while regarding churches as sacred. The most interesting aspect of secular building activities of that period was the picture it gave of the rise and growth of municipalities and the development of the communal idea. Their conscious power was exercised, not only in their dealings with irresponsible nobles and in the erection of great cathedrals, but also in all departments of civic life, and in providing on a grand scale the various civic buildings necessary for carrying on and protecting the life of the towns.

Records in Stone.

Lecturing on Romanesque architecture in France, which preceded the great cathedral-building or Gothic epoch, Sir Banister described how Romanesque architecture indirectly derived from Roman, evolved a series of different constructive expedients in different parts of the country, and eventually produced the Gothic style, first in the North. These ancient churches showed the intertwined histories of English and French kings, when much of France belonged to England, and there were many architectural exchanges. France, said the lecturer, had not the marble of Italy, but it had good building stone, and had great vivacity and inventiveness. The great dividing line between peoples and styles was the Loire. The vaults and domes in the South against the usurping arches and concentrated thrusts of the North showed how the latter style, from its distance from Roman influence, grew more progressive in spirit, and led up to the building genius of the "Ile de France." The next lecture will deal with French Gothic architecture.

Municipal Recreation.

In his fifth town-planning lecture at Birmingham University, Mr. William Haywood, F.R.I.B.A., said that adequate provision for municipal recreation was not usually found in town planning schemes for English cities, but in the gardenless, tenemented areas of America, municipal responsibility for community recreation had been accepted for more than thirty years. No American town plan was thought complete without an allocation of recreation facilities within easy reach of all citizens; indeed a carefully worked-out "park system" (upon which city recreation was based) was all the town plan many American cities possessed.

In some respects the English need had been less than that of the United States. There were probably no towns in this country, for instance, where it was necessary to prohibit traffic in certain streets during a part of each day, in order to make some provision—however inadequate—for children to play in safety near to their homes. We had comparatively few tenements; and little need for drastic action of this kind.

But the pressure was felt in other directions. With more leisure, our people now took their recreation more systematically. There was a great demand for special accommodation for the larger ball games, and in Birmingham within the last twenty years, 350 acres of land had been acquired and set apart for that purpose. During the same period the acreage of their suburban parks had been increased by over 600 acres, and all such parks were used almost to excess for cricket, tennis and bowls. They had 475 acres at the Lickey Hills as a Nature reservation for rambling, and the total area of land now available for public recreation in the city was no less than 2,566 acres.

We had made little progress however in two important aspects of American practice, viz., the linking together of suburban parks by means of parkways, and the provision of neighbourhood centres and children's playgrounds. We had no parkways; but these, although important, were not urgent. Playgrounds in the built-up parts of the city were initiated by Mr. Norman Chamberlain before the war, but were now disorganized, and it was only within the last few years that a start had been made with neighbourhood centres in Birmingham. The outdoor appurtenances of a neighbourhood centre were in full use at Muntz Park; and it was hoped that indoor accommodation would be available at this centre before long. There were some prospects, too, of a similar centre at the Henburys; and the need for a co-ordinated programme of recreation for the systematic equipment of the whole city, and especially of its congested central areas, was now under consideration. So that it might be said of Birmingham that it was definitely moving towards a wider policy in municipal recreation.

The Development of Built-up Areas.

In his sixth town-planning lecture at Birmingham University, Mr. William Haywood, F.R.I.B.A., said that the method of procedure usually adopted in respect to improvements in the built-up areas of English towns was so devised that negotiations for affected property and land might proceed with as little interference as possible from unscrupulous action by speculators in land values. In those areas of boroughs which were not yet built upon, however, this policy had been replaced by a procedure under the Town Planning Acts. This protected the community against speculation; and it was now evident that built-up areas also should be brought within the Town Planning Acts, and be given freedom in planning under the protection of a reasonable court of appeal against attempted exploitation. Meanwhile, until this or some similar protection was afforded, we lacked the stimulating influence of public opinion on this most important and urgent phase of town-planning activity; since schemes for the revision of our congested areas were usually far advanced towards adoption before the public were advised of them.

With respect to Birmingham, he said that the report of the "Housing Enquiry Committee," published in October, 1914, recommended that a plan for developing the central area of the city be put in hand immediately; and the responsible city departments had been working at such a plan ever since; although, for the reason already given, their work had not yet been made public.

In the comprehensive arterial road scheme put forward by the Public Works Department, and adopted by the city in 1917, they had the essential skeleton of their future town plan, with the exception of a small central area. This area was shown on the map illustrating the scheme, but was not included in the project for which special powers were then obtained. It was chiefly by the conditions in and about this centre that Birmingham, with nearly 1,000,000 inhabitants, and a world-wide reputation for municipal vigour, had been known and found wanting in character. And it was by the class of development in this portion of the town that their capacity to rise above an indifferent provincialism in architectural expression would be judged by future generations.

Urban Amenity.

A summary of Mr. Haywood's seventh lecture appeared last week. In his eighth lecture he stated that, of the several factors which contributed to amenity in the material condition of towns—other than beauty of situation—a consistent scale and manner were most important, and most difficult to secure. Consistency of general effect was sometimes attempted by the imposition of a uniform style of building; sometimes reliance was placed upon one-man control as a means for securing the necessary cohesion. These methods, however, could only result in a consistency of mediocrity, with no prospect of any distinction of manner unless handled with genius, and in that case too, they must still fail in representative character. In these days, the true source of urban amenity lay in the disposition of the populace, and was best moved by the stirring of many minds toward a high standard of general excellence.

Towns which had become large only by the multiplication of small parts, would usually be deficient in a scale appropriate to their new size. We had provincial towns in England of an importance, population and wealth which, for adequate expression, required an almost metropolitan character in their equipment; yet they remained so ill-provided with civic and social accommodation proportioned to their condition, that their people appear unsuited to the larger life that the growth of their environment had made possible.

The value of amenity in towns could be most effectively demonstrated by the great building periods of the past, when beauty was thought to be as essential a factor in city life as convenient and rapid transit facilities were to-day. But while the past might stimulate by example, it could not properly serve as a model. Modern towns which sought to give their growth an appropriate expression, must effect this by an imaginative treatment of their own vital energies. Industry and its equipment had much potential beauty; and the predominate occupation of all towns, whether it be industry or not, should be regarded as an essential factor in the determination of an amenity suitable to local conditions.

The Registration of Surveyors.

In his presidential address at the annual meeting of the Surveyors' Institution, Sir Edwin Savill said that a joint committee of the Surveyors' Institution, the Auctioneers' and Estate Agents' Institute, and the Land Agents' Society had prepared a Bill for the registration of those practising in any of the three professions. The Bill had been most carefully drafted under the best advice, and, as usual in such cases, protected all those who were already engaged in the work. Two years after the Bill became an Act, however, no one would be able to register who had not qualified by the passing of an examination approved by a board representative of the profession and the Government departments concerned. They would in no way be compelled to join one of the promoting societies. Sir Edwin regretted that the Bill was meeting with considerable opposition, the most strenuous coming from the legal profession. It was in the interests of the public, he said, that the Bill should be passed.

The Wessex Society of Architects.

The inaugural luncheon of the Wessex Society of Architects was held at the Red Lodge, Clifton. The Society is an amalgamation of members of the Bristol Society of Architects, founded in 1850, which has as its province Gloucestershire, Somerset, Wilts and Dorset; and members of the Gloucestershire Architectural Association, which was formed about sixteen years ago. Mr. G. C. Lawrence, F.R.I.B.A., the President of the Wessex Society, occupied the chair, and those present numbered between fifty and sixty.

After the loyal toast had been honoured, Mr. A. J. Taylor, F.S.A., President of the Society of Architects, proposed "The Royal Institute of British Architects." He remarked that for some forty years the architects' profession had been mothered or governed by two societies, which had been working on different lines, and had not always seen eye to eye. The negotiations which had been conducted in the last three or four years had shown, to his mind, that that was simply due to a lack of knowledge of one another, and of what each society was trying to do. He thought it had been proved that the ideals and aims of both bodies were identical, and that it only required their coming closer together and knowing one another better to realize that. With regard to his own society, they had had definite objects in view, which had not been in the forefront of the Institute programme, but he was hoping now that they would go forward with but one object in view.

Mr. Arthur Keen, F.R.I.B.A (hon. sec., R.I.B.A.), responding, said he was pleased to be present to give his blessing for what it was worth, on the new Wessex Society. He had no doubt it had a career of great usefulness before it, and he wished it the utmost prosperity. He liked the name of the society and anything which perpetuated history, and the name made due provision for any extension which would probably come. The Institute had been going on for nearly 100 years, and was originally a learned society. It had become a great professional society, but it had not ceased to be a learned society. The matter of education occupied the greatest share of its activities, it maintained a wonderful library, and it occupied itself with questions of art. It had been helped and supported most vigorously by the provincial societies.

Some English Cathedrals and Stone Decay.

Professor A. P. Laurie, lecturing to the students of the Royal Academy, said that for some years he had been making observations at the request of the Office of Works on the stone decay taking place in our ancient monuments. During this time he had collected a good deal of interesting information, and during the last summer he determined to visit some of our cathedrals with a view to collecting further facts. The cathedrals visited were Durham, Lincoln, Ely, and Norwich, and in addition he re-examined the condition of the stone at Hampton Court and the Houses of Parliament, and paid a visit to Westminster Abbey.

Before speaking of these buildings he referred to the ruins of Elgin Cathedral. In order to understand what was happening here and elsewhere it was necessary to classify the stones used for building into three main groups : the lime-stones; the sand-stones, in which the quartz particles were united by calcite, and the sand-stones in which the particles were united by silica. This classification would be regarded by petrologists as wanting in detail, and being somewhat diagrammatic in character, but it would be the most convenient for the present purpose, which was the injury caused to modern buildings by the presence of sulphur dioxide in the air produced by the burning of coal. The ordinary causes of stone decay did not require special mention there, as they were well known to architects, but the new and the main cause of the rapid decay taking place in modern buildings was the attack on the calcium carbonate of the lime-stone and of the calcite forming the binding

material in sand-stones by sulphur dioxide in presence of air and moisture forming calcium sulphate. Calcium sulphate was slightly soluble in water, and, therefore, was being slowly dissolved in the rain and removed, but this was not the most serious cause of damage. Cases of rapid decay were found to be associated with the crystallization of calcium sulphate inside the stone, and the consequent breaking up of the stone. The lecturer showed micro-photographs of calcium sulphate crystals and magnesium sulphate crystals from Ely and from the Houses of Parliament respectively, and described experiments for producing the same effect in the laboratory.

Dealing with the stone decay taking place at Elgin, Durham, Lincoln, and Ely, he directed attention to the fact that in some cases where siliceous sand-stones had been used the source of lime must have been the mortar, the rain dissolving and washing the lime into the stone. He also showed from the analyses at remote places like Ely and Tintern Abbey that the destruction owing to sulphur dioxide was not confined to the towns, but was spread over the remote country districts.

Finally, he stated as the result of the evidence collected that probably the best thing that could be done would be to treat such stone surfaces with a binding material depositing silica cement, and periodically to wash down the building with water during the summer with a view to removing the excess of sulphate of lime and thus diminish the danger of crystallization. While it was not possible in the state of our present knowledge to say whether such washing could be safely applied to every variety of lime-stone, experiments in this direction were well worthy in his opinion of the serious consideration of architects.

List of Competitions Open

Date of Delivery.	COMPETITION.
*Dec. 10	New Senior Elementary (Intermediate) School at Westcliff. Premiums: one hundred, seventy-five, and fifty guineas respectively. Assessor, Mr. J. W. Fisher, F.R.I.B.A., of Wellingborough. Apply Education Offices, 20 Warrior Square, Southend-on-Sea.
*Dec. 31	International competition open to landscape architects, etc., for plans for the elaboration of the general plan of the Toptchider Park, near Belgrade. Premiums: 1st, £400; 2nd, £300; 3rd, £200; 4th, £150; 5th, £100. In addition the sum of £250 is set aside for the purchase of designs failing to secure prizes. Apply Minister of Agriculture and Water, rue Prole Mateic 62, Belgrade.
*Dec. 31 1925	Designs are invited for a wall tablet to be placed in the large hall of the King Henry VIII School, Coventry. Apply Headmaster.
*Feb. 16	Designs are invited for a library to be erected at the Compton Road estate, Leeds. Assessor, Mr. Percy S. Worthington, F.R.I.B.A. Premiums of £35, £20, and £15. Apply Town Clerk, Leeds.
*Feb. 28	Art gallery and museum of art for the City of Manchester. Assessors, Mr. Paul Waterhouse, Professor C. H. Reilly, and Mr. Percy S. Worthington. Premiums £500, £300, £200, £100. Apply with payment of 5s., which is not returnable, to Mr. P. M. Heath, Town Clerk.
*Feb. 28	Competitive designs are invited from qualified architects, being British subjects, for proposed New Railway Offices to be erected in Nairobi, Kenya Colony. Assessor, Mr. William Dunn, F.R.I.B.A. Premiums £200 and £100. Designs must be received at the Offices of the General Manager, Uganda Railway, Nairobi, Kenya Colony, not later than February 28, 1925. Apply, with deposit of £1 1s., to The Crown Agents for the Colonies, 4 Millbank, Westminster, S.W.1.
*Mar. 31	Bethune War Memorial. Assessor, Sir Aston Webb, P.R.A.
*May 1	The United Grand Lodge of England invite designs for rebuilding the Freemasons' Hall in Great Queen Street, Kingsway, London.
June 30	Lay-out of open spaces and fortifications between Valletta and Floriana and those encircling Floriana. Premiums £1,000 and £500. An indemnity of £100 will be awarded to three other designs showing conspicuous merit. Assessors, Mr. E. P. Warren, F.S.A., and Professor Patrick Abercrombie, A.R.I.B.A. Apply, with a deposit of £5, to the Minister of Public Works, Public Works Office, Valletta, Malta, not later than December 1. Copies of the conditions only may be obtained free of charge from the Crown Agents for the Colonies, 4 Millbank, Westminster, S.W.1.
No date	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.

* Date of application passed.

Competition News

The Oldham Nurses' Home Competition.

The design of Messrs. C. T. Taylor and Roberts has been placed first in the limited competition, promoted by the Oldham Board of Guardians, for extensions to the nurses' home at the institution. Mr. Francis Jones, F.R.I.B.A., was the assessor, and Mr. E. S. England, A.R.I.B.A., 12 Clegg Street, Messrs. C. T. Taylor and Roberts, 10 Clegg Street, and Messrs. Taylor and Simister, 29 Queen Street, all of Oldham, were invited to submit designs. The extensions were stipulated in the conditions to cost between £20,000 and £30,000.

The Architecture Club

The second annual general meeting of members of the Club was held at the R.I.B.A. under the chairmanship of the president, Mr. J. C. Squire. In presenting the report of the executive committee and statement of accounts for the year ending May 31 last, the chairman stated that, apart from the club's exhibition at Grosvenor House in the spring, they had had the pleasure of co-operating with the Royal Institute in organizing the representative Exhibition of British Architecture at the British Empire Exhibition, and also of assisting the Institute in formulating a protest against the St. Paul's Bridge project. These matters might be taken as evidence of the happy relations that had always subsisted between the club and the premier body of British architects, by whose courtesy, indeed, they were meeting in that hall. Mr. Squire referred to the visit of Her Majesty the Queen to the club's exhibition, to the excellent and stimulating address of the Marquess Curzon at the opening ceremony, and to the thoughtful and sympathetic speech of the ex-Premier, Mr. Ramsay Macdonald, at the last dinner of the club in May. A considerable part of the report dealt in detail with the work of the sub-committees. The financial statement showed that a considerable loss had been sustained through the exhibition, but the deficit, the chairman explained, had since been cleared off. The report and accounts were unanimously adopted.

Messrs. Arthur J. Davis, Nathaniel Lloyd, Charles Marriott, and Clough Williams-Ellis were elected to fill vacancies on the executive committee caused by the retirement, under Rule VII, of Messrs. Oswald Barron, E. Vincent Harris, Ralph Knott, and Professor Hubert Worthington. Votes of thanks to the retiring members of the executive, the retiring treasurer, Mr. H. Austen Hall, who is succeeded by Mr. Darcy Braddell, also to the R.I.B.A., the chairman and secretary, concluded the proceedings.

Following is a list of the officers and council for the year 1924–25:—

Hon. President.

Thomas Hardy, O.M., Hon. LL.D. (Aberdeen), Litt.D. (Cambridge), D. Litt. (Oxford), J.P.

President.

J. C. Squire, M.A.

Council.

*R. M. Barrington-Ward, D.S.O., M.C., B.A.
Oswald Barron, F.S.A.
*James Bone.
*Harold Child, B.A.
*Arthur J. Davis, F.R.I.B.A.
H. Austen Hall, F.R.I.B.A.
E. Vincent Harris, F.R.I.B.A.
Ralph Knott, F.R.I.B.A.
*Nathaniel Lloyd, O.B.E.
*Sir Edwin Lutyens, R.A., F.S.A., F.R.I.B.A.
*Charles Marriott.
*Oswald P. Milne, F.R.I.B.A.
Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A.
Sir Giles Gilbert Scott, R.A., F.R.I.B.A.
*J. C. Squire, M.A. (Chairman).
Sir Lawrence Weaver, K.B.E., F.S.A., Hon. A.R.I.B.A.
*Clough Williams-Ellis, M.C., J.P.
Professor J. Hubert Worthington, M.A., F.R.I.B.A.

Hon. Treasurer.

* T. A. Darcy Braddell, F.R.I.B.A.

Secretary.

J. H. Elder-Duncan.

* Signifies member of the executive committee.

A.A. New Members

At the last meeting of the Architectural Association, the following new members were elected:—

W. E. Aitken.
E. H. Loye.
W. H. Eales.
W. S. H. Pawson.
L. G. Pearson.
Miss P. M. H. Bush.
Miss M. F. Pepler.
A. A. V. Campbell.
T. W. Snailum.
F. J. A. Schupback.
J. W. Parr.
W. E. Lowes.
Miss P. L. Bateson.
Miss K. A. Veitch.
A. G. Raven.
G. R. Dawbarn.
E. Playne.
Miss R. D. Morrison.
H. S. M. Carver.
B. S. Hume.
Miss J. H. Read.
R. B. J. Selby.
G. C. Ames.
H. R. Easton.
Miss M. A. M. Hodson.
R. S. Lavers.
G. F. Nicolls.
A. H. Girard.
F. C. G. Grant.
C. D. Hill.
J. A. Ritchie.
S. J. Kemp.
Miss A. C. H. Brinton.
N. B. Hillier.
H. W. Rich.
C. W. B. Ferguson.
O. H. B. Bedford.
D. R. Burles.
J. C. Rose.
J. M. Richards.
J. C. Dickson.
C. A. C. Turner.
G. F. Randall.
E. B. G. Boulton.
H. Hulse.
H. M. Peskett.
E. Mader.
M. A. Halim.
Miss M. J. Tyrwhitt.
S. L. Thomson.
Miss D. F. Buckland.
W. A. K. Faldo.
S. E. Dykes Bower.
F. E. B. MacManus.
H. Greenwood.
W. H. M. Penn.
E. A. Rowse.
T. Ritchie.
F. R. Jarman.
K. E. F. Gardiner.
J. D. Beloe.
H. R. Thompson.
A. E. Westerman.
R. F. McQuistan.
Miss M. H. Sullivan.
R. P. Cummings.
G. N. Lewis.
Claude Flight.
C. H. Reilly.

The Week's News

The Art Workers' Guild.

Mr. Gilbert Bayes, the sculptor, has been elected Master of the Art Workers' Guild for 1925.

Islington Town Hall to be Sold.

The Ministry of Health have sanctioned the sale of Islington's old Town Hall.

More Houses for Thurnscoe.

The Thurnscoe Urban District Council have decided to build fifty houses.

Tadcaster Housing Schemes.

The Tadcaster Rural District Council have forwarded a scheme for the erection of 277 houses to the Ministry of Health.

A New Dance Hall for Holloway.

A dance hall is to be built at the junction of Holloway Road and Parkhurst Road, Holloway.

The Reconstruction of Main Roads in Bridgwater.

The Ministry of Transport have approved the expenditure of £12,000 on the reconstruction of the main roads in Bridgwater.

Housing at Windlesham.

The Windlesham, Surrey, Urban District Council are to build forty houses.

Housing at Rugby.

The Rugby Urban District Council are considering a scheme for the erection of 100 houses on the Castlands estate.

A New Water Tower for Goole.

The Goole Urban District Council have received the sanction of the Ministry of Health to a loan of £22,000 for the erection of a reinforced concrete water tower.

A Portsmouth Bridge to be Reconstructed.

Sanction has been given for the reconstruction of Ports Bridge, over which a great volume of traffic passes. The new bridge will have a width of 80 ft.

More Houses for Aldershot.

The Aldershot Urban District Council have decided to apply to the Ministry of Health for sanction to a loan of £24,300 for the erection of fifty houses on the Aldershot Park estate.

Coast Erosion at Barmouth.

The Ministry of Health have agreed to sanction a loan of £10,000 to enable the Barmouth Urban District Council to combat the encroachment of the sea.

Manchester Sanatorium to be Extended.

The Manchester Public Health Committee have resolved to push forward the extension of Abergele Sanatorium so as to accommodate 546 more children.

New Shops for Scarborough.

At Scarborough new shops, a café, ballroom, etc., are to be erected. Plans have been prepared by Mr. F. Tugwell, of Scarborough, architect.

Steel Houses for Lanarkshire.

The Housing Committee of the Middle Ward of Lanarkshire have decided to erect 100 steel houses in different parts of the county.

The Restoration of Oldswinford Church.

The tower of Oldswinford Church, in the Midlands, is to be restored, and the nave rebuilt from the designs of Sir Giles Gilbert Scott, R.A.

Abersoch Road Widening Scheme.

The Ministry of Transport have made a grant of £22,000 towards the cost of a scheme to widen the main road between Llanbedrog and Abersoch.

A New School for Ossett.

Plans for a new school at Gawthorpe have been prepared by Mr. Edeson, architect to the Ossett Urban District Council. The estimated cost is £12,500.

Proposed New School for Oxford.

The Oxford City Education Committee have decided to recommend the Council to buy the Oxford Football Club's ground as a site for a municipal secondary school.

"Height Money."

Men who make and repair the slated and tiled roofs of London buildings will in future receive, in addition to their ordinary wages, "height money," which has long been paid in the North.

Loan Granted for Foleshill Housing.

The Foleshill Rural District Council have received from the Public Works Loan Board £12,450 for the erection of thirty houses on the Bulkington Lane, Bedworth, site.

Ludgate Circus Viaduct Plan Rejected.

The proposal to construct an overhead roadway across Ludgate Circus from Farringdon Street to New Bridge Street, was discussed and rejected at the last meeting of the Court of Common Council.

Shipley Housing Scheme.

The Shipley Urban District Council have adopted a scheme for the erection of 195 houses on the Saltaire housing estate. It will now be submitted to the Ministry of Health. The total estimated cost is £114,813.

Housing at Bolton-on-Dearne.

The Bolton-on-Dearne Urban District Council propose to erect 250 working-class houses during 1925, and to increase up to 500 during the next three years. The sanction of the Ministry of Health has been received.

Subsidy Houses in Ipswich.

Sanction has been received from the Ministry of Health to the construction by private enterprise of 100 houses in Ipswich under the subsidy scheme. The total number sanctioned since August, 1923, is 550.

The Incorporated Church Building Society.

By the unanimous approval of the general committee, Mr. F. C. Eden, M.A., F.R.I.B.A., and Mr. Robert Atkinson, F.R.I.B.A., have been elected to the Society's Committee of Honorary Consulting Architects.

Proposed Public Baths and Washhouses for Liverpool.

The Liverpool Corporation are applying to the Ministry of Health for sanction to a loan of £21,600 for the erection and equipment of new public baths and washhouses in Minshull Street.

Blaydon Urban District Housing.

The Ministry of Health have sanctioned the erection of thirty houses at Bleach Green, near Winlaton. The Council have decided to ask for sanction for an additional thirty-two houses.

Scarborough Road Improvements.

The Scarborough Town Council are seeking Parliamentary powers to enable them to carry out an extensive scheme of road improvements, etc., which includes the provision of a large open space opposite the railway station, to serve as a centre for the distribution of traffic.

Bigger Promenade at Blackpool.

A Ministry of Health inquiry was held at Blackpool into an application by the Blackpool Corporation for leave to borrow £221,200 for the completion of improvements to the promenade extensions at South Shore and North Shore, and the open-air baths at South Shore.

Leicester's Great Need for Houses.

A Ministry of Health inquiry was held at Leicester into an application by the City Council for powers for the compulsory acquisition of 1,091 acres of land for housing. The town clerk said the Council had to face the possibility of having to provide no fewer than 10,000 houses.

Dewsbury Improvements.

The Dewsbury Town Council have adopted road and other schemes estimated to cost £50,000. One scheme is for the building of a bridge across the Calder and Hebble canal at Slaithwaite Road, Thornhill Lees, to replace the present stone arch bridge.

The Improvement of the River Ouse.

The Ouse Drainage Board are considering a proposal of the Ministry of Agriculture that the Board should undertake the improvement of the main channel and the outfall of the River Ouse at a cost of more than £1,000,000, of which the Ministry would pay a third.

Birmingham Hospital Extension Scheme.

A private Bill is to be promoted in the next session of Parliament for powers to extend the Birmingham General Hospital. The extension involves the closing of St. Mary's Church and churchyard and their sale to the hospital trustees, as well as the stopping up of Weaman's Row.

Extension of Whitley Bay Promenade.

The Whitley Bay and Monkseaton Urban District Council have approved plans for the extension of the lower promenade to Briar Dene at an estimated cost of £43,000. Application is to be made to the Ministry of Health for sanction to borrow the money.

New Brighton Promenade Scheme.

The Wallasey Corporation have approved the draft of the Bill embodying the £750,000 scheme for the extension of the New Brighton promenade to a point on the Leasowe side of Harrison Drive. It is hoped that it may be promoted in the next session of Parliament, and that the work will be begun in the spring of 1926.

A Big Road Scheme for Devonshire.

The Devon County Council are to carry out a road reconstruction and improvement scheme at a cost of over £1,250,000. Some 120 miles of road, out of a total of 1,400 in the county, will be dealt with, and the work will occupy five years. Special attention will be paid to the main trunk road from Bristol to Exeter and Plymouth.

The Hastings Sea-front Scheme.

Work has begun on the building of the new pavilion on the sea-front at Hastings. Steps are being taken also to alter the approach from the front to the White Rock Gardens. A road 90 ft. wide, with a sunken Italian garden in the middle, is to be made between the new pavilion and the St. Leonards frontage, which begins at the Hastings pier-head.

The New Wing of the London County Hall.

Asked at the last meeting of the London County Council by Mr. J. D. Gilbert what progress was being made in erecting the new wing to the County Hall, Mr. Ernest Gray said the construction of the foundation and retaining walls was in progress. No contract had been entered into for the erection of the additional building.

A New Technical College for Middlesbrough.

It was announced at Middlesbrough that the family of the late Mr. Joseph Constantine, the millionaire shipowner, have doubled his original gift of £40,000 to the fund for the erection of a technical college. As a result of this gift all financial difficulties have been overcome, and the college is to be erected immediately.

The Building and Repair of Churches.

At the last monthly meeting of the Incorporated Church Building Society, held in Westminster, grants were made towards the building, enlargement, and repair of a large number of churches in various parts of the country. During this year nearly £9,000 has been granted in connection with this work.

L.C.C. and Skilled Labour in Building Trades.

The London County Council have accepted a motion by Major H. Barnes to ask the Housing and Education Committees and the special committee on unemployment to consider "what action the Council could take, in co-operation with the building trades employers and operatives and otherwise, to augment the supply of skilled labour in the building trades available for the building of houses under the Housing Acts."

The Government to sell 1,034 Eltham Houses.

The Royal Arsenal Co-operative Society propose to acquire Well Hall housing estate, Eltham, built by the Government in 1916 for munition workers at Woolwich. The total cost to the Government was £808,000, and the agreed price to be paid by the society, if its members approve, is £375,000. The estate comprises ninety acres of land, 1,034 houses, and 212 flats.

University of London School of Architecture 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, Gower Street, London, W.C.1.

Lambeth Bridge.

It was stated at the last meeting of the London County Council that no decision had been made with regard to the rebuilding of Lambeth Bridge. The matter would be considered by the Special Committee on Thames Bridges in relation to the general question. The demolition of the existing bridge depended on the ultimate decision with regard to the rebuilding, and the question of a temporary bridge was one for the Improvements Committee.

Proposed Communal Houses for Henstead.

The Henstead Urban District Council have decided to ask the Ministry of Health for financial aid in a scheme to build small communal houses, with a resident doctor, for a number of aged widows and old-age pensioners now living alone in houses too big for their needs. The accommodation consequently vacated would, the Council consider, become available for young married folk and married people with families who cannot now get houses.

New Appointments at the Ministry of Health.

The Parliamentary Secretary to the Ministry of Health, Sir H. Kingsley Wood, M.P., has appointed Mr. E. S. Hill to be his private secretary; the Permanent Secretary to the Ministry of Health, Sir Arthur Robinson, K.C.B., C.B.E., has appointed Mr. R. Stanton to be his private secretary; and the Second Secretary to the Ministry of Health, Sir A. V. Symonds, K.C.B., has appointed Mr. T. H. Sheepshanks to be his private secretary.

The Railways and Manchester Town Planning.

A conference was held at the Manchester Town Hall between the London and North-Eastern Railway Company and the Joint Town Planning Advisory Committee. Alderman Turnbull, who occupied the chair, outlined the object and work of the committee, and in the subsequent discussion, it was agreed that the closest co-ordination between the local authorities and the railway companies was essential in order that the development of the area might proceed in a manner likely to give the best transportation.

The A.A. Students' Pantomime.

The Architectural Association Students' Pantomime, entitled "Guffaws, or The Double Elephant and Castle," will be performed at 8 p.m. on Wednesday, Thursday, Friday, and Saturday, December 17, 18, 19, and 20, with matinees on the Thursday and Friday at 2.30 p.m., in the Galleries of the R.I.B.A., 9 Conduit Street, Regent Street, W. Tickets 3s., 5s. 9d., and 8s. 6d., including entertainment tax, can be obtained on application by letter, or personally to Miss Rigg, 34 Bedford Square, W.C.1. (Telephone: Museum 4957, 10.30 a.m. to 5 p.m.) Money must be sent with applications for tickets; cheques to be made payable to the Architectural Association. The profits are in aid of the Architects' Benevolent Fund.

Bethlem Royal Hospital.

Subject to a number of more or less formal consents, the question of the removal of the Bethlem Royal Hospital from Lambeth is now practically settled. The site at St. George's Fields, Lambeth, is the freehold of the Corporation of London, and is held by the hospital on a lease. Of that lease there are over 700 years to run. A scheme has now been propounded by the Bridge House Estates Committee by which the governors will purchase a larger site in the neighbourhood of Croydon, which they themselves found, for just over £30,000. This will be taken over by the Corporation, who will immediately grant a lease for the unexpired term of the existing lease of the Lambeth site at the same rent, accepting the new ground in exchange for the old. In this way the governors of the Royal Hospital will come into possession of the freehold of the Lambeth site. Of this they will dispose to the best advantage. If the Court of Common Council agrees, the hospital will have to secure the consent of the Lunacy Commissioners, and then go to Parliament.