Wednesday, December 31, 1924 Vol. LX. No. 1565.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

CHURCH SPIRES.

Spires have been compared to pointing fingers, but they do not in the least resemble these or deserve the gibe which has been flung at sign-posts—that they show the right road but do not take it. A spire always seems to have forced itself upwards to the vanishing-point of tenuity; to maintain with a martyr's firmness the height so painfully reached; to endure the constraint of a cruel bond, which it keeps perpetually stretched to an invisible fineness. "If I can rise no farther," says the spire, "at least I will not decline one inch—and some wonderful night the bond may break."

9 Queen Anne's Gate, Westminster.

The late Mr. Paul Waterhouse, P-P.R.I.B.A.

From the Portrait by Sir William Orpen

An appreciation of the late Mr. Paul Waterhouse, by Sir John Simpson, appears on page 977. The portrait reproduced above is from the gallery of Past-Presidents of the R.I.B.A.

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate, Westminster

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The Claims of Convenience

DIOGENES, the cynic, living in a tub, reduced his demands upon architectural convenience to the minimum, yet, even to him, a modicum of shelter was a necessity.

Since his day the writings of explorers and commentators of renown have shown that absolute exposure to the elements is prejudicial to man's mental development, so that the tub of Diogenes may be accepted as marking the approximate limit of the requirements of civilized man in respect to architecture. If not the architect, the cooper at least must be called in, and something may be said on behalf of the cooper as architect. This skilled artificer not only performs the several technical operations of his craft adroitly—hacks and shaves down his staves and heads with a precision truly astonishing, but also directs all his efforts to an end at once beautiful and useful. His work is only complete when it has been tested and found capable of holding water. Prolonged practice is a part of his secret, but it is the exact and certain knowledge of the thing required of him that enables him to wield his heavy cleaver with such speed, vigour, and effect.

Uncertainty of aim is, perhaps, the most severe handicap upon the architect's usefulness to the public, for, unlike the fortunate builder of barrels, he is seldom called upon to produce a design for a purpose that can be definitely stated in every detail.

Throughout an architect's career the enunciation of his problem comes to him as a problem in itself, for the first part of his business is always to find out just what is wanted, and this is never so simple as it appears. A client is seldom in a position to present a programme clear-cut and precise, and the architect has to use his discretion in determining when he is sufficiently equipped with facts to begin his adjustment of ends and means in the sketch plans.

The manner of the design is so important that the matter may receive rather less than its fair share of attention, or in some cases, where the client's business processes have been carefully studied by the architect, the task of convincing the client that this has been the case is one of most extraordinary difficulty.

Human memory and understanding have their blank spots, and a mathematical demonstration may be quite insufficient to convey the facts. In one case, where the feasibility of the design and the suitability of a certain site depended upon the provision of ample space for the storing of goods, the client discovered, to his intense alarm and annoyance, that the warehouse floor as shown upon the sketch plan was only large enough to hold 75 per cent. of the packages he expected to place upon it. His manager glanced over the figures and came to the same conclusion; the calculations seemed to point to a grave error, though hours of patient inquiry failed to show how the error could have been made. Figures in the architect's possession confirmed those of the business man, and it was admitted that these had been agreed after full discussion and inquiry. Every member of both offices who could by any possible chance throw light upon the subject was consulted, without result, and the architect was instructed to make arrangements for cancelling the purchase of the site.

At the last minute it was remembered that the packages were to be stacked in two superimposed layers, and that instead of a deficiency of space the floor area was ample for present needs and for future expansion of the business!

Setting down the particulars of an architectural subject for the competitive designs either of students or of professional men is by no means an easy task. Such particulars, even when drawn up by experienced assessors, are so usually open to question that it has become customary to permit intending competitors to ask for additional information, and to incorporate their questions and the replies to them as part of the conditions of the competition. To an impatient critic such a mode of procedure might appear to savour of unpreparedness and vacillation, but it is in reality as good a way of ascertaining and communicating the practical conveniences of any special problem as has yet been invented.

Whether an architect's powers of grasping the essential factors in any proposed scheme could be developed by a revised system of education is open to question—and to experiment.

At present, while the arrangements for bringing the student into contact with the artistic and constructional aspects of architecture are highly elaborate and effective, the means employed to educate him in the business of providing the conveniences demanded by his clients are far more flimsy. The young architect is thus usually allowed to reach the end of his training before he gains any intimate acquaintance with the most important of all his studies. This deficiency of the educational syllabus is almost inevitable in a school, though students might be introduced to the art of interpreting general instructions by taking down their subjects of design from the instructions of non-technical persons invited to visit the school for the purpose. If, instead of a successful architect, a merchant or manufacturer or house owner were to set the problems and the resulting studies were to be judged conjointly by an architect and the person setting the problem, a very much more practical form of design would be encouraged.

Office life rarely supplies the need, except in the case of the head assistant, who may be expected to carry on in the absence of his chief, and who learns at these times some of the difficulties that clients experience in making their requirements known. Even in the most favourable

instances there is something haphazard in this method of picking up knowledge, and much more definite instruction is needed, and at a much earlier date.

Many young people drift into architecture just because they feel that they have a taste for drawing, and it is bad, both for them and for the profession, that ability to make tolerably accurate diagrams should be held up as anything more than a necessary qualification among others still more important.

To disabuse the student's mind at the outset, he might be required to make a measured drawing of the house in which he lives or lodges, and submit it together with a report embodying his mother's or landlady's comments on its fitness, instead of the usual repetition of some diagram of the orders.

The ordinary life and work of an architect would be much more fairly represented by the proposed task than by the usual one, and by making the experiment the candidate would be enabled to form a fair judgment of his interest in architecture.

The advantage to the already overcrowded profession would be a sensible reduction in the numbers of recruits, who would no longer enlist under a mistaken view as to the nature of their future duties. The student who had conscientiously faced and committed to paper the disorder and lack of convenience so abundantly apparent in the middle-class English house would either embark upon his architectural training with eyes open to utilitarian needs and possibilities, or he would discover before it was too late that his artistic abilities would find more suitable expression through some other medium.

Up to date there is no record of any student having survived the test with any taste left in him for further architectural study, but, if in future any young person should be found so grimly determined to carry the matter through to a finish, it is questionable whether he would not be a thorn in the side of any architectural lecturer with a less practical outlook than his own. W. H.

The late Mr. Paul Waterhouse

The sudden death of Mr. Paul Waterhouse at the comparatively early age of sixty-three comes as a severe shock to the architectural profession. It had been known that his health had given cause for uneasiness for some time past, but few could have realized that his end was so near. Waterhouse had become perhaps in a greater degree than any of his contemporaries a personality in architectural life and affairs. He had all the gifts and accomplishments that make for popularity, in the best sense of the word—eloquence, humour, wit, and, above all, tact in the handling of affairs in which there were differences of opinion. He was president of the R.I.B.A. during some of the most troubled years of its existence, but amid stormy controversies he contrived to preserve amity and good will, and lived to see the amalgamation for which he had worked so well virtually achieved. By his unfailing geniality, sympathy, and kindness he had endeared himself to all who knew him; his was essentially a lovable personality. By general consent he was one of the best speakers that the Institute has ever had, some of his efforts reaching the level of real oratory. His speech at the Wren Bi-centenary Banquet seemed to be inspired. None who heard it will ever forget it. His outlook as an architect was sane and healthy, and, as one critic has observed, "he may be said to have developed on lines of greater simplicity the picturesque type of design which was characteristic of his father." He carried out a large amount of work, not only in England and Scotland, but on the Continent. After the death of his father, Paul Waterhouse continued and completed some of his father's works. He had helped his father in the designing of St. Margaret's School, Bushey, and Rhyl Hospital, and he completed University College Hospital, which his father had designed in 1897. He also altered the interior of the hall at Balliol. On his own account Paul Waterhouse designed important science laboratories for Oxford, Manchester, and Leeds Universities, and University College Hospital Medical School and Nurses' Home in London. Among his ecclesiastical buildings the Convent of the Incarnation at Oxford was considered especially successful, and All Saints' Church, St. Andrews. Like his father, he did much work for the Prudential Assurance Company, and for other assurance corporations, also for banks, especially Lloyds and the National Provincial, for which he erected buildings in Paris and Brussels. We publish elsewhere in this issue a special memoir by Sir John Simpson.

Our Special Issue

Next week we shall publish our New Year Special Issue, the main feature of which will be a survey of the work of three modern architects distinguished in different spheres of architectural design, namely, ecclesiastical, general, and domestic. The first category is represented by the work of Sir Giles Gilbert Scott, R.A. (with an appreciation by Professor C. H. Reilly), the second by the work of Mr. Frank T. Verity, F.R.I.B.A. (with an appreciation by Mr. A. Trystan Edwards), and the third by that of Messrs. Baillie Scott and Beresford (with an appreciation by Mr. J. D. Clarke). The survey thus comprises a wide range of buildings, including a cathedral, churches, collegiate buildings, war memorials, theatres, cinemas, business premises, flats, and domestic work both large and small, the whole accompanied by numerous plans and other architectural drawings. In addition, the issue will contain a survey of the most important buildings of the year, including Britannic House, Finsbury Circus, designed by Sir Edwin Lutyens, R.A., and Adelaide House, London Bridge, designed by Sir John Burnet, A.R.A., these two buildings being profusely illustrated by specially taken photographs, and accompanied by a critical appreciation by Mr. Howard Robertson, principal of the Architectural Association School of Architecture. It will be seen, therefore, that this issue, besides possessing the attraction of special personal interest, forms in effect a summary of the most accomplished achievement in many departments of modern architectural design. The issue is published at the price of one shilling to non-subscribers, but those readers who subscribe to the paper direct will, of course, receive it without any extra charge. As the number is certain to go out of print shortly after publication, application for copies should be made with as little delay as possible.

"Let's Talk of Graves"

In perhaps the greatest of Mr. H. G. Wells's novels, "Tono Bungay," we remember that when young Ponderevo called on an old school friend after a lapse of several years, he found him occupying a bed-sitting-room at the foot of Highgate Hill, and earning a rather uncertain livelihood as a sculptor of tombstones. We do not remember to have met one of that calling elsewhere, either in literature or in life. According to a report of a special committee of the British Institute of Industrial Art, there is in fact, a shortage of such men. "In some cases firms carry out the designs of architects, in others the head of the firm himself may be a competent designer; but most monumental masons employ no artist, but at best a man capable of producing a scale drawing." And our big London cemeteries, instead of being places in which to linger and meditate, are places of such ugliness as to be avoided. They could hardly, as Shelley said of Keats's place of burial at Rome, "almost make one in love with Death." The remedies which the committee propose are, broadly, to better the choice of materials, to improve the design and workmanship, and the exercise of more intelligent supervision. Whether one is to lie in a magnificent vault at Woking, or in a narrow country-churchyard-grave, one's final resting place should be as fittingly designed as the house in which one lives one's life.

Paul Waterhouse:

An Impression

By SIR JOHN W. SIMPSON, K.B.E.

HE is gone, and we still live; but it is hard to think of him as dead. "*Nomen bonum instar Unguenti fragrantis.* It filleth all round about, and will not easily away." In the close-ranked village church, in the churchyard where his old friends came together—some after many years—we felt him still among us, gentle, unassertive, and distinguished. It seemed but natural that he—though coffined—should lead our little procession to the grave. For all its sad occasion, the wet December day was of rare beauty. Soft west winds tinted its greys with pearly warmth; the singing of birds was about our silence, with faint antiphonal challenges of distant cocks. From the past, comfortable words floated to my mind; "But, above all, believe it, the sweetest Canticle is, *Nunc dimittis;* when a Man hath obtained worthy Ends," and as the choral voices faded away after the committal, I thought how quickly Waterhouse would cap the quotation.

"There is a *Youth* in thoughts as well as in Ages." He was younger than his years, for he had developed slowly, and was long in finding himself. Very modest, he approached things tentatively, holding fast to tradition as he adventured on new ways. At first he worked in the mode his father had invented under the influences of his time, adapting mediæval design to contemporary conditions. For this he was not equipped, lacking, as he did, the enthusiastic paternal conviction with regard thereto; he was never quite happy with quasi "Gothic." His training in the Humanities, and the bent of modern technical education with which he was so closely concerned, led him inevitably towards Classic expression; and his later work was handled with certainty and grace.

The measure of his capacity is, perhaps, best shown by the Bank he designed in the Boulevard des Capucines. A charming and original conception, perfect in scale, and detailed with meticulous care, the interior of this building may well stand for his master-work.

As with all true scholars (*abeunt studia in mores*) his outlook on life was wide and his interests various. He will be long remembered at the Royal Institute, not only for the amount of efficient work he did there, but for the diversity of its direction. In all of it, as in his own practice of the profession, he found delight. For Education, we know the services he rendered as Chairman of the Board. In Town-planning we remember how he showed the connecting value of the south bank of the Thames; his Address on the Traffic Commission Report; his ingenious proposal for reconstructing the Euston Road. Turning from present need to ancient lore, he could formulate his own theory of the Vitruvian *scamilli impares*, and discuss with clarity the commentators of the Renaissance. In discourse his speeches were memorable, excelling in lively epigram, in sudden, thought-compelling allusion and inference.

Nor were his gifts reserved for set occasions. In talk and in letters alike he was ever stimulating, wittily provocative of repartee, never malicious. His tactful quickness in verbal duello stood him in good stead during a difficult presidency; yet his retort was always courteous, and he left no legacy of wounds for his successor to heal.

* * * * *

Time has reaped the profession heavily of late. Of our past presidents, Hare, Newton, Ernest George, Collcutt have fallen; now Paul Waterhouse has paid the obolus and joined them in the meadows of the shadowy West. He has left behind him no jealousies, but many regrets; no enemies, but a great multitude of friends. "They are happy Men, whose *Natures* sort with their Vocations."

Transformation

IT seems that every man can look about him with only his own eyes. For the poet, the sheep on the downs may be sheep, but to the butcher they are mutton. Rome itself is not always—Rome. "Rome! Rome!" said the rich American, "Wasn't that the place where I got the good cigars?" And the architect also—a man in this very like other men!—sees most things in the forms of his own art. A Scots fir by the roadside, because it is tall, erect, and straight, he will compare to a Parthenon pillar, and, in mountainous country, the rocks become pinnacles, the rocks become spires, the rocks become ruins, before his very eyes. In June, high in air, the beautiful and bountiful horse-chestnuts proffer him their tapering, upright cones of congregated blossoms *candelabra-wise*, and the trees in a wood seem planted in long aisles like the pillars in a great cathedral, where he may half expect to hear chanting, and see choirs moving slowly through.

For the architect too, "the cloud-capp'd towers" are in truth, "the gorgeous palaces, the solemn temples," though they be "all carvéd from the carver's brain," like the sculptured imagery of the pendulous lamp in "Christabel." Let him be in the desert even, and the billowy sands will rise into towering columns, stalking about for a moment all aglow with fiery colour, before they finally unmould and dislimn with a collapse as sudden as the motions of the eddying breeze under which their vapoury architecture arose.

It is this quickness to discern architectural forms in all natural phenomena, which has been the basis of all architectural inspiration. From the flower-laden basket of Callimachus, some say the Corinthian capital came; column and entablature from rude door-posts and lintel, and the glory of Gothic from the forests of oak. At Guadaloupe, I have seen a tower built like the flying-sails of a barque. In a poem of Thomas Hardy's we are told how the master-mason of Gloucester Cathedral hit upon the Perpendicular style by catching sight of a pattern made by the frost:

> He closelier looked; then looked again:
> The chalk-scratched draught-board faced the rain,
>
> Whose icicled drops deformed the lines
> Innumerous of his lame designs,
>
> So that they streamed in small white threads
> From the upper segments to the heads
>
> Of arcs below, uniting them
> Each by a stalactitic stem.

—the hand of God disclosing by frost and rain forms not hitherto thought of by him. (Wherefore the Abbot would not recognize the master-mason as sole artist, although he had done but what "all artists do, waited on Nature for his cue.")

As Midas turned all that he did but touch into gold, and

Medusa all that she looked upon to stone, so do artists translate all action and emotion into the language of their own art. In a Wagner passage, Nelson's monument is represented. There is a low note occurring four times, then a very long trill, then pom-pom. And the four notes are for the lions, the long trill for the column, and the emphatic note for Nelson himself.

In the clouds, or in the fire, and in dreams, we behold such pomp of cities and palaces as never yet were built on earth. It was in the clouds after a storm that this transformation was seen :

> The appearance, instantaneously disclosed,
> Was of a mighty city—boldly say
> A wilderness of building, sinking far
> And self-withdrawn into a wondrous depth,
> Far sinking into splendour without end !
> Fabric it seem'd of diamond and of gold,
> With alabaster domes and silver spires,
> And blazing terrace upon terrace, high
> Uplifted ; here, serene pavilions bright,
> In avenues disposed ; there towers begirt
> With battlements that on their restless fronts
> Bore stars—illumination of all gems !
> By earthly nature had the effect been wrought
> Upon the dark materials of the storm
> Now pacified ; on them, and on the coves,
> And mountain-steeps and summits, whereunto
> The vapours had receded—taking there
> Their station under a cerulean sky.

Wilde, with his desire for paradox, declared that Nature copied Art, like the poorest plagiarist, and that it had been always so. Whoever may be given to firegazing will see in the glowing embers the architecture of both the old and the new worlds. The caves of primitive man, the Pagan temples, Gothic churches, skyscrapers designed on the set-back principle, with ornamentation the most modern, and of a constructional daring that would win the admiration of New York.

In their insistence upon originality many modern architectural critics demand the casting away of all tradition, and the employment of only new forms. Their demand is beside the point. They ask for the impossible. Inspiration can never carry us beyond the limits of experience. Milton's archangels are only disguised men. They are animated by purely human motives, and their warfare is based upon the strategy of human battles ; while the poet's conception of the universe is in accordance with the Ptolemaic system, which was generally accepted in his day. If the most highly-gifted architect attempted to describe the buildings of another planet, he would inevitably draw upon his experience of the buildings of our own. The Deity himself has a human shape assigned to him by the loftiest imaginations.

What a panic among all artists, what a dropping of pens, pencils, and brushes, if all art worthy of the name must, in some way or other, and to some extent or other, consist of the previously unknown, unimagined, or uncommunicated !

"In the edifices of man," wrote John Ruskin, "there should be found reverent worship and following, not only of the spirit which rounds the pillars of the forest, and arches the vault of the avenue—which gives veining to the leaf and polish to the shell, and grace to every pulse that agitates animal organization—but of that also which reproves the pillars of the earth, and builds up her barren precipices into the coldness of the clouds, and lifts her shadowy cones of mountain purple into the pale arch of the sky ; for these, and other glories more than these, connect themselves in his thoughts, with the work of his own hand ; the grey cliff loses not its nobleness when it reminds us of some Cyclopean waste of mural stone ; the pinnacles of the rocky promontory arrange themselves, undegraded, into fantastic semblance of fortress towers, and even the awful cone of the far-off mountain has a melancholy mixed with that of its own solitude, which is cast from the images of nameless tumuli on white seashores, and of the heaps of reedy clay, into which chambered cities melt in their mortality." H. J.

The National Deposit Friendly Society's Head Offices

W. H. ANSELL, M.C., F.R.I.B.A., Architect

THE National Deposit Friendly Society have occupied the site in Queen Square for twenty-five years. The remarkable growth of the society necessitated the provision of enlarged premises, which were begun as soon as after-war conditions permitted. The site has a frontage to both Great Ormond Street and Queen Square. Half of the building was completed first, and the staff was then moved into the new rooms. The remainder of the old buildings was then pulled down and the new work completed. This necessarily affected the plan to some extent. The entrance door on the north will be the centre of that façade when finally completed.

The exterior is faced with Portland stone, and the interior is kept extremely simple in character, all the offices having high Biancola dadoes. The committee room and private offices are panelled in oak.

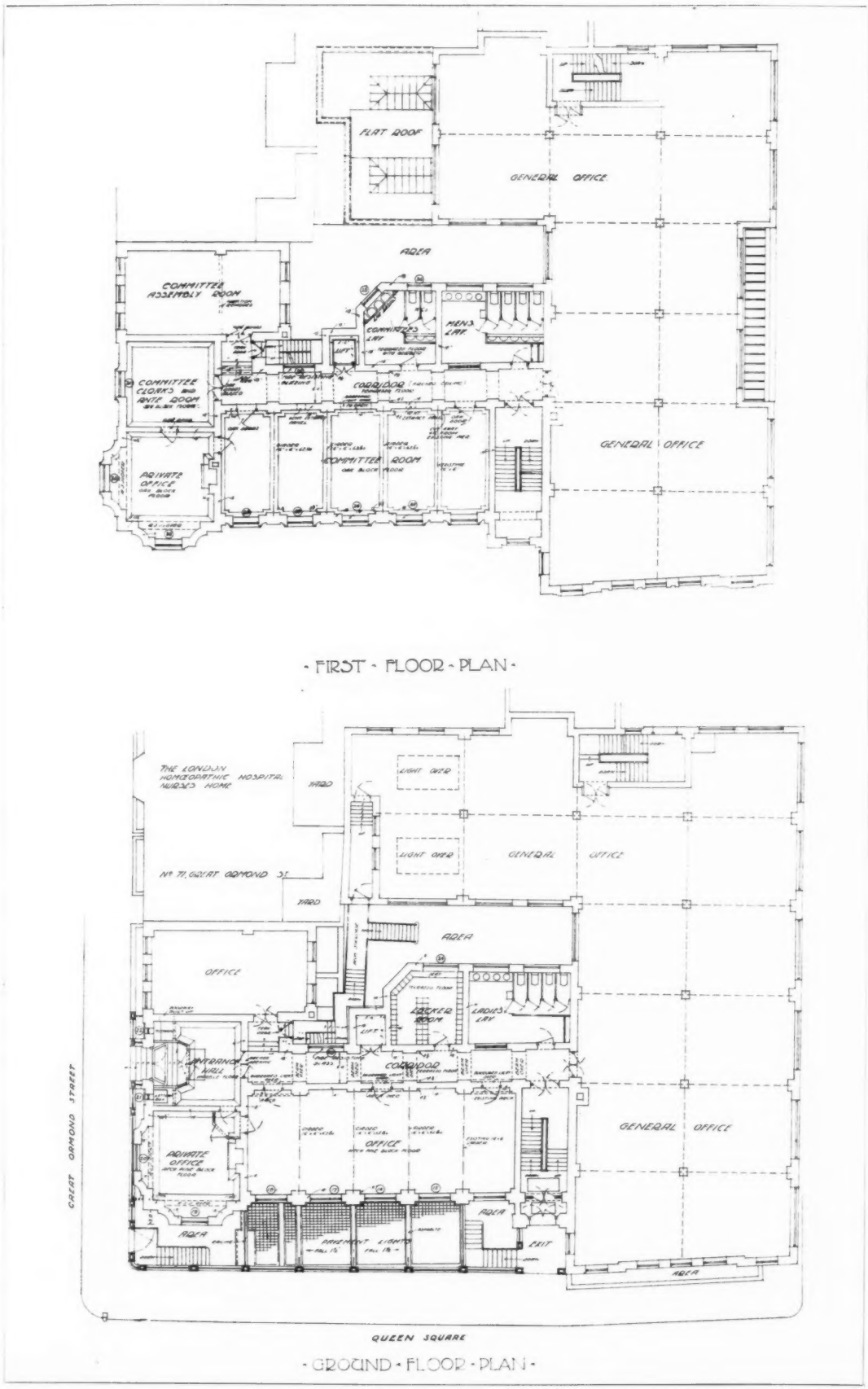
From the main entrance access is gained to a corridor, on either side of which doors lead into offices, that on the right (the larger of the two) leading in turn to a private office. Lower down the corridor, on the left, is found the locker-room and lavatory accommodation for ladies, and, on the right, the staircase with an exit to Queen Square. At the end of the corridor is found the general office, a very spacious apartment. The first-floor plan very largely repeats that of the ground floor, and is distinguished by containing the committee-room, a fine interior overlooking Queen Square. The first floor also includes other committee apartments, men's lavatory accommodation, etc.

The general contractors were Messrs. Dove Bros., Ltd., who also executed the special woodwork. The sub-contractors were as follows : Laurence A. Turner (carved stone work) ; Archibald D. Dawnay and Sons, Ltd. (steel work) ; Siegwart Fireproof Floor Co., Ltd., and Dove Bros. (fireproof floors and partitions) ; Art Pavements and Decorations, Ltd. (tiles, flooring, and mosaic decoration and marble work) ; British Luxfer Prism Syndicate, Ltd. (casements and casement fittings) ; Bratt Colbran & Co. (stoves, grates, and mantels) ; Dent and Hellyer, Ltd. (sanitary ware and fittings) ; Acme Flooring Co., and Paving Co. (1904), Ltd., and Hollis Bros. & Co., Ltd. (flooring) ; Strode & Co., Ltd., and Waring, Withers and Chadwick (electric wiring and fittings) ; G. Jackson and Sons, Ltd. (fibrous plaster work) ; Edward Moore (stained glass and leaded lights) ; James Gibbons, Ltd., Wolverhampton (door furniture and cloak-room lockers) ; Strode & Co., Ltd. (gates, railings, handrails, and balusters) ; Waygood-Otis, Ltd. (electric lift) ; Rosser and Russell, Ltd. (heating and ventilating) ; Chatwood Safe Co., Ltd., John Tann, Ltd., and Whitfield's Safe and Door Co. (strong-room doors and fittings) ; Carron Company (cooking machinery).

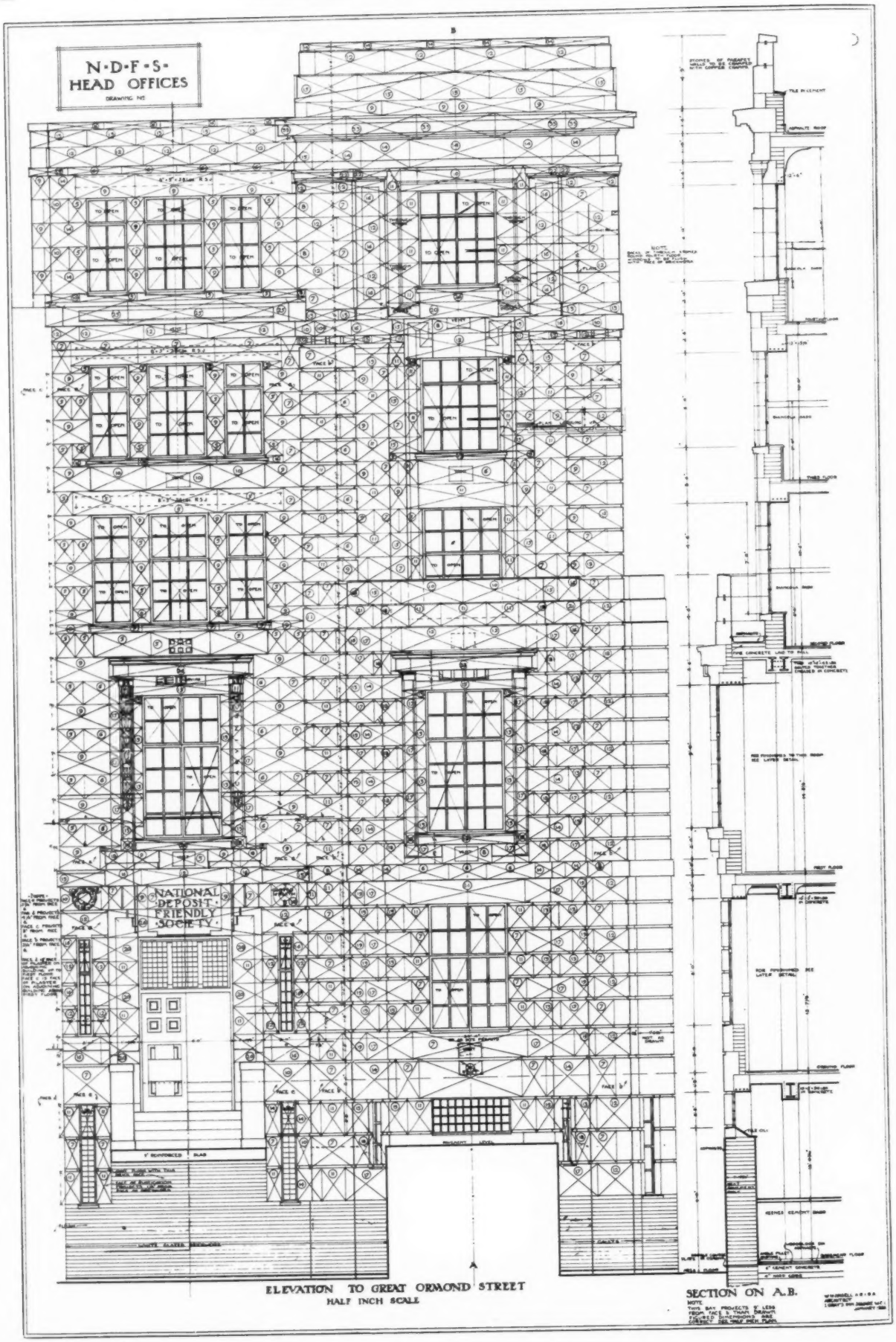
Current Architecture. 258.—The National Deposit Friendly Society's Head Offices, Queen Square, London

W. H. Ansell, F.R.I.B.A., Architect

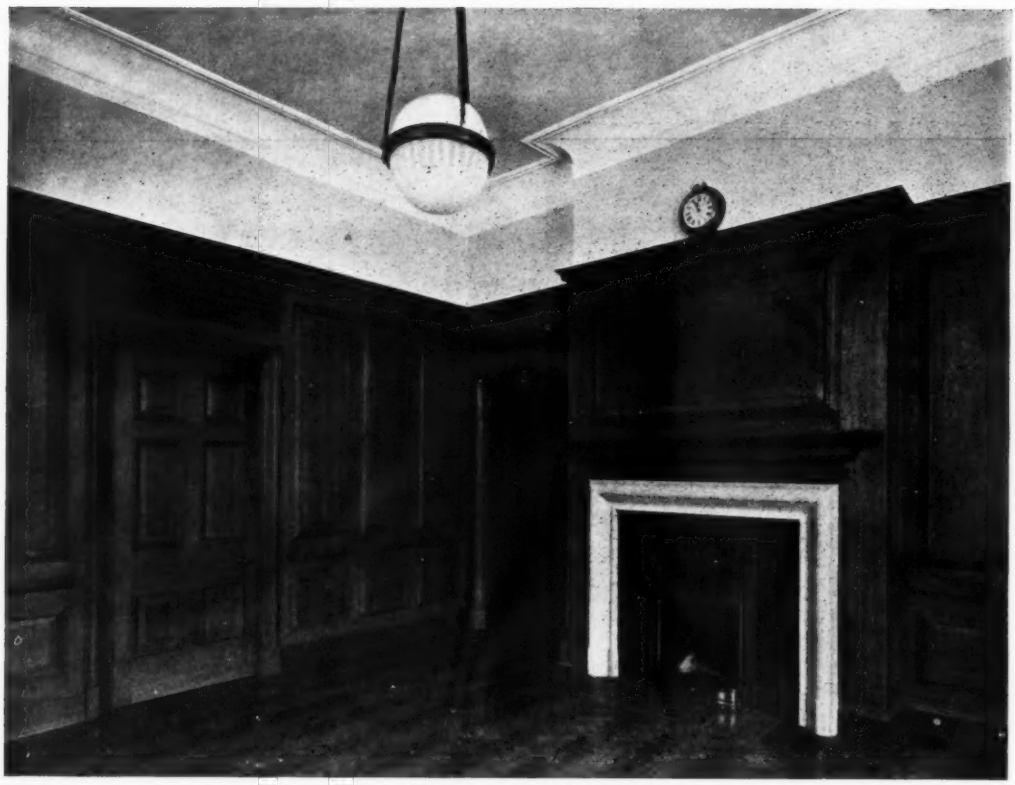
This building has a site to both Great Ormond Street and Queen Square, and the elevation to Great Ormond Street is as yet incomplete. When it is completed, the entrance doorway will be in the middle of the façade.



THE NATIONAL DEPOSIT FRIENDLY SOCIETY'S HEAD OFFICES, QUEEN SQUARE, LONDON.
W. H. ANSELL, F.R.I.B.A., ARCHITECT.


N·D·F·S·
HEAD OFFICES
NATIONAL DEPOSIT FRIENDLY SOCIETY
ELEVATION TO GREAT ORMOND STREET
HALF INCH SCALE
SECTION ON A.B.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY'S HEAD OFFICES, QUEEN SQUARE, LONDON: A DETAIL OF THE GREAT ORMOND STREET ENTRANCE. W. H. ANSELL, F.R.I.B.A., ARCHITECT.



THE GENERAL SECRETARY'S ROOM.

THE ENTRANCE HALL.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY'S HEAD OFFICES, QUEEN SQUARE, LONDON.
W. H. ANSELL, F.R.I.B.A., ARCHITECT.

Current Architecture, 250.—The National Deposit Friendly Society's Head Offices

Current Architecture. 259.—The National Deposit Friendly Society's Head Offices, Queen Square, London : The Committee Room

W. H. Ansell, F.R.I.B.A., Architect

The interior of the Committee Room is panelled, as are the Private Offices, in oak, the floor being wood block.

Current Architecture. 260.—The National Deposit Friendly Society's Head Offices,

Current Architecture. 260.—The National Deposit Friendly Society's Head Offices, Queen Square, London: The Committee Room

W. H. Ansell, F.R.I.B.A., Architect

The Committee Room has been kept extremely simple in character. The windows overlook the quiet and pleasant Queen Square.

The City of Bradford Town Planning Schemes*

By FRED MARSDEN, City Engineer and Surveyor

BRADFORD is the centre of the worsted and woollen industries and the bulk of its people are engaged in some form of work connected with these industries. All the processes connected with clothing, from the natural wool from the sheep to the wearing of it, are carried out in the city. The results of the industrial movements are seen in a very marked degree in the city, especially in the lack of any plan of development, in overcrowding, and in the absence of beauty either in design or surroundings of industrial premises and the housing of the working classes. One of the most essential requirements of the Bradford trade is a good water supply, with the result that the mills in the early days have all been built near or in close proximity to the water courses, and in some cases you get very long stretches of such premises all close to the water courses. A further result of this development is that isolated colonies in a great number of places have sprung up as far away from the centre of the city as four and five miles, and these are dotted on the various water courses.

The area of the city is 22,879 acres, and this area (except the built-up central portion) has been divided into nine town planning schemes. Schemes Nos. 1 and 2 have got to the stage of having had the preliminary statement approved by the Ministry of Health, the other seven schemes are being worked for the present under the Town Planning (General Interim Development) Order, 1922, and permission for development of land and building operations is being granted accordingly, whilst the preparation of the preliminary statements is proceeding. The lines which have been followed in preparing the town planning maps and schemes have been to allocate areas for: (1) housing purposes; (2) shopping and business premises; (3) open spaces; (4) industrial areas.

In the nine town planning schemes, 141 portions of these areas have been allocated "for industrial purposes," following the usual lines, where entirely new areas come under this allocation, of having them on the lands lying near to the railways and canal. Provision has also been made for large firms which require extensive areas of land for establishing new industries to couple with such establishment housing facilities for their workpeople on similar lines to Port Sunlight and Bournville.

The scheme has been to provide for the improvement and widening of all the existing main arterial roads. In addition, new lines of roads are being laid down in all the areas, so as to ensure that main lines of communication shall exist when the various parts of the cities come to be developed and built up in future years. The main arterial roads are being designed for 100 ft. in width overall, including tramway tracks, and the secondary roads 80 ft. and 60 ft. in width, the width being varied to meet as far as can be seen the probable traffic. The Bradford schemes are providing in all cases for building lines on all the arterial roads and other secondary roads branching therefrom varying from 20 to 35 ft. according to circumstances. Much encouragement has been received for these building lines by the way in which builders and owners of property have adopted them because they are beginning to realize the many advantages which accrue to their property where it is used or developed for housing purposes or for shops or business premises. This is not, perhaps, the time for stating the pros and cons of the building line, but it may be of interest to make mention of the fact that the owner of an estate adjoining the city came in just recently to ask if the Corporation would not insist on a deeper building line to make the building line within the city conform with the building line which he had laid down for his estate to a depth of 45 ft. This is on a route which leads to a suburban station, and the land is being used for housing purposes.

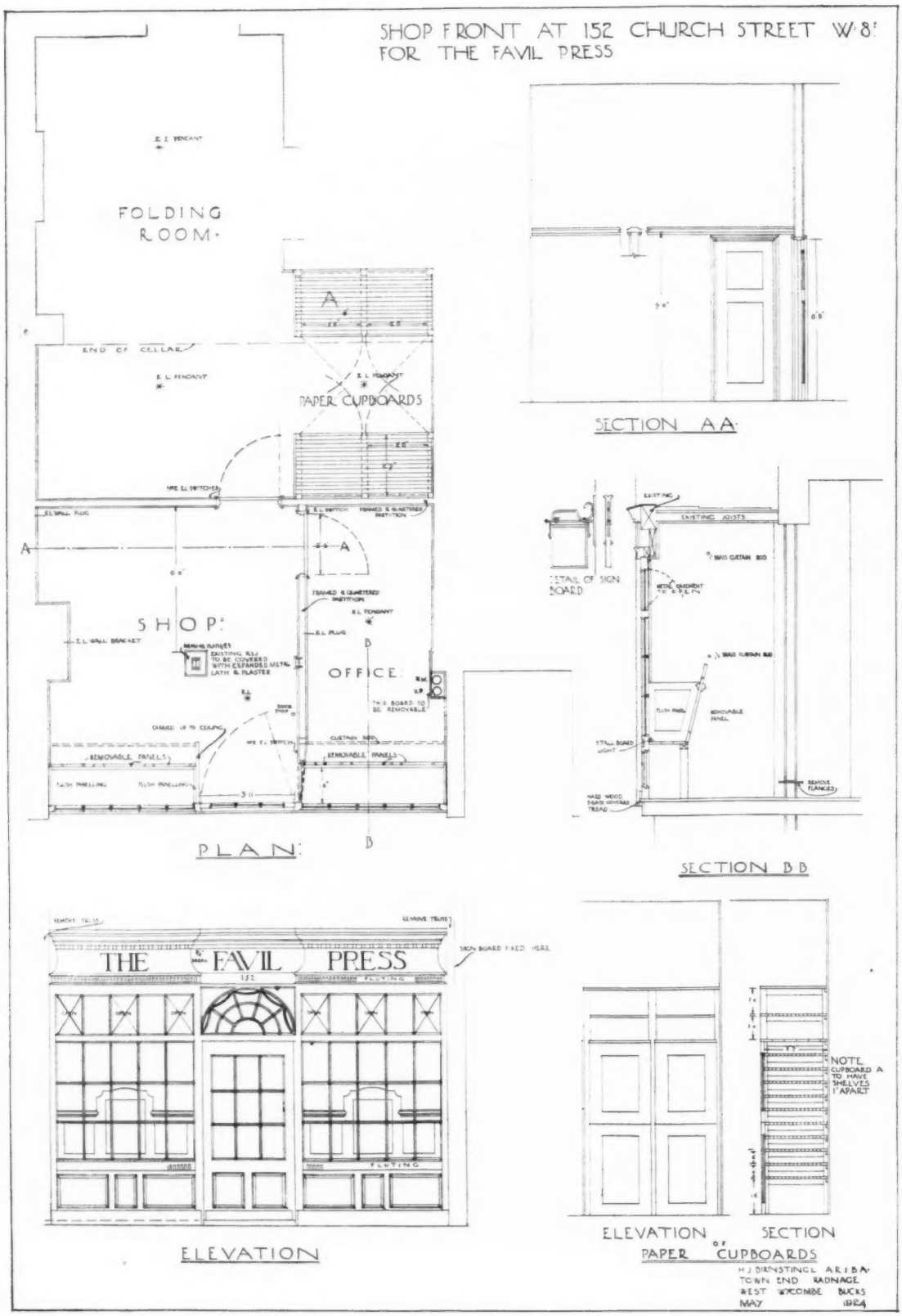
The usual practice in Bradford is when an owner wishes to develop an estate he applies to the Corporation for particulars as to any restrictions or lines of new roads which will have to be observed, so that he can make these the basis of his development. As a rule he is supplied with a small sketch map showing upon what lines it is possible to develop his estate, which he can either adopt, amend, or substitute by another design. Any lay-out which is approved has to provide for the new roads and widenings. In the lay-out of these estates advantage is generally taken by the owner of the relaxation of building regulations to the extent of making much narrower streets with a minimum distance between buildings of 75 ft.; he is then asked to dedicate free of cost any land which may be necessary for the widening of existing highways, besides providing the land for all the new arterial roads required by the town planning scheme. If he is not prepared to meet the Corporation in this way, the Corporation claim to exercise their option as to whether or not they will permit the relaxation of building regulations. The owners recognize the advantage to them, and meet the Corporation's wishes, but in some cases the Corporation agree to pay the extra cost of making any road through the estate of a greater width than 60 ft., as this is the width which may be required by the present building regulations in the City of Bradford for main through streets, but in any case they can require a street to be made not less than 42 ft. wide. Under this arrangement the Corporation have had dedicated to them 100,000 square yards free of cost.

* Extracts from a paper read before The Town Planning Institute.

The Favil Press

H. J. BIRNSTINGL, A.R.I.B.A., Architect

ALTERATIONS were here carried out on the ground floor to meet the requirements of a firm of printers and publishers. In a somewhat limited space it was desired to provide a small shop and private office, a folding room, and cupboards for the storage of paper. A large top-lit room, suitable for a machine room, was already in existence behind. The house is situated in Church Street, and the firm is a member of the Church Street Guild, concerning which an article appeared in these columns on October 15. It was essential that the shop-front should be moderate in cost, and it was decided to design in the eighteenth-century tradition, to which period the house belongs, without, however, resorting to the mere copying of contemporary work. A feature of the front are the removable flush panels in the screen, to which samples of printing can be fixed. These panels are set at an angle so that they may be conveniently seen from the pavement. The general arrangement was somewhat controlled by the existence of two stanchions supporting the main wall of the house. The contractors were Messrs. Fredk. Sage & Co., Ltd.; the bronze door furniture and radiator grilles were supplied by Messrs. Comyn Ching, and a system of central heating was installed, both in the shop and machine room, by Messrs. Charles P. Kinnell.



THE SHOP FRONT OF THE FAVIL PRESS, 152 CHURCH STREET, KENSINGTON: DRAWINGS.
H. J. BIRNSTINGL, A.R.I.B.A., ARCHITECT.

Shop Fronts. 17.—The Favil Press, 152 Church Street, Kensington

H. J. Birnstingl, A.R.I.B.A., Architect

Alterations to 152 Church Street have been carried out to meet the requirements of a firm of printers and publishers. The shop-front has been designed in the eighteenth-century tradition, to which the house belongs.

Modernism in Architecture*

By H. S. SILCOCK, B.Arch.

HISTORY shows that the English soil is not eminently suited to the production of that rare flower, the "Architectural Genius." Indeed, there have been times when the species "architect" itself has seemed in danger of extinction; maintaining but a precarious hold upon life amid the riot of surrounding vegetation; almost flowerless, and suffering much from neglect. But on account either of some innate vitality, or of man's ultimate realization of his need of the order, it has survived. Nay, more, it has had even its prolific seasons, and at one time did appear to have accustomed itself to our soil and climate and to be flowering with a certain degree of regularity and ease, if, perhaps, with a somewhat monotonous uniformity. From history one might gather, also, that the decaying plants of a poor period provide a sort of manure to support the richer growth of a more successful season. Thus did the fungoid growths of James I's early reign prepare the ground for England's best reputed blossoming. For this reason also are we now optimistic.

Leaving our vegetable England, and substituting an England of human beings, it might be interesting to name such of our architects as justify the title "genius"—in contra-distinction to "man of talent." Suppose that a board consisting of Ictinus, Bramante, Peruzzi, Michelangelo, and several other celebrities of the architectural world, were formed to decide in the matter. Imagine the results! The Gothic period gives no names—no single man can be found who is entirely responsible for any given building. The Renaissance yields several. First Inigo Jones ("for his amazing clearness of vision, in an exceedingly murky atmosphere"); and then Wren ("he could reel off city church designs as your modern architect reels off a housing scheme—between his other work"). But in the eighteenth century difficulties are met with. The period is rich in talent. Vanbrugh, Gibbs, Kent, Chambers, Adam, crowd up with testimonials, drawings and photographs; but the board hesitates. Michelangelo evidently regards Vanbrugh with favour, while Palladio is especially moving in his pleading for Sir William Chambers. Something like a "scene" occurs, when Gandon backs his Customs' House against his master's Somerset House. Finally, however, Robert Adam is selected on the grounds of his immense versatility. The nineteenth century adds no names; and it is finally decided that, after nine centuries or so of architecture, we have produced but three known men whom we may truly dub "genius."

Notwithstanding this lack of exceptionally—magically—able men, however, the standard of architecture in England, during the active periods, has been, compared with other countries, high. Although it would seem that the average English architect is not markedly original in his art, yet, with a traditional style in which to work, he will design with taste and, not infrequently, with distinction. He will endow his buildings, unconsciously, with that peculiar English quality which is so hard to define, yet so readily perceived. His more able colleagues will keep the style in a state of continuous expansion. The traditional "manner" will gradually percolate through to the individual craftsman, so that, even in the most unimportant branches of the art, some trace of sympathetic handling will be discernible.

But take away the traditional style, and the English architect is soon disconcerted. The good ship *Architecture*, whose course hitherto has been reasonably straight, whose speed fairly steady, founders. The wretched crew (such as do not go down with her) scramble into boats, or cling, in the usual manner, to planks and hen coops. They spin round in the vortices. The stately schooner *Renaissance* has vanished, and in her place are a number of over-crowded rowing boats, for the most part without oars. The English architect has *shown* us what he can do when his traditional style is gone from him. He designs yellow brick villas and rows of red pressed-brick cottages, with an infinite variety of evil proportions and ugly mouldings. If he is more able than the average, he may develop an intensely personal style, which helps his fellow architects not at all, and only serves to make still more hazy the already half-forgotten standards of design.

English architecture lost its tradition through the—perhaps inevitable—theorizing and eclecticism of the Early Victorians. Purely literary standards were set up by purely literary men, and the architects allowed themselves to be led astray by them. Instead of allowing the art to grow naturally by the expanding effect of the work of the best artists, they tried to force it into channels suggested by the critics and theorists, with the inevitable result of confusion and loss of interest. Too much importance was given to constructive theory, which has proved itself in art an impossibility. For an art does not advance over given ground, according to plan, but over such ground, rather, as can be won for it by its best exponents. Indeed, the theory of any art can only be based successfully upon past achievement. As a catalogue of knowledge gained by experience; as an explanation of method; as an analysis of procedure, a theory may be of use. In this form it provides a starting point for the future artist. But as a plan of action, as a programme, as a list of rules and a dogma, it is a hindrance and a source of continuous dissension.

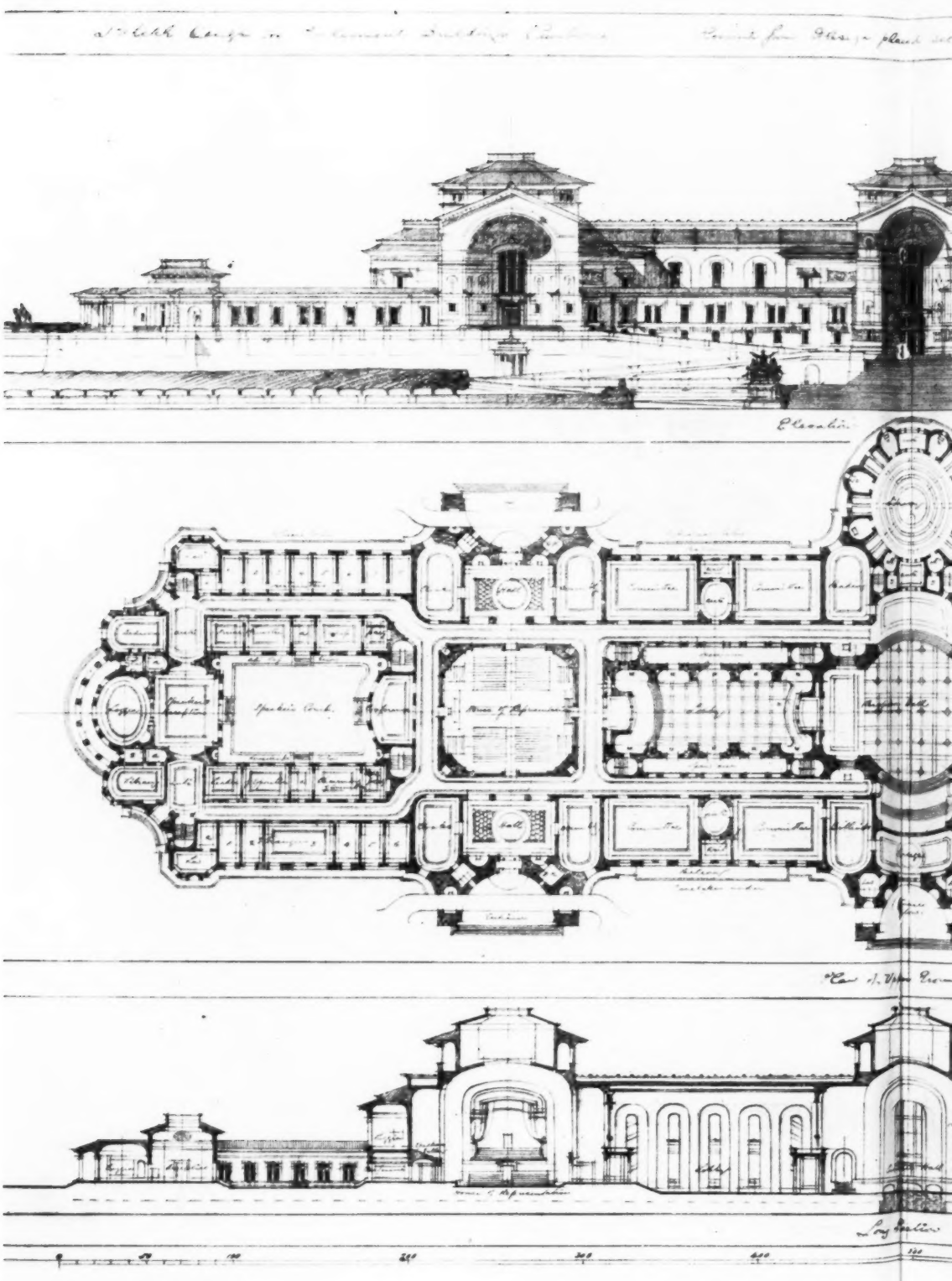
In spite of the poor results previously attained by such means, we still have many of these ghostly theories. Some of them are ghosts of ghosts. They haunt our present day architects as their grandsires haunted the architects of *their* day. One of the commonest of them is known as "Modernism." It appears in many forms, at all times of the day and night; and at all seasons of the year. The idea is quite fallacious that Mr. Geoffrey Scott successfully laid even the most elusive ghosts of this family. The wraith of Modernism still appears: gliding stealthily round drawing offices, creeping into editors' rooms, even performing obsequious bows to some of our university professors. It cannot speak itself, so it carries a ghostly gramophone with one record. The record says: "Above all things be original. Never do anything that anyone has done before: do it worse if you can't do it better, but don't do it in the same way. That is to be your aim. Now for some rules for design. Cut out all mouldings and all curves. I want no mouldings and I want everything square. Use no slates; use pantiles. Be quite sure that the construction of your building is amply evident. Do not hesitate to use glass if your R.S.J.'s are over-concealed. Do not . . ." At this point the record is worn and one strains one's ears in vain for the peroration.

I have endeavoured to show that the English architect is most successful when developing an accepted style on traditional lines, and that he is least so when divorced from his tradition and trying to evolve something of his own. He never has evolved anything in all respects original. (Incidentally, has any architect, in any country, ever done this?) When our Modernists say, therefore, that we must rid ourselves of the "filthy litter of tradition," and establish an entirely new style by returning to the first principles of structure, they are suggesting what amounts well nigh to an impossibility. To establish an entirely new style bears upon no previous example—not even inspired by earlier work—would require some force in architecture such as architecture has never known. A theory would be of little use. There must be a superman to do it, and to show us how it is done. There must be several more supermen to

* This essay was awarded the Architectural Press Essay Prize at the Liverpool University School of Architecture.

Sketch Design for Parliament Buil

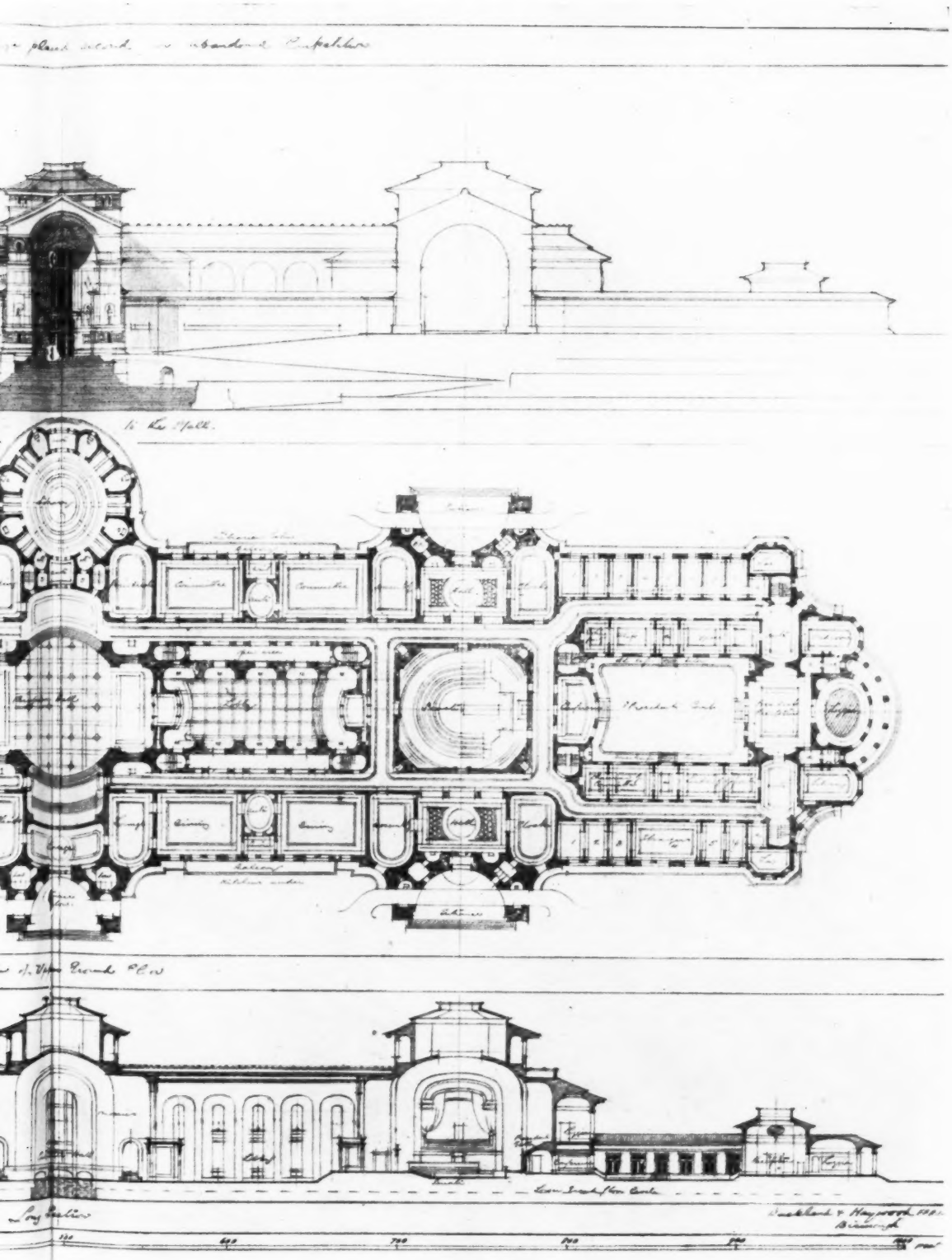
Buckland and Haywood, FF.R.I.B.



In this competition, it was stipulated that the ultimate cost of the building should be within the sum of £1,000,000. The project was e
the merit of their work. The name of Messrs. Buckland and Hay

ment Buildings, Canberra, Australia

d, FF.R.I.B.A., Competing Architects



The project was eventually abandoned, but compensation to the amount of £3,000 was distributed among the competitors according to Buckland and Haywood appears second on the list of awards.

sustain it. How insignificant our little Inigo Jones, who merely brought us Italian blood, would appear beside them!

And while we, in this country, speculate and theorize on "Modernism," and while our Teutonic neighbours move in their modernity from the ugly to the ridiculous and from the ridiculous back again to the ugly, the Americans expand their art with a freshness and a vitality which has no parallel save in the Italian Renaissance itself. American architecture of to-day has the same relation to the Italian Renaissance as the Italian Renaissance had to the art of ancient Rome. It is the Italian Renaissance grown young again; infused with new blood, adapted to modern conditions, and broadening yearly in scope and possibility. Is it that we cannot follow a good example, or is it that we have no "new blood?"

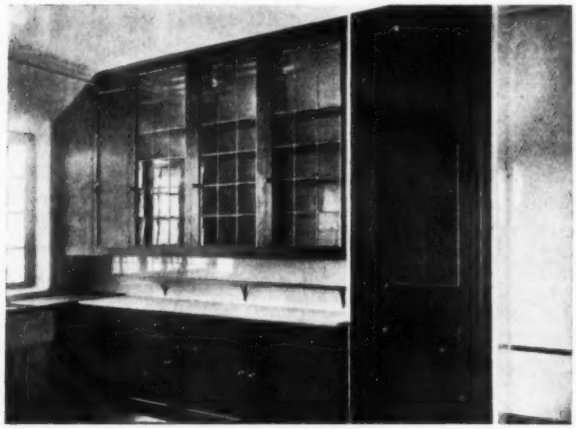
Whatever may be the causes of our refusal to re-establish our traditional architecture, the effects are only too apparent. In the larger modern buildings one sees nearly everywhere a straining after the new. They bristle with little eccentricities, meaningless ingenuities; and when even ingenuity fails, they wear a large square lump, as if to mark the spot. One finds these lumps hanging precariously from the soffits of flat arches; they appear extended as mystifying string courses in unusual and disturbing places; they are everywhere; they *are* our "modern" style. But in the smaller provincial buildings, in speculative building especially, one sees, as often as not, a complete absence of design, much less interest or sympathetic treatment.

How are we to cope with these countless new buildings which show no evidence of conscious design? Their dimensions and materials are decided by speculative builders and inferior architects, who, for the most part, have but little interest in their final appearance. Of what use is a Modernist movement to them—who are sufficiently ignorant, and sufficiently apathetic already? Only when there is a strong tradition in building and design can such builders' buildings be tolerable. One is amazed to find what subtleties of proportion and what refinements of detail go to the making of some of our most isolated Georgian houses. And not a quarter, not an eighth of them are the designs of eminent architects. They were built in this way because it was customary to build them this way, and because craftsmen knew this way and no other way. And until some such spirit can be recaptured, we must possess our souls in ugliness.

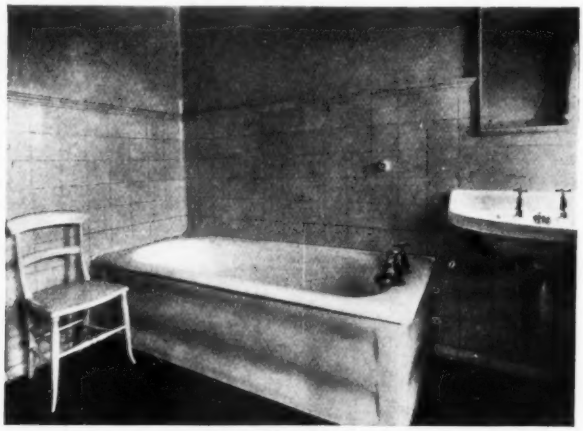
A Small House at Willesborough

J. L. Seaton Dahl, F.R.I.B.A., Architect

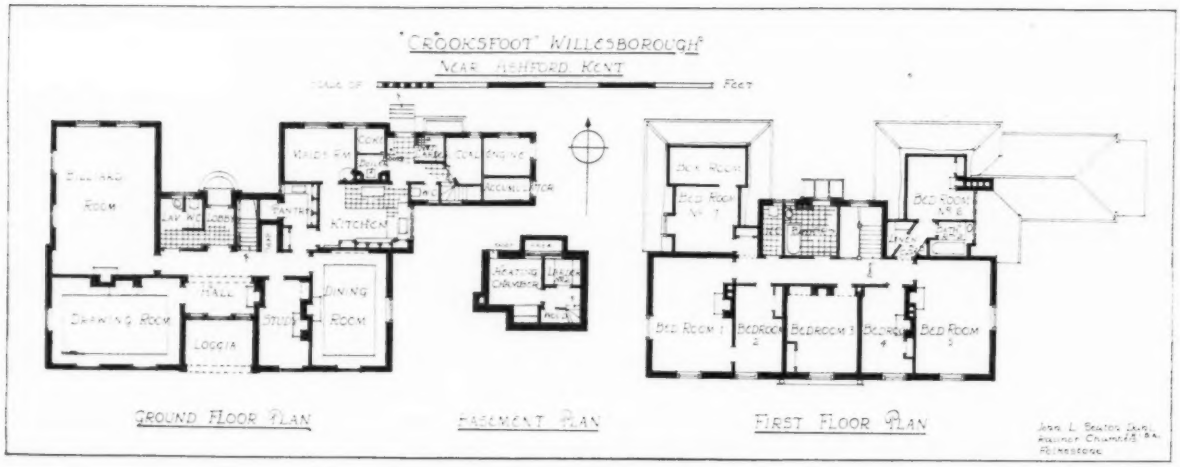
This house has been built at Willesborough, near Ashford, Kent, from the design of Mr. J. L. Seaton Dahl, F.R.I.B.A. The walls are finished in sand-faced stucco, twice colour-washed light buff, and the roof is covered with black glazed pantiles. The general contractors were Messrs. Hayward and Paramor; and the sub-contractors were: Charles P. Kinnell & Co., Ltd. (heating); Marchant & Co. (electrical appliances, etc.); Mathews & Co. (roof).



KITCHEN FITMENTS.



THE BATHROOM.



CROOKSFOOT, WILLESBOROUGH, KENT. J. L. SEATON DAHL F.R.I.B.A. ARCHITECT

Little Things that Matter—43

Reinforcement in General Practice; A Suitable Style for Reinforcement

By WILLIAM HARVEY

THE conscious and systematic combination of material capable of withstanding tensile stresses with other materials better fitted to bear loads in compression dates back to remote antiquity, when some primitive man of genius associated the tent-cloth and the tent-pole to form a portable and temporary home. In more substantial buildings the designers of Byzantine and Saracenic works employed tension members of wood or iron across the spans of their arches to control the thrust and permit of the springing being placed upon a slender shaft without recourse to external buttressing. The scientific nature of this use of the tie-bar is indicated by the long duration of the works themselves, notwithstanding the slenderness of the supports and the large masses of material carried over broad spans, but a modern builder might hesitate to refer to the combination as reinforced construction. The exposure of the tie-bar to the open air, where it may decay by rusting, if of iron, and where it offends the æsthetic taste of a great many critics, differentiates this use of tensile material from the internal and hidden employment of steel that goes by the name of reinforcement to-day.

Iron bands inserted in the brickwork to withstand bursting pressures enabled Filippo Brunelleschi not only to erect the greatest of modern domes, but to dispense with external buttresses, and though it may be that this is not the first instance of reinforcement in our sense of the word, his constructional employment of iron in the principal vault of Sta. Maria del Fiore at Florence is in every way rational and scientific. In some ways this early-Renaissance reinforcement of a structure built in 1420–34 is distinctly up-to-date, and suggests a line of thought that may be useful in guiding the modern design of reinforced structures. Brunelleschi was faced with the difficulty that his work was to be done at such a great height above the floor of the church that rigid centering or shuttering would be impracticable and his structural expedients had to be devised to meet the double requirements of immediate convenience and strength during construction as well as permanent strength after completion. In both these aspects he achieved an extraordinary degree of success.

Recent works involving reinforcement have been less ambitious in character, and the element of constructional adventure has been eliminated by the provision of a substantial (and very costly) shuttering or false-work upon which the actual material of construction is deposited. In a great many cases reinforcement has been used in an attempt to reduce the price of the erection, and money spent on the use and waste of joinery stuff in the shuttering has to be met by a reduction in the cost of the material employed in the permanent work. This is achieved by thinning down the substance of the building to dimensions incompatible with the hope of prolonged endurance, and in almost all cases the shell is designed in such a way that the first erection stands in need of additional works in the interest of decorative appearance.

The high costs of building have made reinforcement a matter of popular discussion, but the sound economy of Brunelleschi's use of it does not receive the attention it deserves. Shuttering and false-work generally play too large a part in the processes employed, and the end—or finished state of the building—is not obtained with the directness that is desirable either in the interests of art or of sound and cheap construction. To ram concrete into a box that leaves on its surfaces objectionable marks of knot-holes, grain, and jointing, and then laboriously to hack the surface to provide a key for plaster or some other form of disguise is not an altogether satisfactory method of dealing with reinforced construction. One thing or the other—either finish at the first intention or avoidance of false-work—should be possible. If moulds are to be used, it would seem distinctly desirable that their removal should leave the surfaces finished in an artistic, as well as a structural, sense, the right colour and texture being imparted to the substances placed within them in the process of deposition. (See Fig. 1.)

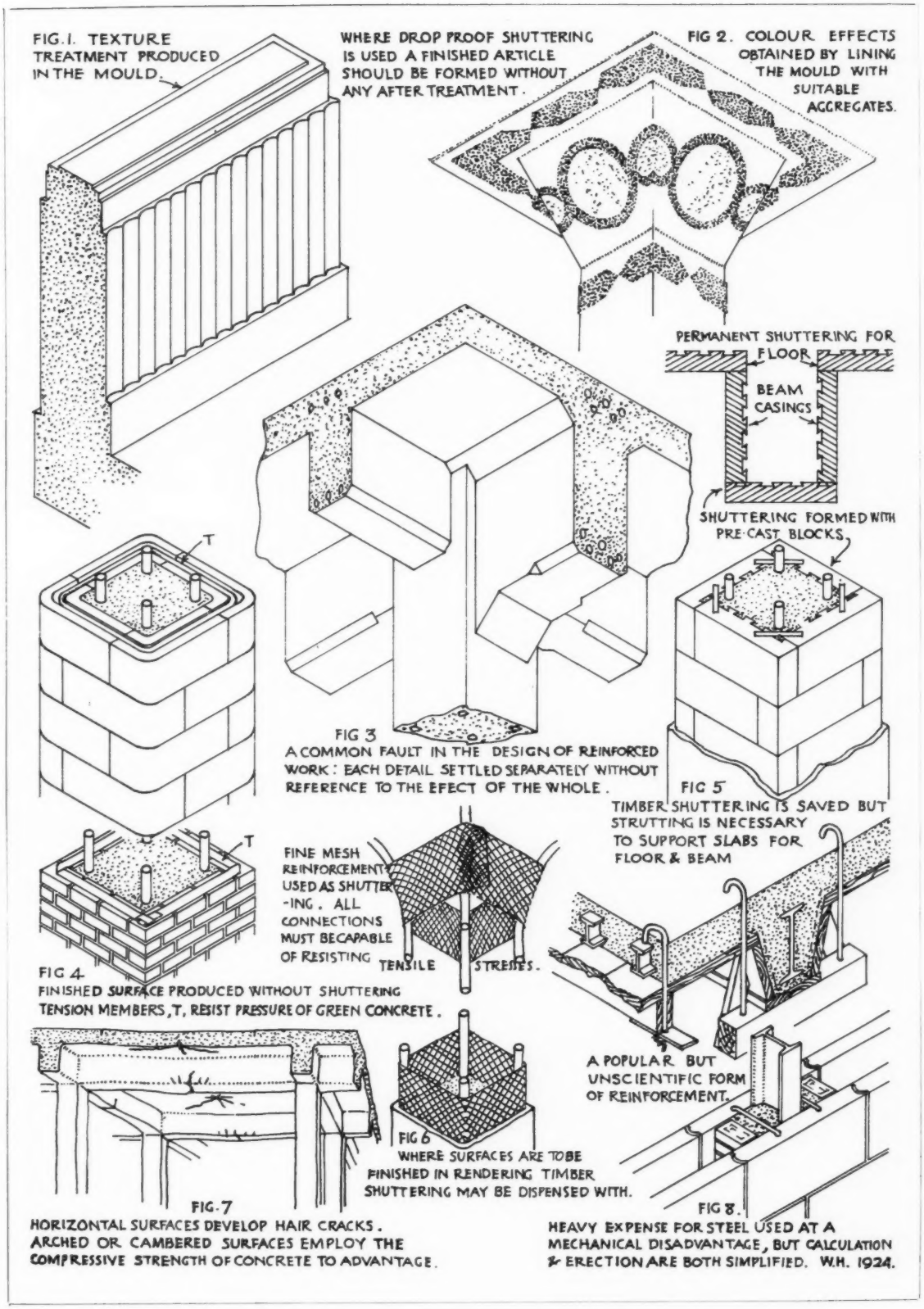
An attempt to produce interesting varieties of surface texture was made in several of the concrete buildings of the British Empire Exhibition at Wembley, but the experiment was not carried so far as might have been hoped, the flutings and other mechanical decorations were not in all cases sufficiently bold in scale to suit the severe and massive buildings, and the execution of the work was not always perfect. Aggregate was allowed to appear on the surface in irregular lines and blotches in a way that indicated the insufficient manner in which the concrete had been tamped. Granted that highly expensive finish was not desirable in an exhibition, it might have been possible to combine these irregularities of surface into an orderly scheme by using bolder patterns of fluting, etc., in the moulds.

In work that aims towards a higher standard of finish, and where the permanence of the building justifies the expense, far more elaborate schemes might be prepared and carried into execution; the decorations that are now laboriously added after the removal of the moulds might be inserted in them if decoration and construction were properly worked out in conjunction. The colour-treatment of surfaces can always be arranged by packing the surface of the mould with a suitably tinted composition, but although this method of decoration may be seen in many a corn-chandler's window, where the different coloured cereals are made to take the forms of zigzags and lozenges, the art has not yet come into general use for reinforced concrete. Something could be done even in a monotone scheme by seeing to it that the composition resulted in a pleasant colour when thoroughly set and dried out. (See Fig. 2.)

Reinforced concrete was so often employed as the cheapest available building material that even this concession to art is generally denied, or where ornament can be afforded it is added by a process that fails to do justice to the constructional interest of the building method.

Detailing for reinforced concrete work is very often of a perfunctory character, the calculated sizes of the material are allowed to govern the design to a much greater extent than would be thought fitting in the case of one of the older materials of construction. A pier supporting four beams is often allowed to terminate in an unpleasant and lopsided fashion. The beam carrying the greatest weight may be deeper than the others, or may demand additional bracketing, and this is given without any consideration for the balance of the arrangement, as it will be seen in perspective. The thicknesses of the several beams may also vary and leave unequal margins of pier surface to run up to the ceiling. The provision of stopped chamfers on the lower edges of the beams as a belated concession to art only adds to the distressing confusion. (See Fig. 3.)

Direct reference to the structural necessities is a virtue that has been admired and praised in many famous works of architecture, but in these cases the consummate art of the designer has so cleverly balanced the rival claims of construction and ornament that it is a delightful puzzle to determine where the one begins and the other ends, and



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

it remains for the designer in reinforced concrete to emulate this high standard of attainment. Certain methods of design may perhaps be found which will overcome this difficulty of pier and beam treatment. Instead of concentrating the floor-loads by means of beams, some calculators advise a continuous slab treatment in which the reinforcement for the floor is made to radiate from the head of the pier with the result that the floor surface can be made to spring equally on all sides out of its summit. The floor slab is connected to the pier by a series of corbelled steps, or by a truncated inverted pyramid, cone, or conoid which performs the double office of bracketing out the floor and reducing the effective span of its central slab, and of bringing the whole arrangement into line with the possibility of some artistic treatment more or less symmetrically applied about the head of the pier. (See Fig. 2.)

The reinforcement and the shuttering can be prearranged for a number of similar connections at the pier-heads with at least as great ease as in the case of a floor composed of beams and slabs. The reinforcement for the conoid is often assembled as a whole, and placed upon the pier as a single unit. The prevalence of the beam and slab type of floor need not be taken as an indication either of its superior economy or strength. It so happened that it was first experimented with, and comparative ease in calculation is probably the greatest factor in its favour at the present time. As alternative methods come to be more fully investigated this advantage will be shared by other and artistically satisfactory systems of reinforced construction.

Enormously increased cost, both of timber and of labour, has directed attention towards the design of systems of reinforced construction in which the shuttering will be economized or even dispensed with. A great deal is saved if the smoothing and close-jointing of surfaces and edges can be avoided, and several well-known floors have been devised in which a few temporary posts and planks are alone necessary. Either the floor is brought to the site and assembled in position in the form of a series of light reinforced hollow beams, or the hollow beams are built up with the help of specially made bricks, blocks, or slabs, with reinforcing members in the joints between one block and the next. In neither case is there any need for elaborate watertight shuttering. In other cases the reinforcement or at least a part of it, is provided in the form of a superficial web or mesh, such as may be rendered on its outer or exposed side and backed up with concrete within. To dispense with shuttering altogether would be possible, both in the case of the block and slab type of construction, and with the mesh reinforcement, but the form of the building and the nature of the reinforcement would have to be adapted to the purpose. The reinforcement would need to be augmented by the provision of special bars and cramps for holding the surface blocks in a position to act as shuttering while the concrete is being poured. The success of building of this kind would depend upon the realization of the possibility of using every block in compression and many of the reinforcement bars in tension in the initial stage of erection, before the concrete backing was in position to add weight and strength to the structure.

The stresses in the half-erected building would differ very considerably in magnitude, in direction, and even in nature from those in the finished work, and both conditions of loading would have to be studied very much in the same manner that Brunelleschi attacked his vault-building problem five hundred years ago. Special members inserted to meet the temporary conditions would not be wasted, for at the worst they would serve to connect the several parts of the structure and render it monolithic. Under ideal conditions every member would be made to serve a useful purpose in the various stages of erection, and would also remain serviceable to the building after its completion. It may be objected that design of this exacting sort would demand intelligent supervision at every point, but the same requirement applies to all forms of reinforced work, and the double purpose of every part would probably serve to concentrate attention, and result in a thorough grasp of the principles of building. The fact that the reinforcement and facing-blocks were required to form a light, but rigid and self-contained shuttering, would guarantee the proper connection of part with part, and aid supervision rather than impose an additional burden upon it.

Where rendering upon some form of metallic mesh forms the outer surface of the finished work the mesh itself is often made to take its part in the reinforcing action. Such a mesh situated at a uniform distance within the surface would not be suited to act as the only reinforcement of a structure except under peculiar conditions of loading, but there would be little or no difficulty in attaching it to other reinforcing members required to act in conjunction with it. (See Fig. 6.)

Artistically considered, the mesh reinforcement offers a way of escape to the architect from the thin and wiry-looking ribs or beams of what is usually considered normal reinforced construction, and permits him to think in terms of broad surfaces and flowing curves instead of the unfortunate ill-assorted lines indicated in Fig. 3.

A practical advantage of the cambered and arched forms that are suitable for mesh reinforcement is their structural recognition of the compressive strength of the concrete. Horizontal ceilings and beams covered with a brittle material, whether it be concrete or plaster, are certain to crack at their points of convex curvature when subjected to excessive or continually alternating loads. In ordinary practice horizontal ceilings and beams of reinforced concrete often crack in the middle of the span on the underside, and although the tension members may be quite adequate to prevent structural disaster, superficial repair becomes necessary in the interests of decorative appearance and the preservation of the steel reinforcement from contact with moist air at a mechanically important point. Cracks also appear on the upper surfaces of floors at a distance of about one-sixth of the span from the supports and cause unpleasant fissures in mosaic or jointless flooring material that has been laid on the concrete.

Some types of floors are so notably defective in this way that they have stirred up an unfounded objection to the use of reinforced concrete in general, and prevented the adoption of flat roofs in this country. The greatest offender is probably the old-fashioned concrete slab floor, in which ordinary rolled steel joists are embedded. Even in this particular case the trouble need not arise, but the popularity of the floor leads to it being constructed by all sorts and conditions of experimenters, who may or may not be equipped with the mental and material means to bring their task to a successful issue. As usually constructed, this type of floor is amply strong as regards ultimate failure, but unless carefully constructed, is liable to split up at an early date after construction into several portions, with cracks along the line of every joist.

In the interests of science and good building the National Physical Laboratory recently tested some floor slabs of this type, and in view of its general utility it cannot be passed by as unscientific, although the steel is employed in positions where it cannot contribute its maximum of tensile strength to the structure. The girders generally used are strong enough to enable the workmen to get about freely without employing an elaborate temporary staging for their own support. To the architect this method of design offers something tangible upon which he can depend; the strengths of the girders can be found by reference to standard tables, and their sizes and weights are readily checked. These facilities in calculation, erection, and supervision are obtained, at some expense, for rolled-steel joists, and there is a temptation to try to save on the quantity and quality of the concrete filling, with the results already mentioned. To avoid excessive deflection of the floor after the concrete has set, it is sometimes thought proper to suspend the shuttering from the joists, and to deposit the concrete in the centre of the span in the first instance. With this precaution and a plentiful supply of rich concrete the cracks may be staved off indefinitely.

Enquiries Answered

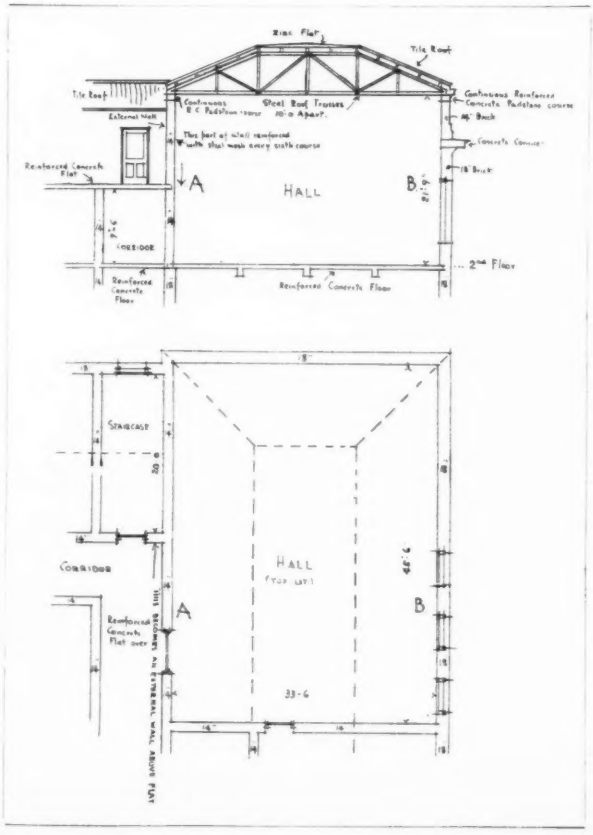
Enquiries from readers on points of architectural, constructional, and legal interest, etc., are cordially invited. They will be dealt with by a staff of experts, whose services are specially retained for this purpose. If desired, answers will be sent direct through the post. In no case is any charge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

STABILITY OF WALLS.

"T. M." writes: "The accompanying sketch shows a hall on the second floor of a proposed building. All the walls would be built with good hard bricks in 6 to 1 cement mortar, and the upper part of the wall A, from the concrete flat to the underside of the steel roof truss, would be reinforced with steel wire mesh every sixth course. (1) Please give me your views on the stability of walls A and B. (2) Would the wall A be perfectly stable if mesh reinforcement was omitted. (3) According to the by-laws, would the wall A be considered as one story high or, owing to support of the concrete flat over the corridor, two stories high. (4) Provided that a wall of unlimited length is not higher than fourteen times its thickness, would it be perfectly stable under any span of roof so long as the safe load on the brickwork is not exceeded, or is there any approximate ratio of span to wall thickness. (5) Can you recommend any book dealing in a practical manner with the stability of walls as applied to buildings, *not* retaining walls."

—Brickwork reinforced by steel wire mesh every sixth course is strengthened against variation of load along the wall on top or support at bottom, but not against general loading or overturning. As the 14 in. wall is 21 ft. 9 in. high it should be not less than $\frac{21{\cdot}75}{16} = 1{\cdot}36$ ft. thick, but as this is not a brick measurement, it should be 18 in. up to the level of the concrete flat. The wire mesh reinforcement might then be omitted. Wall A would be taken as being two stories high above the floor of hall. There is no approximate ratio of roof span to wall thickness. The load from a roof truss must be spread by a sufficiently thick template over such a length of brickwork that the pressure does not exceed 3 tons per sq. ft. The difficulty of accomplishing this without thickening the wall unnecessarily leads to the introduction of piers under the trusses. A wall of unlimited length and not higher than fourteen times its thickness would be perfectly stable under any span of roof provided the safe load on the brickwork is not exceeded and the bending moment due to wind pressure is provided for. As the hall is stated to be on the second floor, there must be a ground floor and first floor in addition, the ground floor story should in that case have the walls not less than 2½ bricks thick. Considerable information upon the stability of walls may be obtained from "The Mechanics of Building Construction" (Longmans, 10s. 6d.).

HENRY ADAMS.



PROFESSIONAL CONDUCT.

"Reader" writes: "I recently prepared plans for a school, and went so far with the scheme as to obtain the opinion of the Architects' Department of the Board of Education, who expressed satisfaction from their point of view. My client was also satisfied. Several months afterwards the proposed site was abandoned, and a fresh scheme was required. At this stage my client became the chairman of a committee formed to raise funds for the project. I also was a member of this committee, upon which was another architect, whose first step, in spite of knowing my position, was to offer his services gratis. This offer was duly accepted by the committee. As a result of this I wrote to the gentleman concerned, pointing out that I thought his conduct unprofessional. This letter was forwarded by him to the secretary accompanied by resignation. The matter came before the committee, who refused to accept this resignation and requested *me* to tender mine. Please give me your opinion on the situation. Was he entitled to use my letter as a reason for resigning?"

—Under the heading "Suggestions Governing the Professional Conduct and Practice of Architects" the R.I.B.A. Kalendar, 1924–1925 includes as clause 4: "An architect must not attempt to supplant another architect, nor must he compete with another architect by means of a reduction of fees or by other inducement."

Whether "Reader" is correct in supposing that his architect fellow-committeeman has committed a breach of this clause would depend upon the application of the words "supplant" and "compete" to the case in question. The preparation of plans accepted as satisfactory would seem to give "Reader" reason to suppose that he was likely to be entrusted with the fresh scheme and would warn any architect intending to compete with him that such a course might be considered unprofessional. "Reader" was, therefore, entitled to inform his architect fellow-committeeman that, in his view, such was the case. Even supposing the offer of services gratis to have been made in genuine zeal for the fund-raising purposes of the committee, the action would still constitute an attempt to compete with "Reader" "by means of a reduction of fees."

The use of "Reader's" letter as a reason for resignation does not appear to be defensible, and the success of this course in persuading the committee to abide by their undignified proceeding does not justify the exposure of the letter or the offer of services gratis.

W. H.

BOOKS ON WREN.

"R. H." writes: "Can you recommend any books dealing with the Work of Sir Christopher Wren?"

—The most authoritative work is the bi-centenary celebration volume, published this year by the R.I.B.A. It contains contributions by many eminent authors, together with reproductions of a number of Wren's original drawings, etc. The Architectural Press have also published a volume (smaller in scope and more popular in character), illustrated mainly by photographs of extant works. The Wren Society, formed early this year, proposes to issue volumes on the work of Wren from time to time.

"Temporary Buildings"

Mr. Percy C. Culver read a paper on "Temporary Buildings" before the Northern Polytechnic Institute, Holloway. He first defined a "temporary building" as one which did not conform to the statutory requirements of the London Building Acts in London, or to the local by-laws elsewhere, so far as these by-laws related to construction. Buildings in this category could be erected under licence granted usually for three to five years, renewable at the discretion of the local authority. It was well, he said, to recognize from the commencement that there were several classes of temporary buildings, ranging from those whose purpose would be filled in a relatively short time to others which were required for periods of fifty to sixty years. This difference in purpose led to substantial differences in construction, and to indicate these variations temporary buildings were classified under the following heads :—

"A"—the entirely timber building.

"B"—the "iron building," which was a timber or steel fabric covered externally with galvanized steel sheeting.

"C"—the "composite building," constructed either wholly of timber or a combination of steel stanchions and trusses and timber intermediate framing. In each case the framing forming the external walls would be covered with weather-boarding, asbestos sheeting, plaster slabs, or lath and plaster, the internal walls and ceilings being finished with plaster slabs, lath and plaster, asbestos sheeting, or one of the many types of wall boarding on the market. The roof of such a building would be covered with asbestos slating, ordinary slating, or red earthenware tiling.

"D"—the "semi-permanent" building, constructed with a skeleton framing of steel stanchions and trusses, and a filling to walls of 4½ in. brickwork or breeze concrete blocks. The roof would be covered with materials similar to those described under the heading of "C"—"composite building."

In dealing with "A"—timber buildings, the lecturer referred to the fact that many examples existed of old timber buildings constructed of English oak framing, weather-boarded sides, and thatched or tiled roofs, and that some of these buildings had been in existence for more than 200 years.

In dealing with the "iron building," Mr. Culver stated that the patenting of galvanized corrugated iron sheeting about 1829, quickly led to its adoption as an external covering. In modern practice the original "iron" sheet had given place to "steel," and he had many experiences—some quite recently—where galvanized iron sheeting had been fixed for some forty years, and after being removed was found to be in extremely good condition. He pointed out the necessity for proper maintenance of the sheeting by regular painting, the length of the intervals being governed by the situation of the structure. Notes were given on standard practice in the proper fixing of this material, and attention was drawn to the methods employed to prevent the entry of water over the heads of doors and windows, etc., and the methods employed in forming valleys in the roofs, fixing of skylights, and ventilators.

After referring to the great variation between the weight of a brick wall and that of the wall of an "iron building," the lecturer proceeded to deal with the question of foundations required for such a structure, and pointed out various methods which could be adopted which, whilst being economical in cost, permitted conformity with the various by-laws, this being specially necessary in cases where 6 in. of concrete over the site was obligatory. For buildings required only for a short period, creosoted plates were mentioned as being sufficient. As conducive to economy and speed, the use of light cast-iron columns was recommended where concrete over the site was a necessity.

Taking as a basis a hall measuring 60 ft. by 30 ft., a description was then given of the various sizes of scantling timber required in the construction of the walls, roof trusses, purlins, etc., mention being made of the various ways in which the timber framework could be prepared. It was emphasized that the standard practice of mortising and tenoning the framework was particularly advantageous in allowing the framework to be erected with the use of relatively few nails, and upon being dismantled the value of the timber would be greater than if the framework had been entirely nailed together. Where the mortise and tenon method was employed for buildings which had to be erected by foreign workmen abroad, a careful system of marking (which conformed to key plans) enabled those erecting the building to proceed without greater difficulty than a child building up a simple picture with blocks.

Attention was directed to the advantage of employing three thicknesses of timber in the construction of "built-up" tie beams and principal rafters for large spans, with the main posts formed of two scantlings blocked apart to form a seating for the tie beams. Various lantern slides were shown of examples of trusses of 65 ft. span and of a Belfast truss of 75 ft. span. The lecturer gave details of the construction of the latter and a full detail of the various scantlings employed.

Lantern slides were also shown of the ordinary framework employed for an "iron building," and also the framework of a combined gymnasium and hospital, the latter portion being two-storied. A further set of slides illustrated—at various stages—the wall, partition, and roof framework of a large school building.

The economical advantages possessed by the "semi-permanent" building, as well as the gain to be obtained in the time required for construction were fully dealt with. The present need for economy emphasized the advantages of such buildings, and enabled them to fulfil successfully many of the purposes for which heavier constructions had been hitherto exclusively adopted.

Law Reports

Alleged Breach of Covenant

Wallrock v. *Sykes.*

Chancery Division. Before Mr. Justice Astbury.

Plaintiff in this case, Mr. S. Wallrock, an estate agent and surveyor, trading as Samuel Wallrock & Co., sought a declaration against Mr. Cyril Sykes, that he had broken a covenant in an underlease dated September 26, 1922, in regard to premises at 7 Blenheim Street, 29 Woodstock Street, and Blenheim Mews, London, W.C. He also claimed damages for alleged breach of warranty.

Mr. Luxmoore, K.C., said the plaintiff's case was that the premises were known as the Blenheim Auction Galleries, and that after plaintiff had agreed to take a lease of them, subject to the existing tenancies and underleases, a question arose in connection with the right to use a staircase running from the first floor. Certain workrooms on the first and second floors, which were not included in the lease, were in the occupation of Mr. John Henry Montague, and plaintiff claimed to be entitled to use the staircase in common with Mr. Montague. An action with respect to the staircase was brought by plaintiff against Mr. Montague, and Mr. Justice Romer held that plaintiff was not entitled to use the staircase. In that action, the defendant to the present case gave evidence on plaintiff's behalf. It was contended by plaintiff that he took the premises, meaning to let off the first and second floors, and it was essential that the access to those floors should not be through the main premises.

Mr. Luxmoore said that Mr. Sykes warranted to plaintiff that he should get that staircase, and now he had not got it he claimed damages for breach of warranty.

His Lordship : He had given you a covenant for the quiet enjoyment of something he could not give you enjoyment of ?

Counsel : Yes. He added that plaintiff's lease gave him all the galleries, subject to Montague's lease, and without the staircase it was impossible to use the top of the premises. Plaintiff carried on an auctioneer's business, and he could not have the upper floors used as a workshop with an access through the auction rooms. Plaintiff's demise was dated September 26, 1922, and was for a period of twenty-five years from March, 1920, at a rent rising from £2,250 per annum to £3,000.

Mr. Archer, K.C., for the defendant, contended that the alleged agreement as to the staircase was a representation only, and that if it amounted to anything more than that, it was

not a collateral agreement as to which evidence was admissible.

Counsel also submitted that the damages were negligible.

His lordship found that so far as the plaintiff's claim to access through the Globe Yard staircase was concerned, it was hopeless, because in order to get to the gangway it was necessary to pass through a portion of the premises unquestionably within Montague's underlease. His lordship then dealt with plaintiff's claim for damages for alleged breach of warranty, which was said to have been given at two interviews. Sykes, he said, was a simple man and an honest one. He honestly believed at the time the interview took place between him and Mr. Wallrock that he had a common right with Montague to use the Globe Yard staircase. Mr. Wallrock was a shrewd and clever man, and made the best of everything he thought took place at the first interview. His lordship thought the net result of the evidence was that Sykes did point to the Globe Yard staircase saying Wallrock would have the right to use it. Sykes said that honestly believing it to be true. His lordship was satisfied Sykes then had no notion that he was making any separate and independent contract with Wallrock. All he intended to do was to point out to Wallrock what he thought Wallrock would be entitled to do with regard to the staircase. His lordship doubted whether at the second interview at the club, the matter was mentioned to Sykes at all. He thought the only contract the parties entered into was set down in the document sent to the solicitors to draw up an agreement. There was no agreement, either express or implied, in regard to the staircase, but there was a representation by one, and an acceptance of it by the other. That, in his judgment, did not constitute a warranty. Sykes's representation was an innocent one, and he dismissed the action with costs.

White Lead Paint, Merchandise Marks Act, 1887, Prosecution

Hedley Miller v. *Langston-Jones and Samuel Smith, Ltd.*

December 12. Guildhall. Before Sir Charles Johnston.

At the Guildhall, Messrs. Langston-Jones and Samuel Smith, Ltd., Compton Works, Weston Street, Bow Common, E.3, appeared on a summons issued at the instance of Mr. Hedley Miller, secretary of the White Lead Makers' section of the London Chamber of Commerce, to answer a charge, under Section 2 of the Merchandise Marks Act, 1887, of (a) applying a false trade description, namely, white lead, to a mixture of sulphate of Baryta and other substances; and (b) selling the goods under such description.

Mr. Trevor-Watson, on behalf of the complainant, said that the defendants had been placing upon the market an article labelled "Signpost Special White Lead Paint," the solid matter of which was composed mainly of sulphate of Baryta, and, indeed, contained only 21 per cent. of white lead. He mentioned that white lead is hydrated carbonate of lead, and gave brief details of the method of manufacture. The London Chamber of Commerce, he continued, with a view to protecting the trade on the one hand, and the public on the other, had for many years been taking action where necessary in order to make sure that a paint containing an adulterant should not be sold as a white lead paint. Having, therefore, by bringing the case into the court, drawn attention to the matter, they were willing, subject to the consent of the court, to withdraw the prosecution, upon terms, the main articles of which were an undertaking by the defendants not to continue the practice, the payment of costs, the withdrawal of all labels at present in use and the supply of new labels in their place bearing a description approved by the complainant.

Mr. Walter Frampton, for the defendants, said that their attention had been drawn to the matter by the London Chamber of Commerce in the previous January, when, on consulting their solicitors (not those subsequently employed), they were advised that the description was not incorrect from the legal point of view. There had since, however, been an important decision in the Divisional Court, in what was known as the Selfridge case, in regard to misdescription under the Merchandise Marks Act, 1887, and the defendants, having taken further legal advice, approached the prosecutor and made the offer which had been mentioned by his friend. The last thing they wished to do was to mislead the public—the trade would not be misled.

The summons was then formally withdrawn by consent of the presiding magistrate, Sir Charles Johnston.

Societies and Institutions

R.I.B.A. Council Meeting.

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

Architecture and Craftsmanship.—On the recommendation of the Art Standing Committee it was decided to arrange an evening lecture during the session of 1925–1926 on the subject of "The Co-operation of the Architect and Craftsman," and to arrange a series of popular afternoon lectures in the spring of 1925 on various crafts.

Buildings Threatened with Demolition.—On the recommendation of the Art Standing Committee it was decided to take steps to ensure the collection and preservation of photographs of buildings of architectural merit in London which are likely to be demolished, and to invite the allied societies to take similar steps in their respective provinces.

The Gold Medal of the American Institute of Architects.—The congratulations of the Council were transmitted to Sir Edwin Lutyens, R.A., on the occasion of the award to him of the gold medal of the American Institute of Architects.

The Presidency of the Royal Academy.—A message of appreciation was sent to Sir Aston Webb on the occasion of his retirement from the presidency of the Royal Academy, and a message of congratulation was sent to Mr. Frank Dicksee, R.A. (Hon. Associate) on his election as president.

The Tribunal of Appeal under the London Building Acts.—Sir Banister Fletcher was appointed as the architect-member of the Tribunal of Appeal in the place of the late Mr. John Slater.

The Royal Sanitary Institute Congress 1925.—Mr. J. Inch Morrison was appointed as the delegate of the R.I.B.A. at the congress to be held in Edinburgh in July, 1925.

Decimal Coinage and Metric Measures.—On the recommendation of the Science Standing Committee it was decided to urge H.M. Government to appoint a committee to examine and report upon the possibility of a further introduction of the decimal system of coinage and a metric system of measures in this country.

Examination Fees.—On the recommendation of the Board of Architectural Education it was decided that students of recognized schools exempted from the final examination who attain to candidature for the Associateship, and who pay examination fees in their schools, shall in future pay fees to the R.I.B.A. totalling £10 10s. instead of £15 15s.

Nominations for Membership.—Three candidates for the Fellowship and nine candidates for the Associateship were nominated for election on January 5.

Bridge Design.

In his tenth lecture on town planning at Birmingham University, Mr. William Haywood, F.R.I.B.A., said that the general character of bridge design should be suited to its environment. In the presence of great natural effects, as in the bridged intervals of a road through mountains, it should be bold, simple, and *subordinate*. Across vast cuttings, with cliffs of great size, an appropriate design might be found—as at Clifton—in the magnificent stride of a cambered roadway, of slight thickness, between pyramidal abutments of stone. Or the Clifton problem—so far as situation was concerned—might be treated as the Romans bridged the valley of the Gard, with an amazing symphony of arches, in which the governing purpose, the carrying of a stone-built channel at a great height, was logically and superbly achieved. In that design there was harmony of scale with the rugged valley; an effect of vast strength applied to trifling labour, and there was a better scale factor than was possible with the suspension principle; yet the *spirituelle* manner of Clifton was at least equal in its appeal to the terrestrial grandeur of the Pont du Gard.

Great estuaries, with relatively low land masses, provided conditions favourable to emphasis in bridge design. The Firth of Forth was such an estuary, and the Forth Bridge was in most respects a successful design for the situation. The monotony of the landscape was there best opposed, and the situation invited a *dominant* design. In undulating country, a road bridge and the swinging rise of its approaches might rank

in importance with the lesser land swells. Easy ramps and low parapets rising suavely over a thin crown were the most necessary elements of a proper treatment for this situation.

The type of bridge with which they were most familiar was that which linked two sections of a town across a river. It was usually built with as few piers as possible, and its arch-lines were either elliptical or segmental. Ammanati's Ponte della Trinita at Florence, *circa* 1566, a most beautiful bridge of this character, was one of the first in which the new elliptical form was used. The fine cutwaters and curves of the arches and parapets were happily related to their architectural environment. This type and its derivatives were to-day the normal for moderately wide rivers. Many of the Parisian bridges were of this character; and the Pont Alexandre, with its single span of steel, was a development of the same idea.

The more intimately bridges were associated with buildings, and especially with buildings of collegiate or civic importance, the more properly might they make use of details common to buildings. Balustrades, for example, seldom looked well except in the vicinity of appropriate buildings, or the architectural gardening which often formed part of their *entourage*. The delightful bridge at Clare College, Cambridge, built 1638, was a case in point.

Colour was also an important factor in bridge design, and particularly in the design of modern composite structures. All the older or pre-steel bridges were uniform in colour, because they were built throughout of the same material, but where several materials were employed, a comprehensive effect was more difficult, and was often thoughtlessly ignored.

Strength and Defence in Architecture.

Sir Banister Fletcher, F.R.I.B.A., in his last lecture, dealt with the secular architecture of the Middle Ages in France, turning from cathedrals, referred to in a previous lecture, to castles, country houses, hôtels-de-ville, palaces, and hospitals. These, he said introduced a study of a different aspect of social and political life, the castles being the well-nigh impregnable fortresses of a proud and exclusive nobility. The public buildings reflected the delight shown by the citizens in erecting beautiful buildings in which their disputes should be adjudged, their municipal affairs settled, and their aged and infirm housed. The many slides of different buildings showed the exuberant ornament which was lavished on these characteristic structures. These structures stood, said the lecturer, as monuments of a high order of craftsmanship and art. The lectures will be continued next term, on January 14. During the term Sir Banister Fletcher will deal with English mediæval architecture, including cathedrals, churches, and domestic buildings.

The Suggested St. Paul's Bridge.

In a lecture before the members of the London Society, on "The Bridges of London," Major Harry Barnes referred to the suggested St. Paul's Bridge, which, he said, raised the question of the stability of the Cathedral. It was said that threatened men live long, and it might be as true of churches. It was difficult, however, to believe that the City Fathers could be careless of the fate of the greatest of City churches, and in face of the first report of the Royal Fine Arts Commissioners, it was perhaps not too much to expect that before proceeding further with St. Paul's Bridge they would take such steps as would allay the apprehensions that the report had aroused. "I say, with a sense of the greatest responsibility," added Major Barnes, "that the stability of St. Paul's Cathedral is causing the greatest anxiety among all those charged with the care of it, and if we really want to save this national monument from disaster immediate steps must be taken to avert it."

The Architecture of Concrete Building.

Lecturing before the Sheffield, South Yorkshire and District Society of Architects and Surveyors on "The Architecture of Concrete Building," Professor Beresford Pite, F.R.I.B.A., M.A., A.R.C.A., said that architecture was either conscious or unconscious, natural or artificial, the work of the constructor or the work of an artist. This definition would generally correspond with Gothic or Classic. The Renaissance tried to be both at once, an affectation of character which might be at once an artistic and artificial imitation. It was a truth, a realized fact that unaffected simple construction eventually attained an æsthetic value. When they looked at modern reinforced concrete construction it was their hope that sooner or later it would give them the same satisfaction that unaffected Gothic buildings afforded them. In concrete buildings they must fall back upon the qualities of simplicity and impressiveness of scale and of that expression of purpose which was always interesting, and await the advance of a sense of beauty. Adornment detracted from such interests. Simple bridges were better without ornament, they illustrated the interest of constructive expression and the forces at play in the construction. Architects could mock this spirit and play with it. This might be illustrated from many buildings at the last Paris exhibition, where playfulness abounded. It was their duty to put architecture in its proper place. The progress from prehistoric construction, from the primitive Greek to advanced Roman, from Norman masonry to the vaulting of Edward VII Chapel at Westminster, would show how ideas progressed from simplicity to a complex beauty. Combining artistic construction with constructive expression. They must combine the simple expression of reinforced concrete construction with their artistic enjoyment of traditional forms, using those negatively as well as positively. Modern French reinforced concrete had done this with success. Their heavier Saxon ideas moved in larger masses, and were not yet very playful, but they did not live in the past, and should seek for freshness and find a stimulus to imagination in the new use of thinness instead of thickness. Self-contained thrusts instead of abutments, and in the consequential new proportions; remembering that naked facts could never be wholly satisfactory, that clothing and ornament were necessary, and for these they must look for historic architecture in dealing with concrete buildings. A vote of thanks to the lecturer was proposed by Mr. F. E. P. Edwards, seconded by Mr. J. M. Jenkinson, and supported by Professor Husband and Mr. J. Amory Teather.

The Bridges of London.

Mr. Mervyn Macartney spoke on the bridges of London before members of the Bartholomew Club. He said there were eleven bridges in the Cities of London and Westminster, and he might describe them as good, bad, and indifferent. There were two very fine bridges—London and Waterloo. Waterloo Bridge he considered the finest ever built, so far as his knowledge went. The people who built the fine bridges did not attempt to put on frills, and were content that their work should look what it was—stone, cast iron, or steel. Nowadays the taste for the ornate had to be pandered to. Indifferent bridges were the "rotten lot of cast-iron things put up by engineers to let trains into London." He wished they had stopped on the south side. The only merit of those structures was that they did not impede river traffic as did stone bridges. London Bridge, old Southwark Bridge, and Waterloo Bridge were all designed and erected by John Rennie. Waterloo Bridge was nothing short of a wonderful conception. He thought it would be a lasting shame to this generation if they let Waterloo Bridge fall down. He was afraid the commercial people on the river banks were very keen on insisting on it being demolished, and another bridge of five or six spans substituted. They said they could not get their barges through the arches, but that was surely rather an exaggeration. The bridge had been there for 100 years, and they had navigated the river successfully all that time. Of course, the bridge was at the wrong point of the river. It went into a bend, and that made it very difficult for traffic, but he thought it could be negotiated.

Heating and Ventilating Engineers' Assistants' Prize Competition.

The Council of the Institution of Heating and Ventilating Engineers are offering the following prizes for original papers on subjects connected with heating and ventilating, during 1925: The Lumby premium, £10 10s.; the Sirocco premium, £10 10s.; and the Grenville premium, £5 5s. The winning of an award carries with it a medal of the institution. The prizes will be awarded as follows: The Lumby premium for the best paper submitted dealing with, or any subject connected with heating or hot water supplies. The Sirocco premium for the best paper submitted dealing with ventilation and the general application of fans; air washing, air conditioning, dust and fume removal, mechanical draught, etc., and the Grenville premium for the next best paper on any subject included in the above. Papers submitted must be the sole composition of an assistant. The only qualification is that such assistant is actively connected with the business or profession of heating and ventilating in Great Britain and Ireland, and is not a principal or an employer. Any subject may be chosen, and "The List of Subjects for Papers," prepared by the Institution of Heating and Ventilating Engineers, a copy of which may be obtained on application to the secretary, 38 Victoria Street, London, S.W., is suggested as a guide. The awarding of a prize may exempt the winner from the usual examination for Associate membership of the institution.

Contemporary Art

The Revival of Pottery.

No form of craftsmanship has benefited more by the renewal of interest during the Morris-Crane-de Morgan epoch than ceramics. The dull level of accomplishment maintained throughout the earlier Victorian period, that not even the beautiful, classical *pâte sur pâte* work of Solon could stir into a living craft, has disappeared. Now, on many sides, the paramount importance of design is recognized, and mere perfection of production less thought of. Taste is vastly improved, and technique is being subjected to experiment. Individual work is displacing mass production once more, and allied with it is the work which is produced by frankly commercial undertakings of the very highest class, such as Pilkington's and Howson Taylor's; work made by craftsmen under the guidance of an artist director, who, in some happy cases, produces his own superb pieces. There have, however, always been great pieces—the Portland vase, for example—but the craft should be less concerned with such than with the general level of the whole, and this is increasingly the case.

Traditional Artists.

Tradition in the production of fine glazes is a very potent factor. There are artists who are wholly concerned with it. Fortunately it is the finest tradition that Reginald F. Wells follows. In his exhibition at the Beaux-Arts Gallery he proved himself a worthy descendant of his Chinese ancestors of the Tang and Lung epochs. He is a glaze man; one who is preoccupied with the problems of firing, of fluxes, and temperatures. He has been known as a capable sculptor of animal forms; but it is not so much his plastic powers that are brought into play in his pottery as his exquisite feeling for the beauties of surfaces. His sense of form in his bowls, vases, dishes, and pots is entirely at one with his Chinese forbears; he is content to utilize these ancient and beautiful shapes, and to rediscover their exquisite secret of quality. Even in the modelling of his ceramic animal figures—heavy horses, bulls, rams, and ducks; in his human figures of women and children, he has absorbed the Chinese form-feeling and is content so to express himself, which he does convincingly. Originally his pottery was known as Coldrum, now it is called Soon work, a more soothing, Chinese sound.

Ceramic Design.

A quite different problem arises in connection with the exhibition of what was infelicitously styled "hand-painted pottery," by Alfred H. and Louise Powell, at the Brook Street Gallery. In this case design is of paramount importance, and the actual ceramic processes take a lower place. The design is of a very varied character and application, and all classes of articles are treated. It is not art for art's sake in this case, but art for the sake of usage. A good deal of charming domestic work is produced by these designers, but their most interesting work has an architectural character. It consists of large pieces for decorative purposes, bringing reminders of the majolica work of Italy and Persia, but more subdued in style and colour; reminders, too, of the exquisite lustre of the Mauresque-Hispano pieces. The application of these is dictated by their size. They are dishes, round, and just under two feet in diameter, or vases a yard or so high. The former are admirably suited to the purposes of a frieze in a panelled room, adding colour and pattern. The shapes have been thrown by Wedgwoods, with whom the designers work sympathetically, but it is not in the shape, but in the ornamentation that the pieces are interesting. It is painted on the china in the colours used by the craft, and afterwards glazed, fine surfaces resulting, which add greatly to the designs which are architectural, landscape, heraldic, and floral. The latter are treated conventionally, while the heraldic are certainly the most imposing. From the technical point of view the conventional floral pieces are the most interesting, and beautiful lustres have been achieved in these.

It is curious that in neither of these two cases is the importance of the real ceramic form-problem realized. Many makers of modern pottery have been successful in evolving new shape-variations, but these have generally happened in plain, undecorated wares, and as a general rule throwing, as distinct from every other ceramic process, is not practised by the individual craftsman working outside the factory.

KINETON PARKES.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Sir Kingsley Wood, Parliamentary Secretary to the Ministry of Health, in reply to Mr. A. Greenwood, explained that the only reason why the Minister said that a grant from public funds would be available for the Weir type of "steel" houses was because Lord Weir's experiment in housing was probably more advanced than that of any other person who was engaged in the matter. A committee was set up under the chairmanship of Sir Ernest Moir to examine the new methods of construction, and Lord Weir's house was the only one which, at the moment, had received the recommendations of that committee. There were several other public-spirited people who were at present endeavouring to advance a new method of housing construction, some of whom had already approached the committee, and whose schemes were at present under consideration. He had no doubt that in a short time the committee might be able to issue further interim reports on the other methods of construction which were being put forward by other people. If this were done, and the committee made a recommendation as favourable as had been done in connection with Lord Weir's scheme, the Minister would not seek for one moment to put one scheme before the other.

The Price and Supply of Building Material

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

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

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

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

The Ilford Housing Scheme Litigation

A question concerning the limitation of the City of London Corporation's housing scheme at Ilford to 220 houses, and the litigation which has taken place, was raised at the last meeting of the Corporation. Mr. W. H. Savery, chairman of the Special Housing Committee, in reply, stated that there appeared to be an impression that the City was responsible for the failure of the scheme. As a matter of fact, they were not to blame in the least. Their liability under the Act was limited to 1d. in the pound, and so far as the litigation was concerned, the Corporation was simply fighting the battles of the Government.

The Week's News

Bath Housing Schemes.

Thirty-six municipal houses are to be built at Bath.

Proposed Public Hall for Culmstock.

It is proposed to erect a public hall at Culmstock, near Exeter.

Housing at Barnsley.

The Ministry of Health have sanctioned the erection of 168 houses at Barnsley.

An Old Manchester Building to Go.

The one-time Angel Inn, Manchester, is to be demolished. It is about 200 years old.

Housing at Hebburn.

The Hebburn Urban District Council have decided to build 100 three-roomed houses.

Leadgate Sewerage Works.

The Leadgate Urban District Council have decided to seek a loan of £13,500 to carry out sewerage disposal works at Crookhall and Billingside.

Torquay Harbour Scheme.

The Torquay Town Council will shortly inaugurate a scheme for the improvement of the harbour property, at an outlay of £17,000.

More Houses for Shrewsbury.

The Shrewsbury Corporation have received sanction to erect a further seventy houses in connection with their Sultan Road scheme.

Giotto Mosaic Discovered in Rome.

It is reported that a mosaic by Giotto, representing an angel, has been discovered in the Vatican caves during restoration work.

Sea Wall and Promenade for Blyth.

Sanction has been received by the Blyth Corporation to borrow £5,500 for the construction of a sea wall and promenade on the foreshore.

Rebuilding the Dover Isolation Hospital.

The Health Committee have approved a recommendation that a local architect should be engaged to draw up plans for the rebuilding of the isolation hospital.

The Darlington War Memorial Hospital.

The Darlington General Purposes Committee have decided to contribute £30,000 towards the erection of the new war memorial hospital.

Change of Address.

Mr. Frank S. Swash, F.R.I.B.A., has moved his office to Ridgeway, Newport, Mon.

The Southampton Town Hall Scheme.

The Southampton Corporation have decided to promote a Bill in the next session of Parliament to empower them to erect a town hall, including a council chamber, municipal offices, court-house, police-court, police station, art gallery, and other buildings and premises.

The Lady Astor Housing Scheme, Plymouth.

Messrs. Hennell and James, of 19 Russell Square, London, W.C., the architects for the Welwyn Garden City Housing Scheme, tenders for which are published in this issue, have been appointed architects for the Lady Astor Housing Scheme at Plymouth.

Proposed Tube Extension through Chelsea.

The Wandsworth Borough Council are recommended to appoint delegates to confer with representatives of the Battersea and Chelsea Borough Councils on the suggested extension of the tube railway through Chelsea with a terminus on the south side of the Thames.

Norman Work Disclosed at Dover Castle.

Excavations in the ramparts of Dover Castle on the land side have opened up an ancient Norman sallyport from Fitzwilliam's Tower. There is a very fine arch of Caen stone, and the passage appears to be in very good condition, whilst a foundation of walls beyond the arch leads partly across the Northfall meadow adjoining the ramparts.

Charlton House.

The Greenwich Borough Council are applying to the London County Council for sanction to a loan of £60,000 for the purchase of Charlton House and Park. It is proposed to use the house as a town hall, and to allocate part of the grounds as sites for houses, and the remainder as an open space.

A New Bridge for Rotherham.

The Rotherham Corporation have decided to build a new bridge over the River Don at Rotherham at a cost of £90,000, half of which will be borne by the Ministry of Transport. The present fifteenth-century bridge, with the chantry on it, has been scheduled as an ancient monument; it was originally a foot bridge, and has twice been widened. Two schemes are under consideration for the new bridge.

Westminster Baths.

The Westminster City Council are recommended by the Public Baths Committee to instruct the engineer and surveyor to prepare plans and specifications and invite tenders for the rebuilding of the Marshall Street baths. The present building, which was erected in 1851, is reported to be in a very dilapidated condition. The necessary accommodation, it is proposed, shall be provided in order that the bath may be let during the winter months for meetings and entertainments.

New Store Premises for Vancouver.

His Majesty's Trade Commissioner at Vancouver, B.C. (Mr. L. B. Beale), reports that a local departmental store firm have decided entirely to rebuild their store premises in that city, and that the architects concerned are about to call for tenders for the supply of lifts, heating installation, and refrigerating plant. United Kingdom firms in a position to supply British materials can obtain further particulars regarding this matter on application to the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1, quoting reference AX. 1552.

The Northampton Polytechnic Institute.

At the Northampton Polytechnic Institute the Marchioness of Northampton presented the prizes and certificates awarded in respect of the session, 1923–1924. An address was given by the Marquess of Northampton, D.S.O. The chair was occupied by Mr. L. B. Sebastian, chairman of the governing body. Thirty-three degrees and certificates were awarded by the University of London to students attending the day and evening courses in engineering and certificates were awarded by the governing body of the Northampton Polytechnic Institute, the City and Guilds of London Institute, and other bodies.

A Big Block of Flats for Canada.

His Majesty's Senior Trade Commissioner in Canada (Mr. F. W. Field) reports that a company in Montreal is proceeding with the construction of an apartment house (block of flats) which, it is considered, will be the largest building of this kind in Canada, and that in consequence there is likely to be a demand for materials for interior decoration, roofing, etc. United Kingdom firms desirous of obtaining further particulars should apply to the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.

An Observatory for Hendon.

The Hendon Urban District Council have favourably entertained a proposal from the University of London that they should allow an observatory to be erected in Hendon Public Park. The University has been offered a large astronomical telescope the late owner of which, Mr. W. E. Wilson, was awarded the gold medal at the St. Louis exhibition for having obtained with the instrument hitherto unexampled photographs of spiral nebulæ. A condition of the gift is that the University will undertake to provide a proper observatory in which to house the telescope. Hendon, it is suggested, combines easy access with considerable height over sea level and a reasonably good atmosphere.

The Week's News—*continued*

1,000 Houses for Newcastle.

The Newcastle City Council propose to build 1,000 houses during 1925.

More Houses for Market Bosworth.

The Market Bosworth Rural District Council have decided to erect 250 houses.

Housing at Steyning West.

In the Steyning West rural district fifty houses are to be built by private enterprise.

The Extension of Batley Hospital.

The Batley and District Hospital is to be extended at a cost of £24,000. Mr. Arthur W. Hanstock, of the firm of Walter Hanstock and Son, of Batley, is the architect.

New Baths for Bingley.

The Bingley Urban District Council have approved a scheme to provide new public baths and a swimming bath on a site in Myrtle Grove. The cost will be about £27,000.

Housing at Mexborough.

The Mexborough Urban District Council are seeking the permission of the Ministry of Health to the erection of forty-eight parlour-type houses, and twenty non-parlour-type, in blocks of four, as a first instalment of 110 houses for which sanction has been asked.

Change of Address.

The following companies have moved to Portland House, Tothill Street, Westminster, S.W.: The Associated Portland Cement Mfrs., Ltd.; The British Portland Cement Mfrs., Ltd.; The Cement Marketing Company, Ltd.; Martin Earle & Co., Ltd.; The Wouldham Cement Company, Ltd.; White's South African Cement Company; The S.A. Construction Company, Ltd.; The British Portland Cement Research Association.

New Inventions

Latest Patent Applications.

29025.—Bowker, W. R.—Building structures. December 3.
29076.—Braithwaite & Co., Engineers, Ltd.—Building construction. December 4.
29077.—Braithwaite & Co., Engineers, Ltd.—Building unit. December 4.
28714.—Carter, W. L.—Building construction. December 1.
29171.—Creak, G.—Concrete building-blocks, &c. December 5.
28970.—Cuming, A. J. Roach.—Construction of walls. December 3.
29330.—Digby, W. P.—Means for protecting buildings from vibration. December 6.
28829.—Gardner, W. D.—Building construction. December 2.
28976.—Gray, H.—Reinforced-concrete structural members. December 3.

Specifications Published.

225003.—Newman, B. L.—Building construction.

Abstract Published.

223445.—Lampel, A., 5 Seitenstettengasse, Vienna.—Walls.

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

A Useful Diary

This is diary and calendar time, and we have to acknowledge the receipt of many artistic almanacks, etc., from various sources. One of the handy pocket series of diaries has been sent to us by Messrs. Francis Polden & Co., Ltd., the well-known firm of electrical and mechanical engineers, of 56 Cannon Street, E.C. The diary contains a few illustrated announcements as to the several works of the company, and, in addition to the pages allotted to the day's work, a page devoted to "Facts Worth Remembering" is very useful. Messrs. Francis Polden will be pleased to send a copy of this diary to architects expressing a wish to have one.

A GENERAL VIEW.

THE FRONT ELEVATION.

:BURTON HOUSE:
:WESTMORLAND:

PLANS OF THE GROUND AND FIRST FLOOR.

Situated half-way between Lancaster and Kendal, Burton House is a small Early Georgian mansion containing some good Adam work. The woodwork is mostly oak. The walls are limestone, the main façade being ashlar. The above drawings are by Mr. Vivian Barrow. (*See also notes on page* xxii.)

Burton House, Westmorland

Burton House is situated in the village of Burton, Westmorland, half-way between Lancaster and Kendal. It is a small mansion of a typical Early Georgian style, and contains some very good Adam decoration, notably the mantelpieces and ceilings. The first floor, which consists of ten bedrooms, one dressing-room, bathroom, etc., is approached by a very fine stone staircase. The ceilings and mantelpieces of the drawing-room and main bedroom are worthy of special mention, the former being of white and green marble and beautifully proportioned. The second floor consists of three bedrooms and one dressing-room. The interior decorations are good and the woodwork is mostly in oak. The walls are built in limestone, the main façade being ashlar, and the back and sides stuccoed. The house stands well above the level of the main road, and is approached by a circular carriage-drive. As is usual in most types of Georgian residence, the rooms on the ground floor communicate one with another (see preceding page).

Obituary

The late Mr. B. Hannen.

We regret to record the death of Mr. Benjamin Hannen, one of the principal directors of Holland and Hannen and Cubitts, Limited, the builders and contractors. He died at his residence Great Serries, East Grinstead, Sussex, at the age of sixty-two. After receiving his education at Rugby and Cambridge, where he graduated in 1884, Mr. Benjamin Hannen, two years later, entered the firm of which his father was a partner, and which was then known as Holland and Hannen. In 1890 he became a partner, and from that time onwards he had never ceased to be actively engaged in the development of the firm. Among the more prominent work executed by the firm were Euston Railway Station, Coutts' Bank, Freemasons' Hall, Fishmongers' Hall, many of the large West End business houses, and the Government House at Salisbury, Rhodesia. Not a few of the great shipping offices in Cockspur Street are the work of the firm, as well as Donald Currie's building in the City, and the Cunard offices in Liverpool. One of the most important contracts fulfilled by them during the Great War was the construction of the shell-filling factory at Chilwell, which became famous as the pioneer factory and school of shell-filling. The latest ambitious scheme of the firm, and probably the most important since the war, is their acquisition of Devonshire House.

"The Quarterly Illustrated"

The autumn number of "The Quarterly Illustrated of the Incorporation of Architects in Scotland," contains as its leading literary and pictorial feature the second article of the series on great Scottish architects of the past. It deals with James Craig, and has been specially contributed by Mr. T Harold Hughes, A.R.I.B.A., Principal and Professor of Architecture at the Glasgow School of Architecture. With the exception of the gifted Adam family there are few Scottish architects of the latter half of the eighteenth century whose names may be said to have more than limited repute. Of these few James Craig is one. Craig was born in the year 1740, the son of Robert Craig, merchant, and grandson of Robert Craig, a magistrate of Edinburgh. His mother was a sister of the poet Thomson.

Craig's first work and that by which he will always be remembered, was his scheme for the New Town of Edinburgh, which he prepared when he was but twenty-seven years of age.

List of Competitions Open

Date of Delivery.	COMPETITION.
1925 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, 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, Westminste S.W.1, not later than February 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.
*May 15	Technical College for the Middlesbrough Education Committee. Assessor, Mr. Percy Thomas, F.R.I.B.A. Premiums £200, £100 and £50. Apply, with payment of £1 1s., for conditions not later than December 27, to the Director of Education, Education Offices, Woodlands Road, Middlesbrough.
*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.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.

* Date of application passed.

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