Wednesday, April 16, 1924. Vol. LIX. No. 1528.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

They builded a tower to shiver the sky and wrench the stars apart,
Till the Devil grunted behind the bricks: "It's striking, but is it Art?"
The stone was dropped at the quarry-side and the idle derrick swung,
While each man talked of the aims of Art, and each in an alien tongue.

RUDYARD KIPLING.
"The Conundrum of the Workshops."

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

Messrs. Peter Robinson's New Premises, Oxford Street, London : A Detail of one of the Portals

T. P. and E. S. Clarkson and H. Austen Hall, Architects

In the new Peter Robinson building special emphasis is given to the entrance portals, which occupy the height of two floors. The marquise, grille, and shop-fronts are of bronze. (See also pages 642 *et seq.* and xli.)

THE

ARCHITECTS' JOURNAL

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Olympian Wonders

NO man can point to the first exhibition—unless it be to the day of creation itself—for things were exhibited even when men dwelt in caves. Then, of course, the exhibition was not so much one of handywork as of prowess—prowess in hunting, fighting, and swimming.

But when the long canoes were paddled up to the shore, there were exhibitions of skins and weapons, rudely wrought bones and metals, which were bartered for dyed cloths and other things dear to the heart.

Now, these exhibitions, although essentially an affair of trading, were no doubt the occasions for the display of some pride.

The clever craftsman, asking his weight of ores for his lengths of coloured stuffs, would note with pride that he obtained twice the amount of metal that his less skilful brothers received. And he grew in reputation and riches, and was much sought for in trade.

Several hundreds of years after these happenings took place on the banks of the great rivers and the sea-shores, men still have goods to be proud of and to exhibit, and though such are organized and advertised, they are still the same in conception as when dusky cave-dwellers assembled to haggle for trinkets and beads.

An exhibition is a white milestone in the progress of civilization. "See!" cry the merchants; "See how much more wonderful are our wares than when last you came!" And we walk round and we find paper pulped and compressed to make engine-wheels, and wood fibre spun into clothes, and bricks—by the fierce invention of necessity—made out of straw, and silk yarn stretched out of glass. Things of which we never before dreamed are spread out on both hands for all to view.

A building trades exhibition is no whit more tame than an exhibition of modern inventions in high explosives; the noise perhaps is less, but the revolution of effect on things organic is the same. Here you shall enter a house constructed of slabs of petrified wood shavings, built in seven days; a building of Cheltenham stone, guaranteed to stand the weather for a thousand years; shall inspect a stone figure, not sculptured, but *moulded* out of the rock. Oh, progress! progress! progress!

And is there not, too, a dawning revolution in Art? How shall the stay-at-homes guess at the new desire for clothing construction with beauty, for infusing colour into concrete, for bringing proportion and perfection into every form? These things are only slowly to be learned unless we go Exhibition-wards.

Since the formation of a Ministry of Health it has become the custom for the Minister in office to declare the Building Exhibition open. Surely building could be attended by no better man. When there is a Ministry of Fine Arts, of course, Health and Art will walk hand-in-hand. The psychological effects of good building have not yet, indeed, been sufficiently explored. The late Arthur Clutton-Brock used to insist that walking a mile down a dreary suburban street tired one far more than walking ten along a country lane.

As staring at a white wall will more quickly exhaust the optic nerve than will the sight of green fields, so will a monotonous roof-line, with ugly chimneys, depress and enervate the mind. "If a man live among noble buildings," said Aristotle, "he will become infected with their nobility." And so, too, is Health wedded to Art.

Many visitors to this year's exhibition will be cheered by the general improvement in the design of the stands. Far more have been designed by architects than on former occasions. In opening the exhibition, Mr. Wheatley (the Minister of Health) laid stress upon the co-operation there must be in the building industry if the housing problem were to be solved. And he wanted the operatives to see that the houses they built were houses from which we might expect good women and great men to come. We imagine that in the first instance he was referring to the necessity for confidence and goodwill between masters and men. But in the second instance, the architect should be concerned. Since architecture began, the architect has entrusted the building to a builder; it would be better for all if the builder were always to entrust the architecture to an architect.

"To each his office."

The number of exhibitors at the exhibition is greater than ever before, and although Olympia has enlarged its boundaries by building an additional hall—covering, incidentally, as much as half the area of the original structure—all the available space has been filled. Mention of this extension leads one to remark upon the arrangement of the stands in the extra space. Around a central octagonal stand, eight other stands have been grouped, and though the other stands in this particular hall are in rows, the departure may be noted with satisfaction, for it is the first attempt on the part of Mr. Montgomery to have his exhibition town planned.

Although many architects and others come to the Building Exhibition in search of only that which is new, it must not be imagined that it is only the novelties which can attract, for things that may be familiar enough to the older men in the profession are not so to the young. And, moreover, it will enlarge the young architect's experience enormously if he be able to see and touch everything for himself.

And, too, there is the client. Many words from the architect will, very often, not bring home to him the suitability or otherwise of various materials; catalogues and travellers can never demonstrate how well a kitchen range will serve. These are things usually learned too dearly.

But a careful hour spent at Olympia will tell one many things.

H. J.

Notes and Comments

The Institute and the Society: Unity at Hand

It is no secret that the negotiations with regard to amalgamation which have been proceeding between the R.I.B.A. and the Society of Architects for some time past have now reached the stage of a provisional agreement. The exact terms of this agreement have not yet been made known, but it is safe to say that the general lines of it are more or less public property. In any case, there can be no harm at this stage in referring generally to a matter which before long will have to engage the serious consideration of every member of the Institute and of the Society of Architects. Our understanding of the position is that amalgamation means, broadly, that the 170 Fellows of the Society will become Fellows of the Institute; the 980 Members of the Society will become Licentiates of the Institute; the 180 Licentiates of the Society will become Students of the Institute, and the 130 Students of the Society will become Probationers of the R.I.B.A. These are the main outlines of the proposed changes. It will be noted that the Associate Class of the Institute is not affected, though it will be open to members of the other classes to enter into Associateship by means of a special examination. The basis of amalgamation is, we think, a just one, and we hope sincerely that so obviously fair and genuine an attempt to bring the two leading architectural societies of the country into a united body will not be crabbed by merely factious or obstructive criticism. The advantages of amalgamation are so manifest that it would be superfluous to dwell upon them; what remains to be discussed is the method of securing the sanction of members to the proposed agreement. It is not possible, we believe, under the present charter and by-laws of the R.I.B.A., to take any decision by means of a referendum. A referendum would be only an expression of opinion, and would have no force until a General Meeting had passed the necessary resolution. This is obviously a matter on which the whole body of members in the United Kingdom should have an opportunity of expressing an opinion; a General Meeting in London can only be attended by a very small proportion of members. The only alternative, therefore, is an election by means of which every member may say whether he approves the Council's scheme, and whether he wishes to return them to office with a mandate to put it into effect. Such an election will have to be held. The outcome of it should not be in doubt. After many years of friction and discord we have a scheme which, in its general outlines, takes account of all interests and involves real hardship to none. With a united profession the chances of securing Registration are immeasurably enhanced, especially with a Government in power that is not unsympathetic to amalgamation. The psychological moment really seems to be at hand. We sincerely hope that members may realize the necessity of seizing it.

The Battle of the Bridges

The Battle of the Bridges may so far be nothing more than a battle of ideas, but it is none the less desperate for that. The first clash has resulted in victory for the enemy, if we may be allowed to class as enemies of London those who are content with rebuilding bridges where they are not wanted, and with widening old bridges that are better preserved as they are. The L.C.C. at their meeting last week decided to widen Waterloo Bridge at a provisional cost of one million pounds. As we have observed before in these pages, we are not opposed to widening on principle; if a bridge is inadequate for its job, then, no matter how beautiful it may be, if there is no alternative it must be widened. With the advocates of beauty apart from utility —in the case of so utilitarian a thing as a bridge—we have little sympathy. But this is not to condone the widening of Waterloo Bridge. There is much vague talk about present and future traffic requirements. Has there been any serious attempt to discover what these really are? If there had been we do not think it would have been decided with such desperate haste to widen Waterloo Bridge (which only within the past few weeks has shown serious signs of giving way) and to rebuild Lambeth Bridge, which has been closed to vehicular traffic for somewhere about sixteen years. These sudden decisions imply panic and its inevitable corollary, improvisation. We cannot believe that these hasty measures are anything else than a belated attempt at atonement for past neglect. Hence the would-be impressive talk about "future traffic requirements" in connection with the widening of Waterloo Bridge moves us not at all. Waterloo Bridge could never have been allowed to get into its present desperate condition if there had been so much as an elementary regard for traffic requirements. Once again we are showing that national failing of "letting things slide," in the hope that everything will be all right or that emergency measures will get us out of our troubles when they arise. Emergency measures, however, can do little more than postpone the day when the London bridge problem must be scientifically tackled in its relation to the metropolis as a whole. It is useless to tackle it in a series of isolated compartments, or as it affects the City Corporation, the L.C.C., or some other individual authority. Widening old bridges may or may not be necessary, but it is fairly certain that piecemeal methods can do little towards the solution of the problem as a whole. What is wanted is a body of experts, representative of all phases of the question—practical and æsthetic—to go thoroughly into the problem of London's bridges; to ascertain what the traffic requirements are at the moment, what they are likely to be in the future, and to make recommendations accordingly—recommendations, moreover, that shall be compulsory upon our civic authorities; a merely advisory body is worse than useless. What is certain at the moment is that widening Waterloo Bridge can help but little. At the risk of becoming tedious we must repeat what we have often said before, namely, that London must have *new* bridges—not debouching on to the congested lanes around St. Paul's, but crossing the Thames between Blackfriars and Westminster.

Country Methods of Sewage Disposal

The new series of articles on "Little Things that Matter," by Mr. William Harvey, the first of which appeared in our last issue, promises to be one of considerable value to architects. The second article, which we print this week, deals with "Country Methods of Sewage Disposal"—a subject of much interest to architects who specialize in domestic work, and incidentally a subject of topical interest in view of the current development of large estates at considerable distance from London, and even from large country towns. Plots of from a quarter to one acre are being built upon before any sewerage scheme can be provided, or even seriously considered, and drainage becomes an affair for individual house-owners and their architects to determine as best they may. This has always been the case to some extent in country practice, but the new houses that are being designed are very largely inhabited by townsfolk, who find the prospect of living away from the conveniences of a sewerage system somewhat terrifying. The smallness of modern sites, too, magnifies the dangers and intensifies the need for full consideration of country methods of sewage disposal. Mr. Harvey's article supplies just the information that is required on points of sanitation by those who build in country districts.

The Price of Building Materials

The Present and the Future Outlook

By an EXPERT

A QUESTION which is to architects of equal interest to the current negotiations regarding a rise in wages, is that of the cost of building materials.

Before the late war even a mild fluctuation in price was a comparative rarity, and excepting in imported timbers, prices were fairly stable over long periods. The war almost immediately disorganized the methods and centres of production of many of the principal materials used by the building and allied trades.

Added to the disorganization at home due to efforts in producing supplies of war material, was the difficulty of obtaining many of the necessary foreign materials owing to closed frontiers, the result being that by July 1915, although labour rates in the building trade were very little above the July 1914 rate, the cost of materials had advanced an average of 12 per cent. over the prices ruling in the previous year (many materials had, of course, advanced beyond that figure). By the middle of the following year the average increase was about 40 per cent., and in July 1917, about 60 per cent. There is no doubt, however, that had it not been for a certain amount of control and the system of licences established by the Ministry of Munitions, prices would have soared far above these figures. As it was, however, the increases were steadily maintained until, at the armistice, they stood at an average of about 112 per cent. above July 1914.

The years 1919 and 1920 saw a marked increase in commercial and private building as apart from building for national purposes, and by September 1920, the average increase above the pre-war figure had reached 180 per cent., the highest point between 1914 and the present day. From that point, however, the fall has been steady, until at the present time the percentage of increase is between 65 and 70 above 1914.

During the past few years there seems to have been a greater tendency on the part of manufacturers, merchants, and others handling building materials (in common, of course, with other commodities) to take advantage of every opportunity of revising prices, more generally where an increase was concerned, and, once increased there has been a great reluctance to reduce the price again except in circumstances of very strict competition.

The Inter-departmental Committee set up by the Ministry of Health in April, 1923, to consider complaints in respect of the prices of building materials found, for instance, that in all the circumstances of the demand for bricks as against the available supply, the question of a general reduction in their prices might well be taken into account.

As regards other materials, we are, of course, dependent to a great extent upon Spain and other countries for lead ore, and upon Germany and Scandinavia for pig and other iron. Most of our timber for joinery is imported, there being a very limited supply of home-grown timber suitable for joinery purposes.

Although an effort was made during the war to stimulate the use of home-grown timbers for carpentry and similar work, the demand has not been great since the foreign timbers again became available.

On the question of timber, the forthcoming Empire Exhibition will probably assist in opening up new centres from which timbers can be imported in competition with the Scandinavian and Baltic timber, but until these become a thoroughly sound commercial proposition it is impossible to forecast how the prices will compare with other varieties, or how they will affect existing markets. At present British Columbia pine joinery is about level in price with deal joinery.

As regards plastering materials, these are nearly all of home manufacture, and the advent of the American white cements has not, to any great extent, affected the position. Portland cement is likely to be very little affected by the importation of Belgian or other foreign cement, particularly as the home-produced article is almost entirely in the hands of one or two large organizations.

Until 1920 the slate trade was in a very poor condition, owing to the small demand for this material during the preceding four or five years, but the large housing programmes have revived this side of building materials production, with the consequence that the prices of slates have for some time been fairly stable.

Sanitary ware is in fair demand, but prices are maintained at a fairly high level and do not show any indication of a fall. Glass is also fairly stable.

White lead is, of course, another item for which we are dependent to a great extent on foreign supplies, and the same remarks apply also to zinc oxide.

Linseed oil is also an import, but a good deal of substitute oil is crushed at home. Turpentine and its substitutes are imported, and in this case also we are very much at the mercy of the foreign markets.

Rainwater goods, kitchen ranges, and similar light castings are, of course, home products, although foreign markets affect considerably the prices of pig iron, any increase or decrease being reflected in the prices charged by British founders.

On the whole it is difficult to forecast what will be the position as regards building material prices during the present year, particularly as there is so much uncertainty regarding the employees' demands for higher wages in the building trade. Any increase in wages to building trade workers is almost invariably reflected very quickly in the price of materials, and there is no doubt that should the demand for an all-round increase of 2d. per hour be eventually granted, some increases in the prices of materials will take place, even if justified only by the extra cost of handling at merchants' depots, etc.

Neglecting this contingency, however, which would apply more or less evenly over all prices, the tendency would seem to be towards a very slight fall during the year, with the exception, perhaps, of the price of lead, which can rarely be forecast with any certainty for more than a short period.

Cement may rise in price, but this is doubtful, and, in common with the price of bricks and light castings, will be more dependent upon any increase in the cost of coal than upon the rates of labour obtaining in the building trade.

With the possibility of the introduction of new timbers from British colonies and increased felling in Russian forests there may be some downward movement in the price of imported timbers, but it will not be of very great moment.

Linseed oil and turpentine and their substitutes should remain fairly stable until the present boom in the building trade in the United States shows some sign of diminishing. During the past few weeks there has been a very slight hardening of many prices, but lead has fallen again, and the general indication is that the increases are only temporary.

Reviewing the position as a whole, however, it would appear that we cannot expect prices to fall very much below an average of 50 per cent. above those ruling at July 1914.

Messrs. Peter Robinson's New Building in Oxford Street

T. P. and E. S. CLARKSON and H. AUSTEN HALL, Architects

THE new premises for Messrs. Peter Robinson, Ltd., were opened to the public last month. The building occupies the whole of an almost square island site on the north-eastern corner of Oxford Circus. All the firm's departments are now gathered under one roof, and their windows range along Upper Regent Street, around the quadrant of the Circus, along Oxford Street, and up Great Portland Street. The warehouse and staff entrances are in Great Castle Street, at the back.

The building was constructed in two parts (a west and an east section), and the earlier part—that having the elevation to Regent Street, with returns in Oxford Street and Castle Street, designed by Messrs. Henry Tanner and Son—was completed two or three years ago. It is the second portion, the east section (with elevations on Oxford Street, Great Portland Street, and Castle Street) with which we now propose to deal. The whole of this block was designed by Messrs. T. P. and E. S. Clarkson and H. Austen Hall.

The most distinctive feature of the block is undoubtedly the three great portals—two in Oxford Street, one in Great Portland Street. In scale these are magnificent. They rise upwards through two floors, and are almost Oriental—or American — in their height. Through them we can imagine all the commerce of east and west passing to and fro.

Of the arresting treatment of both the Oxford Street and Portland Street façades there can be no question, and the passer-by can hardly fail to be impressed. Up to the level of the second floor the exterior is grey granite, the imposed Order being carried up in Portland stone. The overhanging cornice by which the building is surmounted, almost 80 ft. above the street level, is constructed of reinforced artificial stone. With natural Portland stone, such a wide overhang would doubtless have been impracticable and unsafe. The shop windows on the Oxford Street front are projected slightly from the surface of the wall, a refinement which dispels the illusion that the whole weight of the upper stories is carried by sheets of plate-glass.

The elevation to Great Castle Street is reminiscent of the bare and bold architecture of ancient Babylon, so sheer does it rise from the pavement, so unadorned are its stone masses, so crudely strong is its form.

The interior of the building presents an appearance of light and spaciousness. The island site mainly allowed for the excellent lighting, and in addition to the large windows on either side of the building, two glass domes in the roof reflect light down wells in the centre of the building. This gives the maximum amount of daylight in those parts of each floor which are remote from the windows, and evenly distributes it throughout the showrooms.

The internal decorations have to be sought for, so unobtrusive are they. Indeed, the style selected is almost severe—plain walls with cornices moulded with the Greek key pattern, the former treated with a delicate shade of buff, and the latter with the plain ceilings a pure white. There is a little marblework here and there—a great circle of yellow marbles on the ground floor, figured with the signs of the Zodiac, and to the surrounds of doorways and windows. The stairs are of Bianco del Mare marble, the treads and risers of which produce a remarkable effect.

The woodwork which has been used is either Ancona walnut of beautiful grain (on the upper floors) or Cuban mahogany (on the ground floor). Their richness contrasts admirably with the surroundings.

The floors (of travertine marble—and the floors, walls, and stairs harmonize) are covered with rich deep pile crimson or dove-coloured carpets, and the chairs and settees are to match in the woods employed for shop furnishing.

The lifts and lift lobbies differ in treatment. These are in convenient places of access from all departments in the eastern and western sections of the building. The former are decorated with panels of Wedgwood blue with black borders, and the latter with brilliant geranium-red with black borders, with a polished surface like that of glass. Against the oak woodwork the effect is particularly bright and pleasing. The walls of the lobbies are of second statuary marble, the floors are of travertine, with marble surrounds and inlays, and against these, the bronze metal gates of the six lifts in each lobby prove most effective.

Each department has had allotted to it the maximum amount of room, though it would have been easy to crowd it with big showcases and other obstructions. To maintain the idea of space, and to allow the eye to travel along the vistas which are afforded, showcases on the ground floor are all of the dwarf description, so disposed as not to interfere with the progress of the customer and yet to command the maximum amount of light.

The ground and the first floors are devoted to feminine wear. Although they are divided into various departments, the line of demarcation is scarcely divined, and one can get a view of the whole floor at almost any angle. The third floor is given up to the rest room, and to the counting-house and other offices of the establishment.

The evening gowns department is especially noteworthy for the beauty and refinement of its furniture, in French grey wood, beautifully veneered and inlaid.

On the fourth floor (as yet uncompleted) will be located the restaurants—"the finest restaurants in London attached to a business house," it is claimed. There will be accommodation for 700 people. They will be reached by two separate services of lifts at each end of the building. Facing Regent Street will be a long restaurant, the principal decoration of which will be canvases depicting scenes from Grand Opera, by Mr. John Murray. The whole of the centre of the floor, lighted by a glass dome, will be occupied by the main restaurant. On the same floor will be departments for hairdressing, chiropody, etc., telephones, lavatories, etc., and a children's room.

A special system of ventilation is installed, the machinery being in the lowest basement, about 50 ft. below the street level. Here it is that the fresh air is prepared, to the great benefit both of customers and staff. There are, in fact, three floors below the street level, and the natural ventilation of the ground floor would have interfered considerably with the architectural plan and the arrangement of the vast display windows. The problem of supplying air to what are virtually four floors was, therefore, one of some magnitude.

The fresh air supply is drawn in, by way of two towers on the roof, by two multivane centrifugal fans, steam-driven in winter and operated by a 50 h.p. electric motor in summer, with a suction capacity of a million cubic feet per hour. It passes down a couple of shafts, 9 ft. by 6 ft., situate in the western section, to a room adjoining the boiler house, where it comes under treatment. This is, in

227.—Messrs. Peter Robinson's New Premises, Oxford Street, London

T. P. and E. S. Clarkson and H. Austen Hall, Architects

The two lower stories are carried out in grey granite, the shop fronts, marquises, and grilles within the portals being of bronze. The stories embraced by the Order are of Portland stone.

Current Architecture. 228.—Messrs. Peter Robinson's New Premises, Oxford Street, London : A Detail of one of the Entrance Lobbies

T. P. and E. S. Clarkson and H. Austen Hall, Architects

This is a view of the entrance lobby nearest Oxford Circus. Decoratively treated, it provides good show-case accommodation, and is shut off on either side by a range of swing doors.

VIEWS IN THE SHOWROOMS.

tact, the air laundry. First, the air is passed through a battery of radiators. Then it is sprayed with water and washed clean. Next, it is dried, and finally it is warmed to a temperature of 70 deg. Fahrenheit, by means of steam-heated radiators, and discharged by a pair of powerful multivane centrifugal fans into a system of underground distributing ducts. From these ducts the purified air passes upwards through numerous trunks in the cavities of two walls, running from north to south, and constructed for this purpose in the eastern and western parts of the building. Oblong gratings, 9 ft. above the floor, admit the clean, warm air to the various departments. Behind these gratings are ingeniously contrived diffusing plates—a unique feature not previously adopted in work of this kind—which overcome the tendency of the air to come out in one stream.

Other similar gratings, but placed higher up the walls, will also be observed on all the floors to which this system is applied. These are the exits for the used-up air. They connect with a system of rising metal flues, which lead to the main extraction ducts on the roof, connected with two multivane centrifugal exhaust fans. Something like 2,250,000 cubic feet of air are exhausted every hour, and a complete change of air is effected every twenty minutes. The air-washing plant is guaranteed to take out of the air fully 95 per cent. of the dust and dirt particles which are characteristic of London air. The colour of the water in the washing tanks after a few days' run affords striking evidence of the state of the atmosphere which we are ordinarily content to breathe.

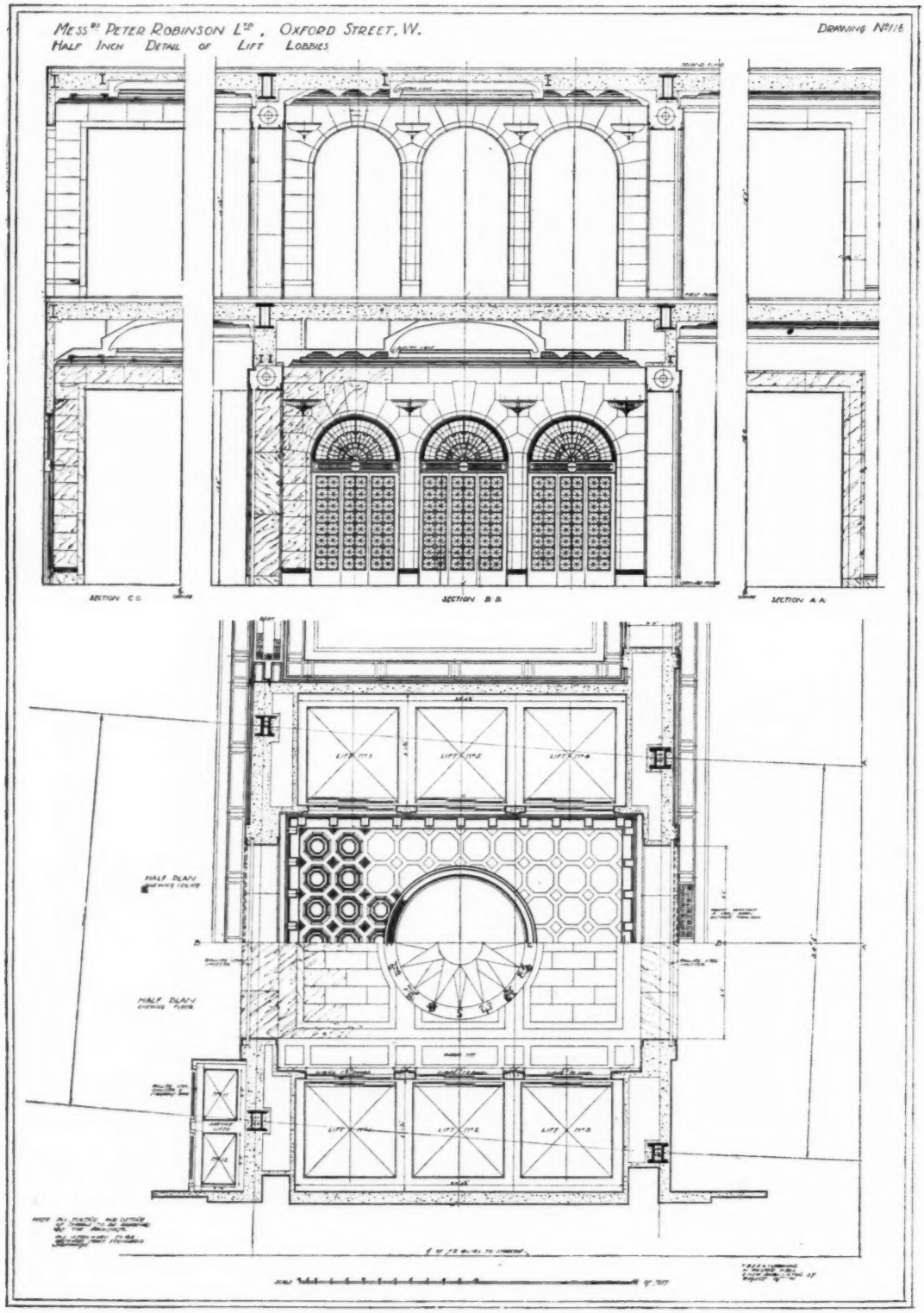
The result of this ingenious method of supplying clean air is noticeable to the shopper in the basement. It may be added that, in connection with the ventilating plant, there is yet another feature of conspicuous interest. The steam for the whole plant is generated by three large multi-tubular steam boilers, which are oil fired, and the oil-fuel plant is considered by experts to be the finest example of oil-firing machinery in the country. Moreover, special care has been taken to guard against the danger of fire, which a less carefully devised system might tend to encourage, by reason of the flues and ducts which compass the building. Wherever a duct passes through a floor, it is fitted with an automatic fireproof damper, which effectively prevents the possibility of its being a contributory agent in case of fire.

Attention has been drawn to the excellent daylight lighting of the premises—partly due to the island site and partly aided by the use of prismatic glass. An efficient scheme has been carried out whereby sufficient light is thrown upon the ground floor to enable customers to distinguish every tint in fabrics displayed.

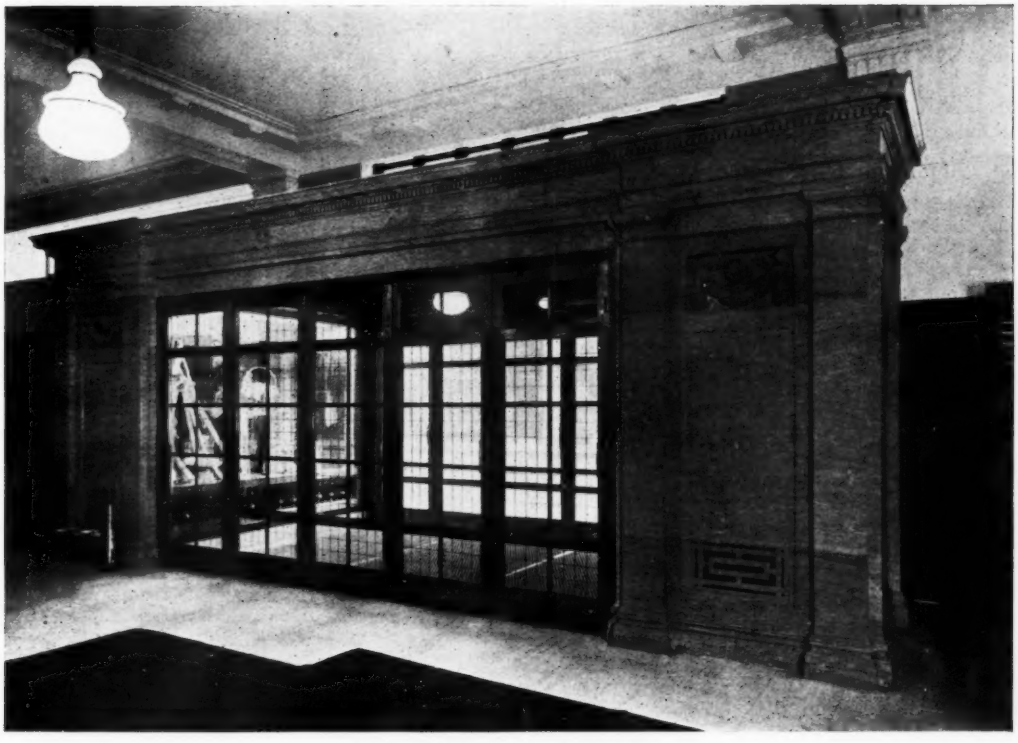
With regard to the artificial lighting, an electrical system on the latest principles has been provided. The lighting installation for the whole building comprises about 3,000 lights, and the power installation represents approximately 500 horse-power. About sixty miles of cable and twelve miles of steel tubing have been used in all, while about ten miles of wire have been employed in connection with fire-alarms, bells, clocks, and the special telephone system.

ENTRANCE TO A STAIRWAY

Special interest attaches to the switch room, which is located in the lower basement. This switch-room serves the whole of the premises. The five switchboards, described above, are of wrought iron, on to which are mounted the main control switches, enclosed in cast-iron cases. These control the various lighting and power circuits throughout the whole range of buildings — roughly 200 circuits in all. Further, there are overload circuit-breakers fitted on the various sections so that in the event of any overload taking place on any of these circuits, they automatically cut themselves out. Connecting with the main switchboards are specially designed distributing linking



MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: A DETAIL OF THE LIFT LOBBIES.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.



ONE OF THE MAIN ENTRANCES.

ONE OF THE LIFT LOBBIES.

MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.

panels from which bare copper conductors, mounted on suitable insulators, are run to the high-tension transformer chambers situated below ground in the sub-basement.

The Steelwork.

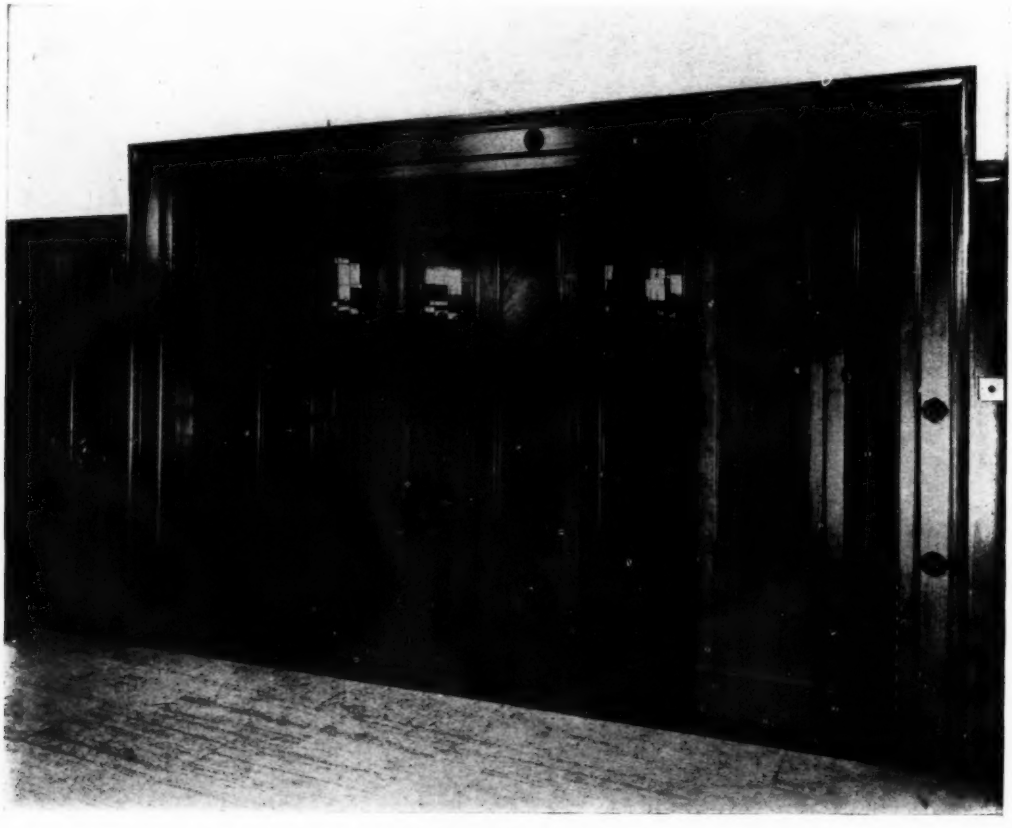
When it is realized that the whole of the massive structure of stone and marble and concrete, with capacity for many thousands of customers and vast stock and equipment, is supported by the steel framework, something of the magnitude of the undertaking will be understood. Moreover, it must be remembered that Peter Robinson's business had to proceed without interruption in the old premises while the new building was being erected. This condition provided a first-class problem which could only be solved by consummate skill on the part of the contractors. Part of the old building was, of course, demolished, to make way for the first portion of the new, but it was impossible to wait for the complete demolition of the old premises before proceeding with the construction. Thus it happened that customers were thronging in the surviving portion of the old building, and the staff were going about their ordinary duties therein for many weeks, while under their very feet, about 40 ft. below ground, men and machines were laying the foundations of the vast new structure which to-day enters into the life of London. To accomplish this was an engineering feat of the first importance. The old building had to be underpinned and supported by girders and baulks of timber, while the very soil on which it rested was cut away, the new foundations put in, and the lower tiers of columns set in place. The building was erected in two portions and, when the framework of the first was complete, a gantry was built on the roof, on which the cranes were erected, for dealing with the metal which went to the making of the second portion. Unlike the first portion, the foundations of the second go only about 37 ft. below the pavement.

Fireproof materials have been employed throughout in the construction, and, as in all modern stores, steel doors and roller partitions have been introduced to isolate any outbreak of fire to that part of the building in which it may occur. Overhead sprinklers are also provided. But despite the prosaic utility of these fittings, they will probably be amongst the least observed of all the appliances with which the premises are equipped.

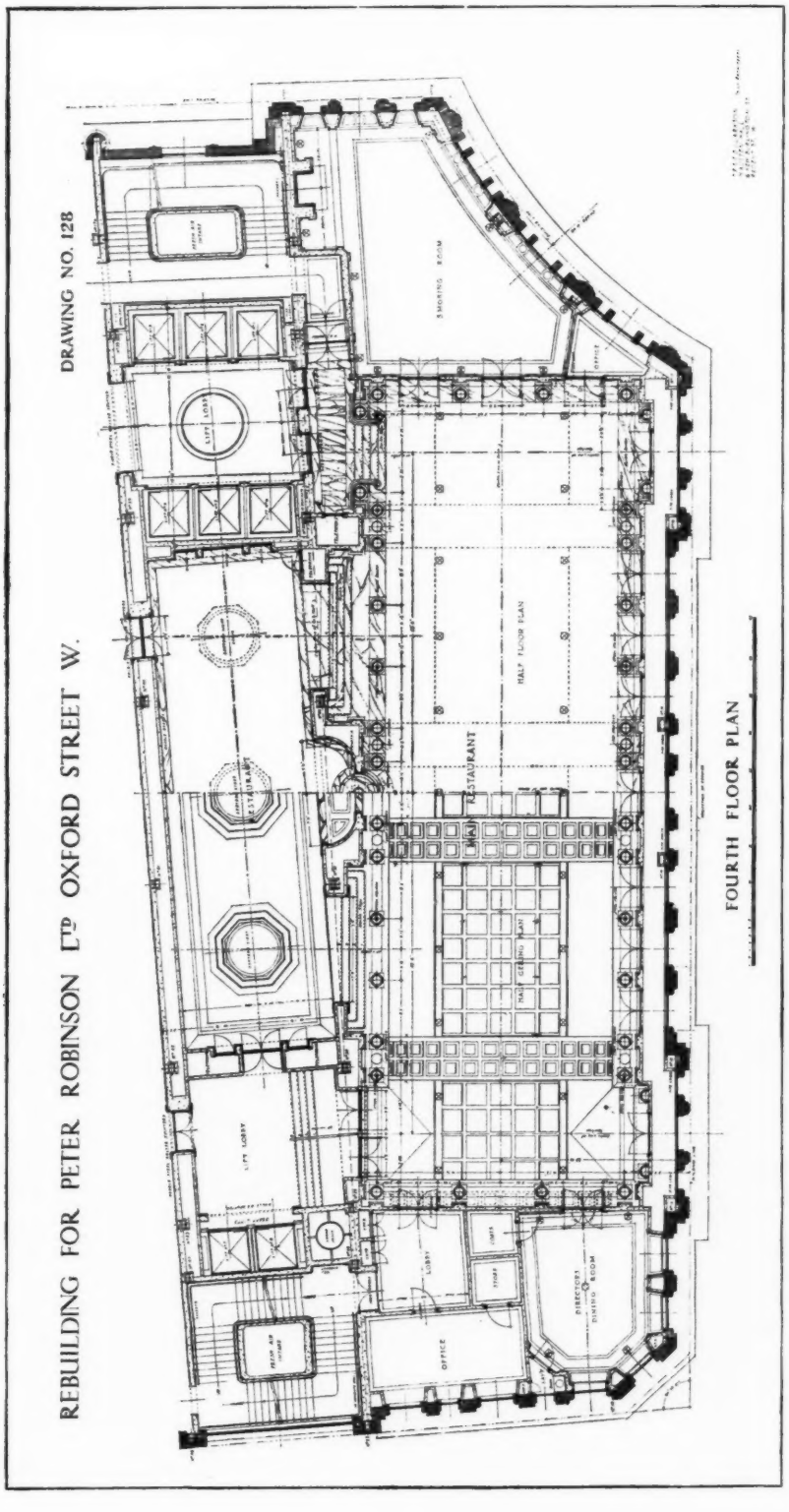
The shopfront treatment is of a novel kind for London. All this bronze work, including that of the show cases, is carried out in "Kalamein," a process of extruding or drawing bronze on hard wood. The castings are fine in detail and colour.

The authority for covering hard wood with bronze is probably much earlier than the known examples of the Pantheon, Temple of Romulus, and Baths of Caracalla. The first bronze doors to be made after the art of bronze casting had died out in Rome were those for Sta. Sophia, Constantinople.

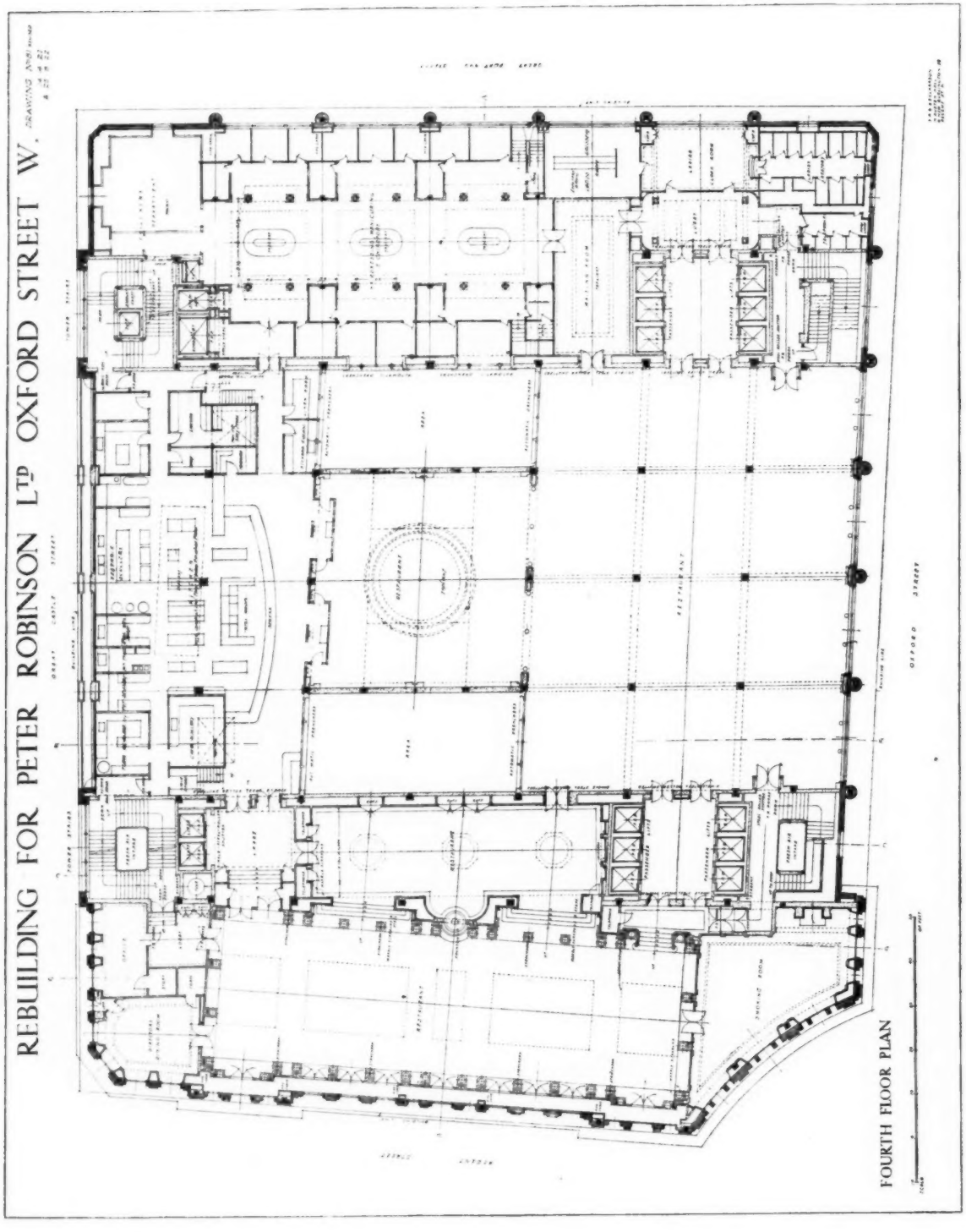
The general contractors for the first portion of the building were Messrs. Higgs and Hill; Messrs. Mowlem & Co., carrying out the second portion. The sub-contractors were: Redpath Brown & Co. (constructional steelwork); Fenning & Co., West Section, and Whitehead and Sons, Ltd., East Section (marble work); Empire Stone Co., Ltd. (artificial stone); Modellers and Plastic Decoration Co. (decorative plasterwork); Saml. Haskins and Bros. (shop fronts); Wm. Mallinson and Sons, Ltd. (decorated wood); George Parnall & Co. (fittings, showcases, counters, and wall panelling); Waring, Withers and Chadwick, West Section, and Duncan Watson & Co., East Section (electrical installation); National Cash Register Co., Ltd. (electric sanction system); British Luxfer Co. (prismatic lighting); J. Jeffreys & Co., Ltd. (ventilation); Jackson Electric Stove Co., Ltd. (electric stoves); James Slater & Co. (Engineers), Ltd. (cooking equipment); Art Metal Equipment Co., Ltd. (steel doors and partitions); National Provincial Plate Glass and General Insurance Co., Ltd. (plate glass insurance); A. Sauvée & Co., Ltd. (despatch chutes); F. A. Norris & Co. (sorting tables); Burroughs Adding Machine Co., Ltd. (adding machines).



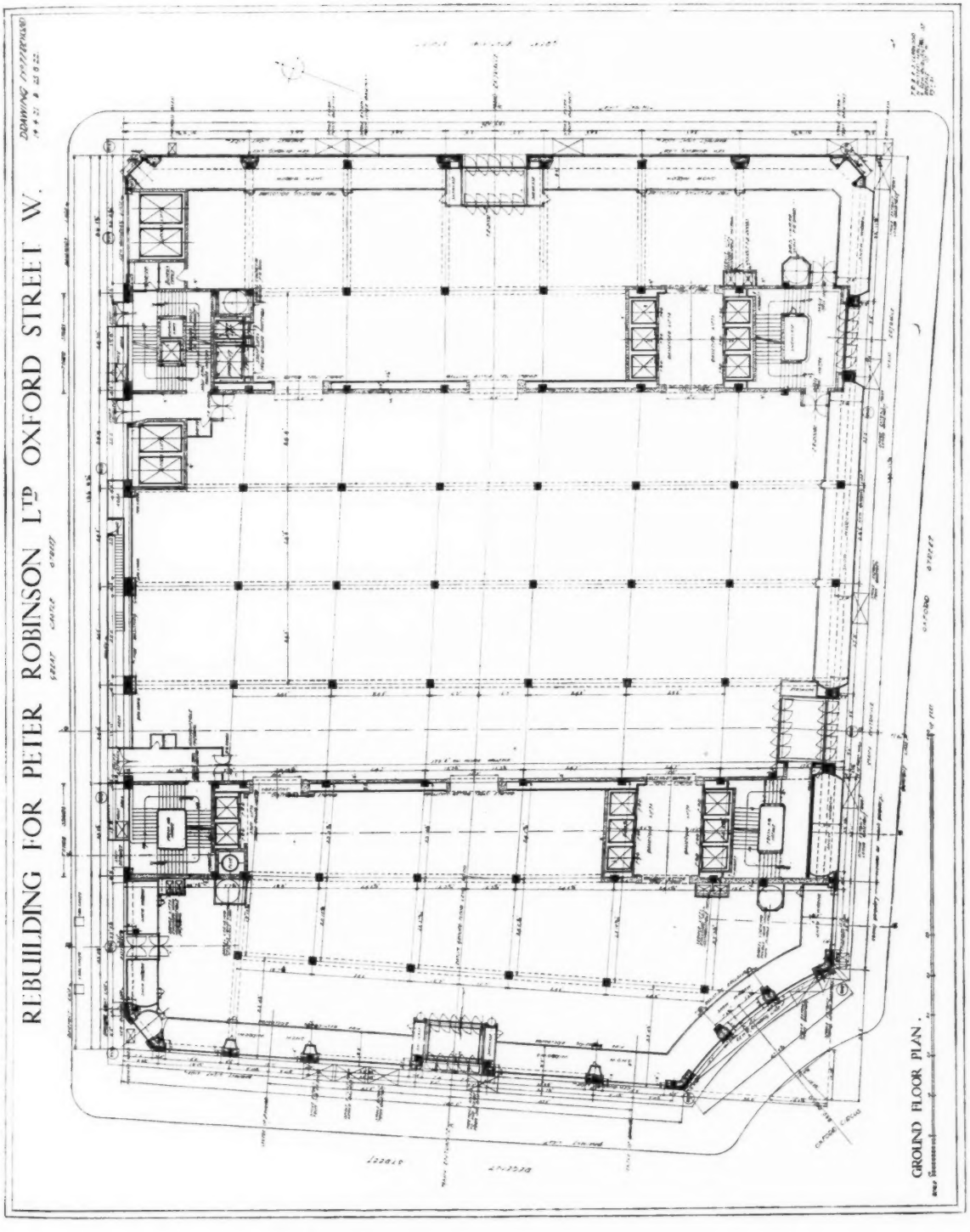
A DETAIL OF THE MAHOGANY PANELLING TO A LIFT ENCLOSURE.



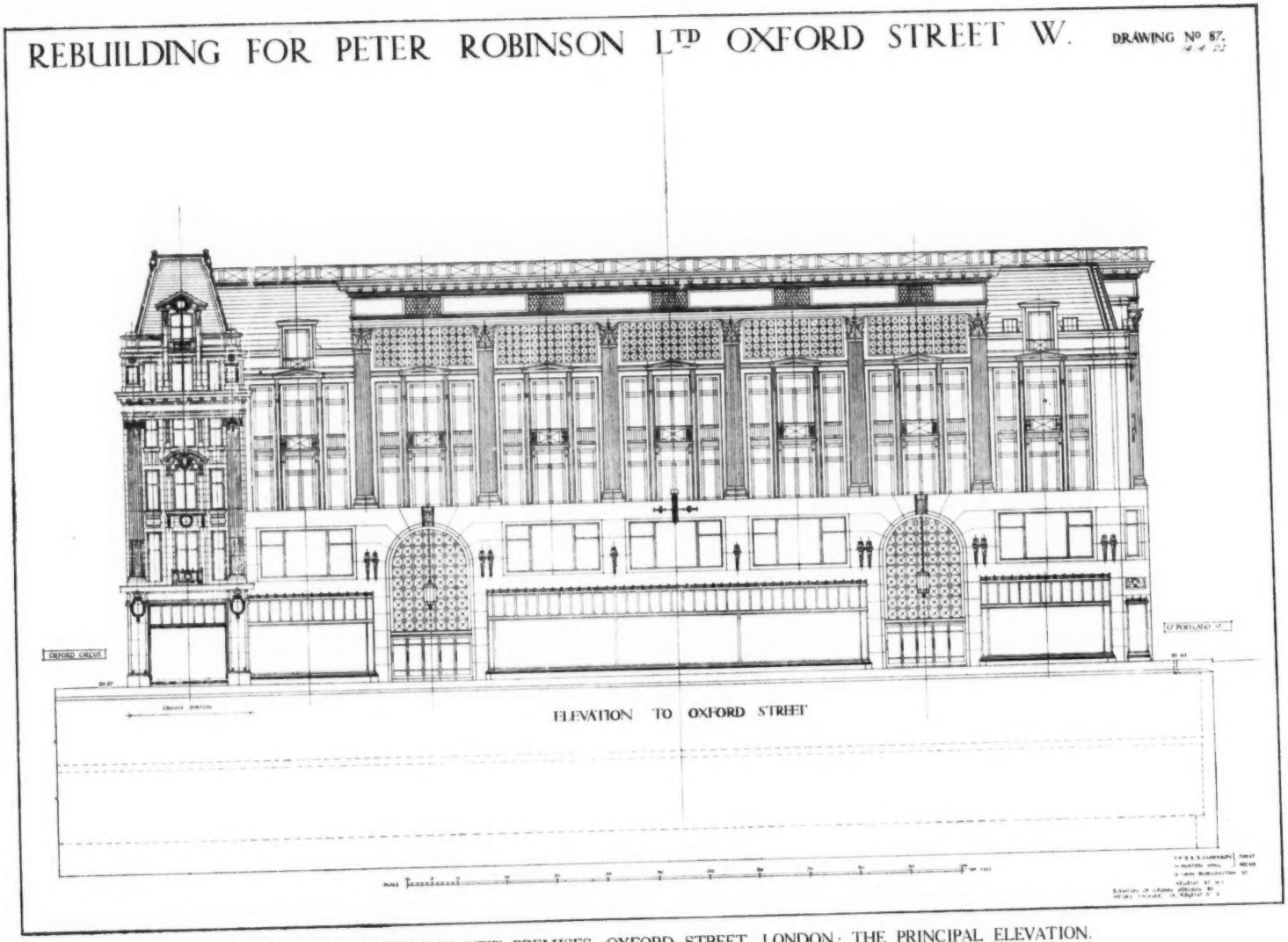
MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: PART OF THE FOURTH FLOOR PLAN.
T. P. AND E. S. CLARKSON AND H AUSTEN HALL, ARCHITECTS.



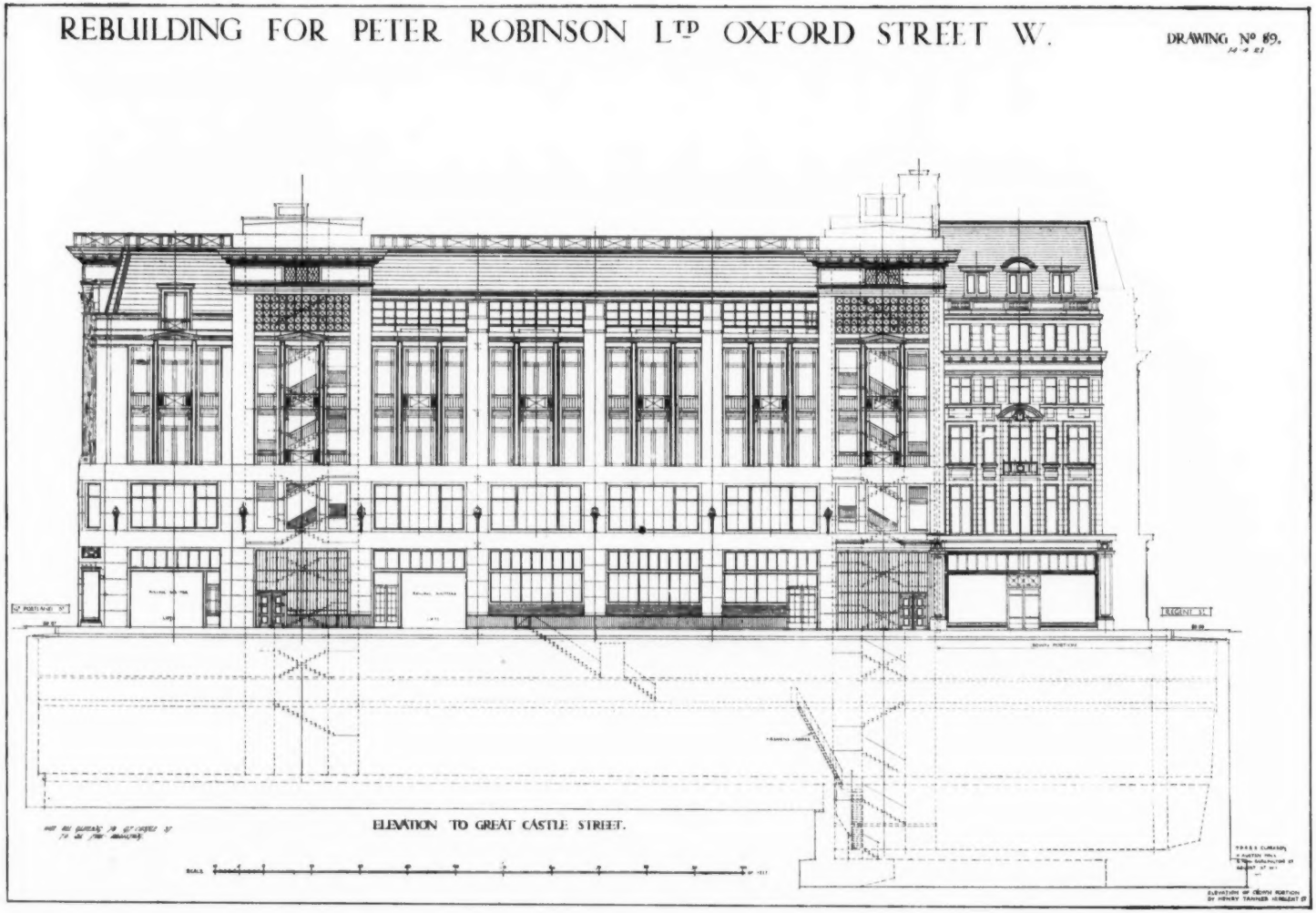
MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: THE FOURTH FLOOR PLAN.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.



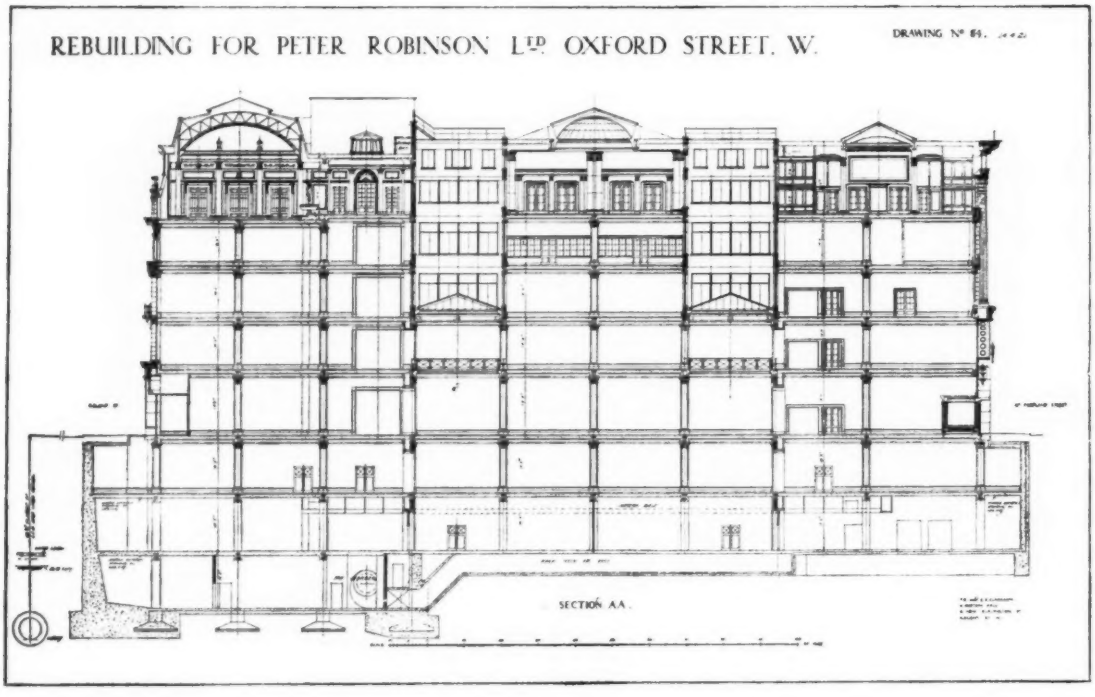
MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: THE GROUND FLOOR PLAN.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.

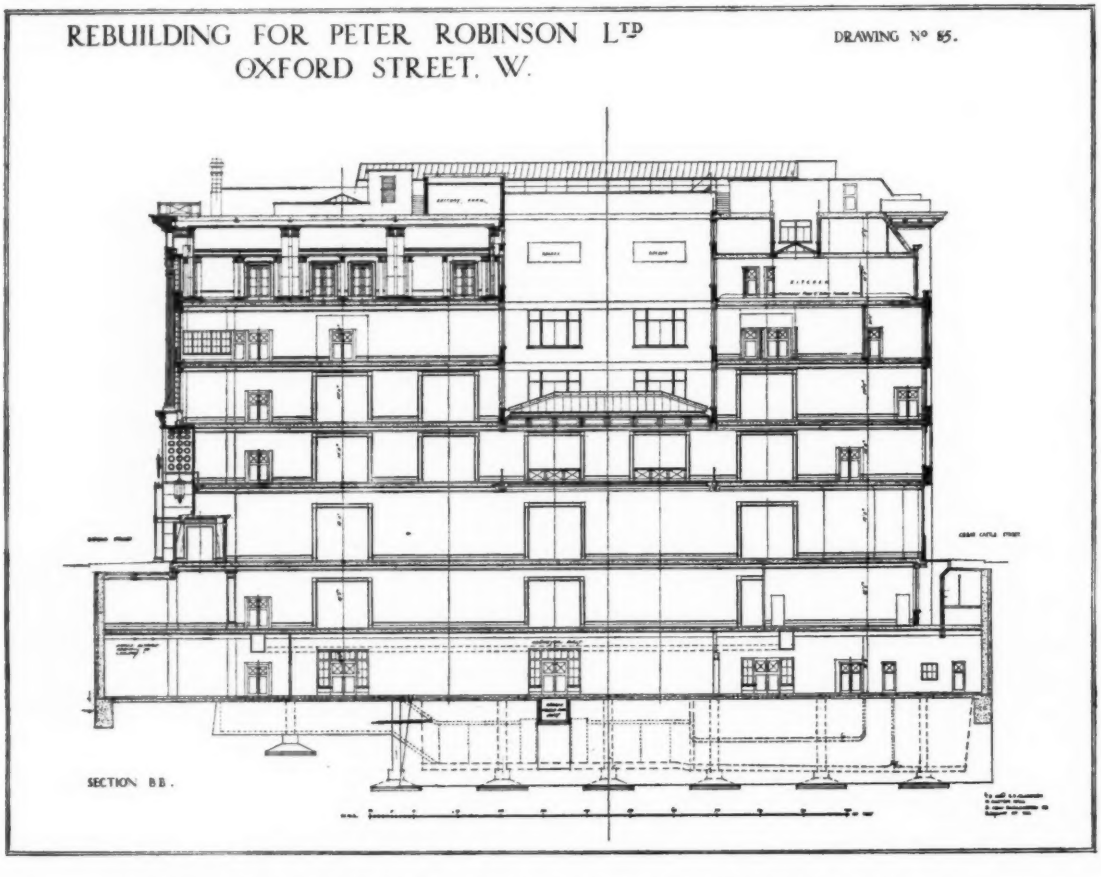


MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: THE PRINCIPAL ELEVATION.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.



MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: THE REAR ELEVATION.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.





MESSRS. PETER ROBINSON'S NEW PREMISES, OXFORD STREET, LONDON: SECTIONS.
T. P. AND E. S. CLARKSON AND H. AUSTEN HALL, ARCHITECTS.

The Principles of Architectural Composition.–9

By HOWARD ROBERTSON, S.A.D.G., Principal A.A. School of Architecture

DISTINCT dangers occur in the application of even the most general principles unless the designer realizes the necessity for judgment and discrimination. We have mentioned in Chapter I the need for definition of form, and have cited the satisfaction resulting from the use of such figures as the square, the circle, etc. These figures, however, are so decisive in the regularity of their shape that they create for the eye an impression of stability extreme enough to arrest the vision at the point where they occur. For this reason they are extremely useful at certain points in the design, but objectionable at others.

In designing the windows of a façade it will rarely be found possible to use square windows as the "running motive" of the fenestration. The square shape is so definite as to destroy the effect of continuity. They will often be found, however, in the top or bottom story, where they provide, by their property of arresting the eye, a "stop" and completion of the scheme of fenestration. (Fig. 99.) The same may be said of circular or bull's-eye windows. (Fig. 102.) Their shape is such as to attract attention and create a pause or "turning point," and they should, therefore, be introduced with discretion. A very subtle case of proportioning of elements occurs in the use of the Elizabethan type window with stone or wood mullions and transomes. (Figs. 100 and 101.) It is rarely found in the best work that the transome is so placed as to produce a square pane above it. (Fig. 103 "a.") On the contrary, the divisions of panes more generally make the transome occur at an intermediate stage (Fig. 103 "b"), sometimes actually at the centre (Fig. 103 "c").

This last example is less pleasant than "b," on account of the equality of the division, but while "a" seems to fulfil all the requirements of good proportion in so far as ratios are concerned, the fact remains that the square upper portion is too definite a shape, and by its assertiveness tends to destroy the harmony of the window by attracting attention to its upper part only. From this examination we reach the conclusion that definition of shape is highly desirable in main masses, but the insistence and emphasis resulting therefrom may become worrying if indulged in in all the details, through the creation of too many centres of interest.

We have left to the last the consideration of proportion in its relation to what is known as "scale."

Mr. Belcher, in his "Essentials in Architecture," describes (good) "scale" as "the proper relation of the several parts to one another and to the whole in point of size," which is practically the definition which we have made of proportion. We would say rather that good scale consisted, in fact, in these relationships of size, but with the addition of the relationship of the parts and the whole to some fixed or assumed standard. What exactly this standard should be is a matter depending on circumstances, but in the normal way we may assume it to be regulated by the human scale, namely, the size of the average human figure and the objects which in size are associated with it. (Fig. 106.) When we say, in a general way, that a building is big or small in scale, we mean that its component parts are, and also visually appear to be, of large or small physical dimensions (as the case may be). The standard by which we judge of these actual dimensions is fixed by an objective or subconscious comparison which we make between the building and some object or objects near it, objects of which we know or assume the actual physical size. (Figs. 104–6, 109.) A building, to be "big" in scale, need not necessarily be a big building, but it will be composed of elements unusually large and bold compared to the human figure or to objects near it, such as other buildings, natural features, etc. (Fig. 108.) The smaller the object with which we compare the building, the greater will appear to be the building's scale. If we imagine a number of Lilliputian men and women standing in front of a normal-sized dwelling, the "scale" of that dwelling will be forced up by comparison. Should, however, the comparison be with a crowd of Brobdingnagians the converse will occur.

A building which is described as having "too much" or "too little" scale will be one the treatment and handling of which makes it appear as respectively larger or smaller than the actual reality. It may well happen, therefore, that a building "big in scale" may have too little scale, or that a building "small in scale" may have too much.

Falsification of scale may occur in the relationship of a building, as an entity, with other buildings or objects, or in the relationship of its several parts to each other and to the whole. (Figs. 109–11.)

If, for example, we imagine the front door of a small Georgian house, which is well designed to have an appropriate relationship with the size of the human beings who use it, we find ourselves in the presence of an element which is in good scale, i.e., of proportions suitable in mass and detail to its setting and function. But if we construct a doorway precisely similar in type, ten times as large, we have created a design which is no longer an appropriate one. We have taken an element which was intended to be small, and we have made it big. Conversely we might have assumed an essentially monumental feature, such as a Roman triumphal arch, and tried with fatal results to reduce it down to make it form an appropriate entrance to a kindergarten. In either case we have falsified scale by making our element of a size other than that which would naturally be assumed. For by custom, and by association, certain standards of sizes for different types of elements become fixed and understood by the eye, and if we distort these standards we produce that discomfort which falsity of scale creates. (Fig. 111.)

Actual physical size alone will not guarantee in a building an appearance of fine scale, and the elements which go to make up a composition cannot be increased in size beyond certain limits without a loss of impressiveness. Instead of unduly inflating our elements, we should rather add to their number, and thus gain by repetition an effect which mere vastness may fail to produce. A classic example nearly always cited, of failure to produce effect through size alone, is afforded by St. Peter's in Rome. Here we have a scheme consisting of comparatively simple elements which have become overdeveloped, instead of a design depending on the introduction of more elements better related to the human scale. There is lacking in the interior of St. Peter's a sufficiency of elements to give a clue to its actual size. All its details are large, and there are no objects of any importance to afford a standard of comparison. The church only begins to "look its size" when crowded with worshippers, for then the human figure gives a clue to the scale, which we at once see is immensely large.

In external work the attainment of good scale is less difficult than is the case with interiors, because in nearly every instance there are surroundings which give the key to actual size. The Arc de Triomphe in Paris derives its effect of scale not only from the beauty and stability of its proportions, but from its setting. It is in excellent relationship with the area of the Place de l'Etoile, and seen from any of the radiating vistas of which it is the climax, its silhouette dominates sufficiently to convey an effect of "bigness." For Paris the Arc de Triomphe is correct in scale, but in London, where the scale of the buildings is smaller, it would have to be set in special surroundings to

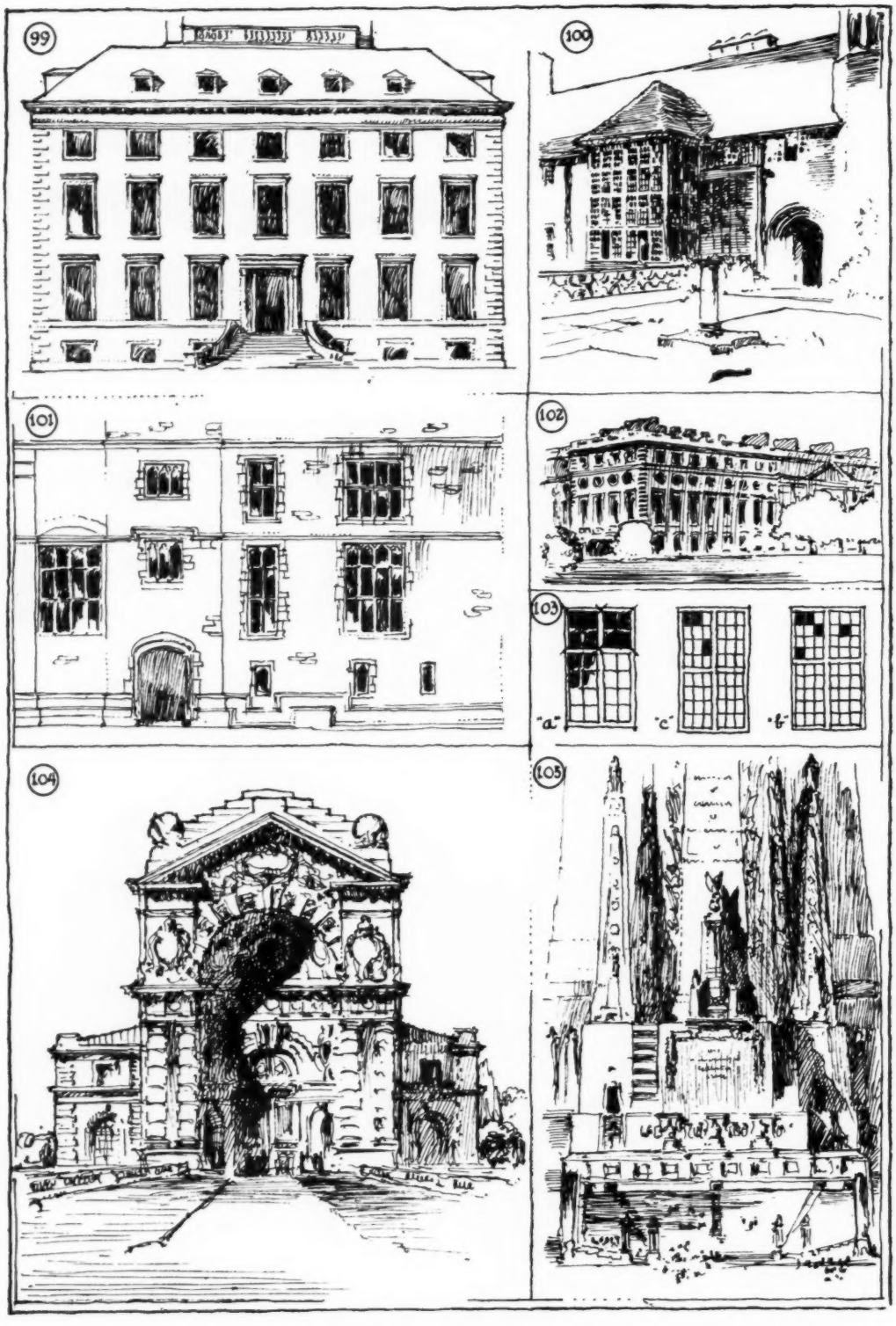


FIG. 99.—Chevening, Kent, by Inigo Jones (from Vitruv. Brit. II). Note how the row of square windows acts as a stop and climax to the scheme of fenestration.

FIG. 100.—Hall window to the "Deanery Garden," a house by Sir Edwin Lutyens. The window division is extremely pleasant, the two lower divisions being five panes in height, the upper divisions each four panes.

FIG. 101.—Rayland Castle, Monmouthshire (after Pugin). Various types of window. Note the placing of transomes which in no case gives a square upper division.

FIG. 102.—At Hampton Court Palace the circular and square upper windows duplicate each other's function from the point of view of composition, the effect produced by this dual "stop" to the fenestration being too emphatic to be altogether successful.

FIG. 103.—Various types of transome division in windows "a," "b," and "c."

FIG. 104.—An effect of overpowering scale is obtained in this French student's design for a "Chateau Entrance" by utilizing elements, large in themselves, to build up an effect of scale through their subordination to elements still greater in size. The wings give scale to the arched doorway, the doorway to the columnar pylons, the pylons to the niche, and the niche to the pediment. The size of the human figure gives a realization of the vast scale of the whole.

FIG. 105.—Base of design for "Monument to the Glory of the American Nation" by Despradelle. Another example of scale obtained by juxtaposition of elements with elements still larger. Note the size of human figures and columns at foot of steps. The columns themselves are large, but appear minute by comparison with other elements.

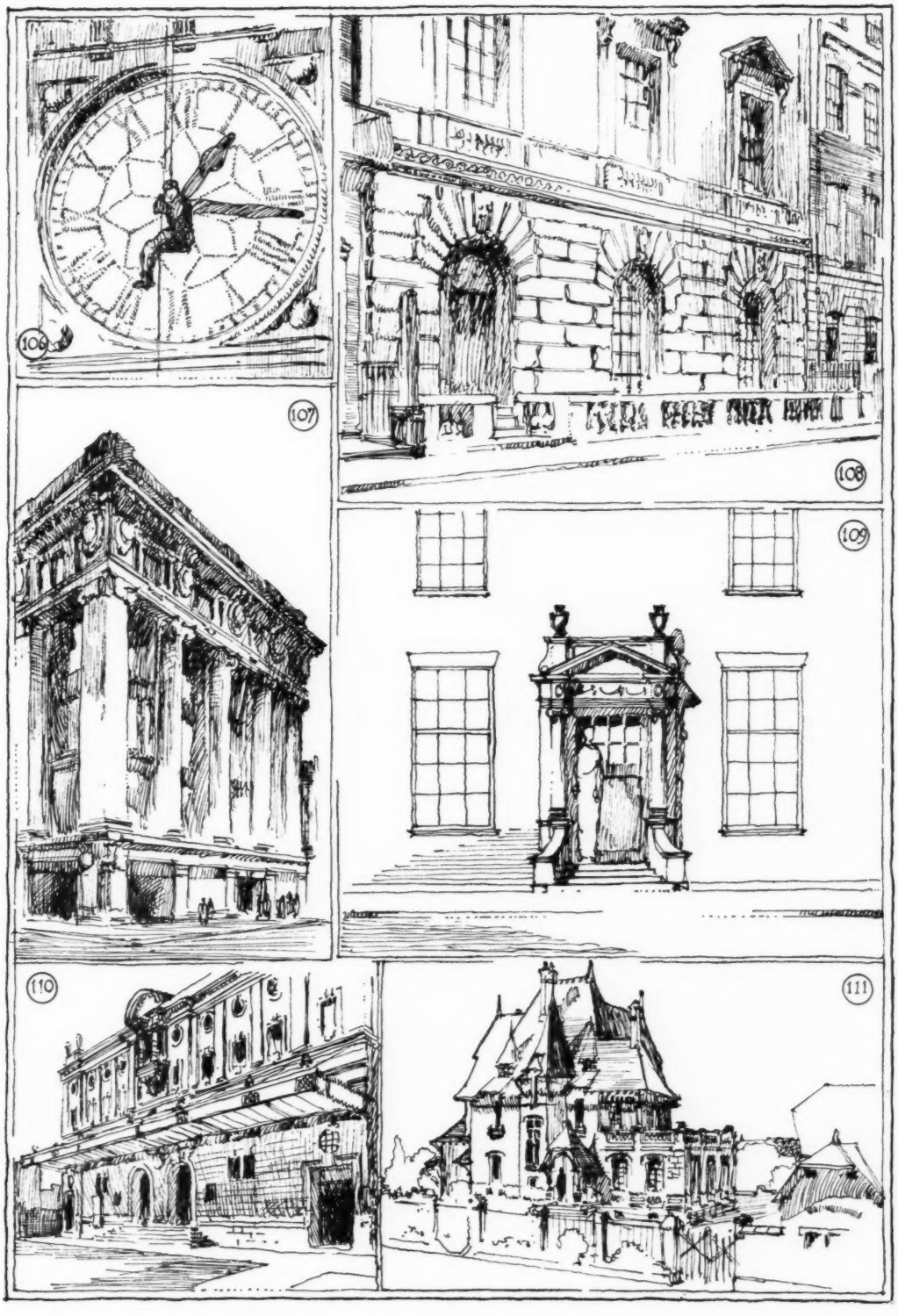


FIG. 106.—A clock dial on a modern building. An instance of the actual size or true scale being conveyed by the accident of the presence of the human figure.

FIG. 107.—The new extension of the Selfridge Store; Graham, Anderson, Probst, and White, and Sir John Burnet and Partners, architects. The ponderous scale of this building is too large for most London streets under present conditions, and the massive superstructure destroys the scale of the shop windows which might reasonably be expected to be an important element in the design.

FIG. 108.—House in Grosvenor Street by Blow and Billerey. Finely handled in itself, the scale of the façade is almost too overpowering for the architecture of Grosvenor Street. Note the difference of scale with the adjoining premises.

FIG. 109.—A doorway to a town house which the size of the human figure and of the adjoining windows reveals as being too small in scale and having too many elements for its actual physical dimensions.

FIG. 110.—A cinema façade in which there is incompatibility between the scale of the two stories. The scale of the upper story appears forced by the number and smallness of its elements, making this story appear larger than it is actually.

FIG. 111.—The introduction of innumerable ambitious elements in a restricted space results in falsity of scale and meanness of effect. This French villa appears to be a large building until the size of the human figure in the porch is observed. The elements are all too small to be treated in so pretentious a manner.

avoid the risk of crushing its neighbours, a risk not always avoided in modern English street architecture, where the influence of large scale American work is beginning to be felt. (Fig. 107.)

The student of architecture must take special precautions to avoid errors in scale. He should refrain from using, in small buildings, motives which depend largely on ample dimensions for their effectiveness. The Orders, for instance, should not be employed, at any rate in their full classic expression, in cases where dimensions are very restricted. To see a miniature colonnade, complete in every classic detail, with a column about 7 ft. high, is to feel that a feature which is essentially one of dignity and stateliness is being forced down to a scale entirely domestic, in which the human figure will loom so large as to become dominant and almost patronizing. One does not feel respect for stunted examples of grand motives.

The motives, details, proportions, and minor effects of design suited to domestic work may not be infinitely enlarged in the hope that a monumental effect will be obtained by their use in a large scale building. For large dimensions we must employ motives ampler and grander in conception, and qualities of grace and picturesqueness will give way to those of gravity and dignity.

Meanness of scale is very characteristic of poor English work. Details of design so slight as to be appropriate only for execution in wood or metal have been carried out in stone. A multitude of tiny and confused features are applied to façades in the hope of producing thereby an effect of richness and classic dignity. On the drawing, where no key to actual size beyond the printed scale is available, the effects may be passable, but in execution we find the actual dimensions to be so small in comparison with the human figure that the features become mean and even ludicrous.

On the other hand, we find small decorative features, such as swags, lions' heads, acroteria, the egg and dart, enlarged to gigantic dimensions and occupying a space far larger than is warranted by their interest as decorative adjuncts. If features are to be executed on a large scale, they must be composed of a reasonable number of elements, so that each element may be kept sufficiently small in scale to avoid competition with more vital and important features which are really essential to the design. Such elements as steps and balustrades have their dimensions determined by practical necessity, and they form a valuable standard of comparison for judging scale. If we find a fully detailed balustrade only 18 in. high, we know at once that it is false in scale. And if all the features of the building to which it belongs are in good relationship with the balustrade, we may then safely assume that the whole design is false and "out of scale."

Practice, observation, and experience will gradually assist in forming a sense of correct scale values. It is extremely useful, however, to cultivate the habit of measuring and noting the actual dimensions of buildings and features which may remain in our minds as fixed standards of comparison. If we design a window 3 ft. 6 in. by 7 ft., and have in our mind's eye the image of a window of these dimensions, we will avoid the danger of producing a design, which, on paper, appears to be 5 ft. by 10 ft., or 1 ft. 6 in. by 3 ft. in size. If we are familiar with the average spacing of window centres in, say, a typical London house, it will assist us in the setting-out of our fenestration when the problem of a town house arises. A knowledge of actual dimensions of various features in executed work designed in good scale forms the surest stepping stone to the attainment of a sure sense of scale in original design.

(*To be continued.*)

[The previous articles in this series appeared in our issues for January 9, 16, and 30; February 13 and 27; March 12 and 26; and April 9.]

More Modernism in Architecture

By P. W. HUBBARD, M.A., A.R.I.B.A.

MR. HOWARD ROBERTSON, in his most interesting paper on "Modernism in Architecture," is grappling with a subject which at the present time has an especial significance for our profession. I say "at the present time," because the aftermath of war has let loose a series of conditions which, perhaps, warrants a departure from accepted modes of procedure, and compels us to employ novel treatments in the handling of modern problems.

Mr. Robertson's paper has done much to clarify the various points under discussion, and has ably presented his three alternatives in approaching the question of design. In the first case, he says that buildings may receive expression from an anterior period which portray construction and conditions no longer persisting at the present time. Secondly, "the designer may modify and adapt a borrowed expression in order to meet new conditions," and the third alternative "is to evolve functional building . . . and express it in architectural forms which have the abstract qualities of beauty."

It is certainly this latter which constitutes the modern problem, and which appears to me to be the keynote of Professor Richardson's papers on this subject, and the interpretation of his phrase that "form is the true manifestation of structure."

We are warned not to be too critical of experimental effort in the handling of pure form, and to encourage the study of essentials in design and the adoption of a "plastic idea." All of which is excellent hearing. But leaving for a moment these high-sounding sentiments, let us see whither we are led, if we adopt too unreservedly this third alternative. I am not denying that masterpieces of art may be achieved without any apparent reference to scholasticism or academic culture, but to attempt a mode of design which consciously omits anything that might suggest tradition will lead us to a stylism as futile, as unnatural, and as affected as any blind transcription of the past.

Throughout history we have found that styles are not called into existence by fortuitous invention, nor are they dictated by caprice. We do know, however, that they were evolved; the same features were used again and again, but modified and adapted. But to find origins we must delve deeply indeed.

Changes that have periodically occurred have been due to various impulses, such as revivals. If, now, this post-war period be ripe for change, we must look for some alteration in present-day thought and outlook, and, in fact, perceive how the necessary inspiration will influence architectural design.

As I have submitted elsewhere, the impulse which reaches us to-day may be loosely called "reconstruction." Town planning and housing schemes, together with a possible industrial expansion, will chiefly claim our attention. These and the employment of new materials will be the most influential factors with which we shall have to reckon. In this latter connection, however, we must bear in mind that though the use of a new material may cause us to give a truthful expression of its character, yet the arrangements of architectural composition are judged on an æsthetic rather than a structural basis.

To take a very simple example, let us suppose it be required to build a cottage or small house which does not have to fall in with any particular style, and is not influenced by surrounding buildings.

The architect, we will imagine, wishes his design to embody the following points, namely, order, repose, and simplicity. He then arranges his planning so that elevations take on a certain regularity or a more or less formal appearance. His openings are carefully placed in relation to wall surface, and special attention is paid to proportion.

Present-day influences and requirements will manifest themselves in the plan, where liberty of arrangement is, of course, a necessity. The section will exemplify modern construction, but that which we actually see is its three-dimensional appearance, which will not essentially differ from prototypes.

In fact, the architect without conscious intention will find that he has probably designed almost Georgian elevations, or those which reflect the spirit of the eighteenth century, because good taste and fine composition do not alter with changing fashion.

It is on this account that I would submit that in most cases we should do well to follow Mr. Robertson's second alternative, namely, "modify and adapt . . . in order to meet new conditions."

The Police and Fire Brigade Headquarters Competition, Bristol

A Criticism of the Designs

THIS important competition, involving an expenditure of £120,000, met with a poor response from the architectural profession, for twenty-eight designs only were submitted. Two reasons account possibly for the small number of schemes sent in: firstly, certain clauses in the conditions somewhat cramped the imagination of competitors; and, secondly, the site, together with the accommodation asked for, made the problem an exceedingly difficult one. Furthermore, it is a debatable point whether a detailed plan, such as that supplied to each competitor, is not of more hindrance than help. Certain it is that a number of competitors were very much tied by the official scheme, and thought that little beyond elevations was required. One does not hesitate to agree with the assessors' award. In this particular instance there could have been little difficulty (after ascertaining that the conditions had been fulfilled) in selecting No. 9 for the first premium. Messrs. Ivor Jones and Percy Thomas have produced "a design of exceptional merit. Not only is it a scholarly and refined work, it has also a genuine and legitimate originality based upon a sound knowledge of architecture. The elevation expresses in a remarkable degree the purpose of the building."*

If one may venture an adverse criticism, it is that the authors of the winning scheme have pushed severity a little too far. The tendency of justice to-day is not on a parallel with that which existed when old Newgate Prison came into existence, and to-day's problem of criminal reformation is dealt with upon totally different lines. In the Nelson Street façade the authors have taken full advantage of the chance presented by the parade-room (which extends the entire length of the front) to top light this apartment, an æsthetic point of great value, grasped by a surprisingly small number of competitors. The widely-spaced fenestration to the ground-floor rooms in this narrow street is likely to result in inadequate lighting of the various offices and the central corridor.

In the planning, a large and unobstructed practice and exercise yard is obtained, the hose tower being well out of the way, adjoining the existing police courts. In common with one or two other competitors, the winners make the approach to the inspectors' and sergeants' quarters by means of external balconies. These permit of living-rooms and bedrooms being planned on either side of a central passage, economizing the area to such an extent that an extra floor is dispensed with. A telling difference in fenestration is noticeable in comparing the Silver Street front in this scheme with that of No. 5 (the second premiated), by Messrs. Ashley and Winton Newman. Each block has a frontage of 73 ft., and both contain similar accommodation; in the former instance there are but ten windows, whilst in the latter twenty-five are provided. Certainly the solids in the one and the voids in the other are excessive.

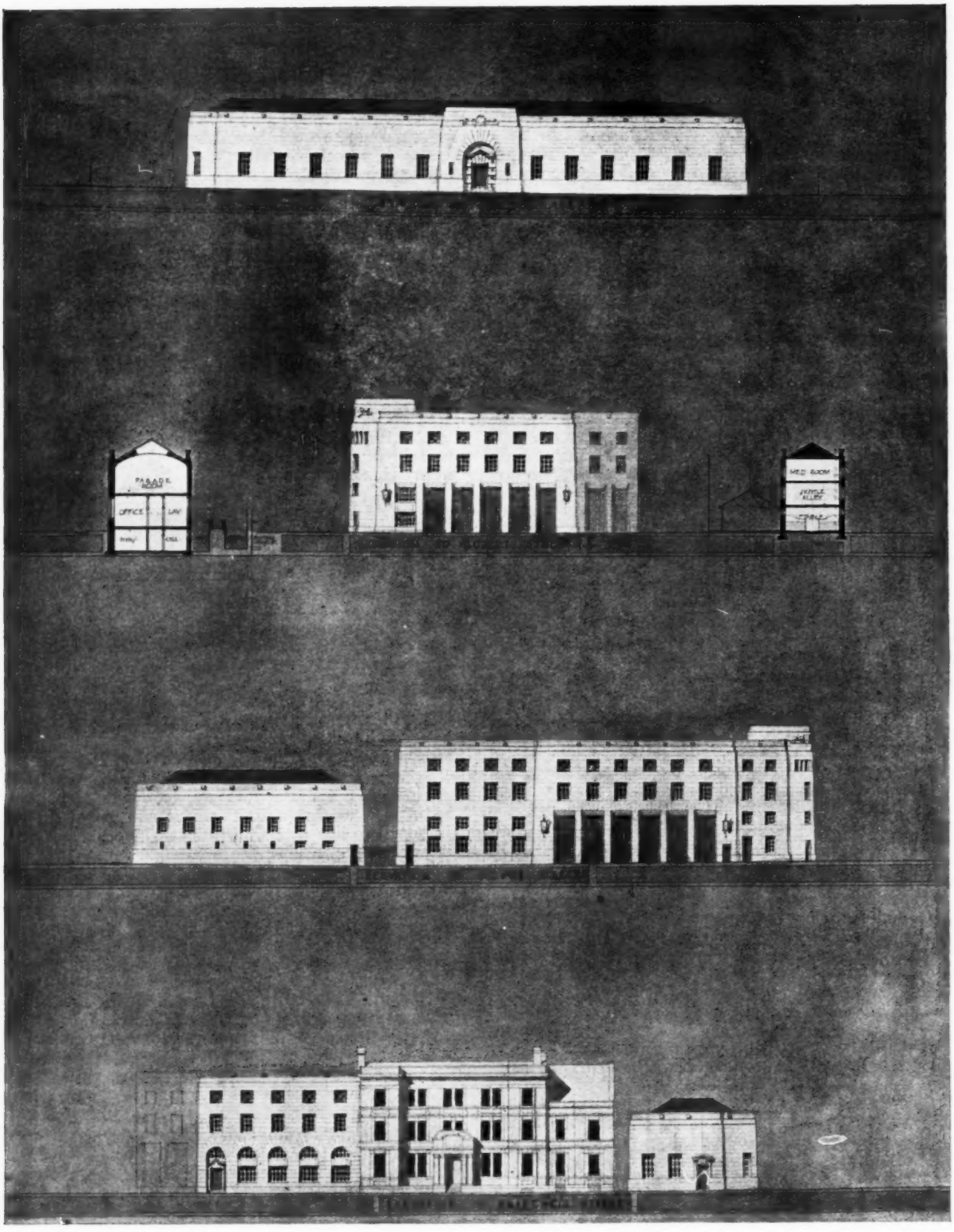
In the third premiated design (No. 21), Mr. E. Vincent Harris has produced a bold and fascinating scheme. The engine-house, giving direct access to Silver Street, Rupert Street, and Bridewell, is admirable; but, unfortunately, this feature has been obtained at the cost of sacrificing the size of the yard. Although the treatment of the intersection of the streets is perhaps over-emphasized, both in plan and elevation, the clever introduction of staircases between each return and the termination of the block by staircase towers is very commendable. The restrained front to Nelson Street was evidently inspired by old Newgate. Very few of the competitors endeavoured to bring their designs into harmony with the existing police courts; they foresaw that one day the present buildings must conform to and complete the larger scheme.

The fourth premium has been divided equally between No. 10, Messrs. Smith and Hendy, and No. 4, Mr. Harold Todd (Bristol). Messrs. Smith and Hendy endeavoured to fall more into line with the Bridewell building, but after a bay or two they realized the impossibility of the task, and their design soon assumes the lines adopted by the majority. In no sense do the elevations express the purpose of the building, and it is difficult to see the necessity of splitting the premium. Mr. Todd's plans follow to a great extent the general arrangement laid down in the official plan, but in recasting the whole he has produced an excellent scheme, with direct access to the various departments, and with well-lighted corridors and areas. Had he appreciated the fact that the parade-room did not demand side lighting, his façade to Nelson Street would have gained immensely. Of the twenty-three remaining sets one notices the many instances in which the elevations are purely of the commercial type, and how the fitness and purpose of the problem have been lost sight of.

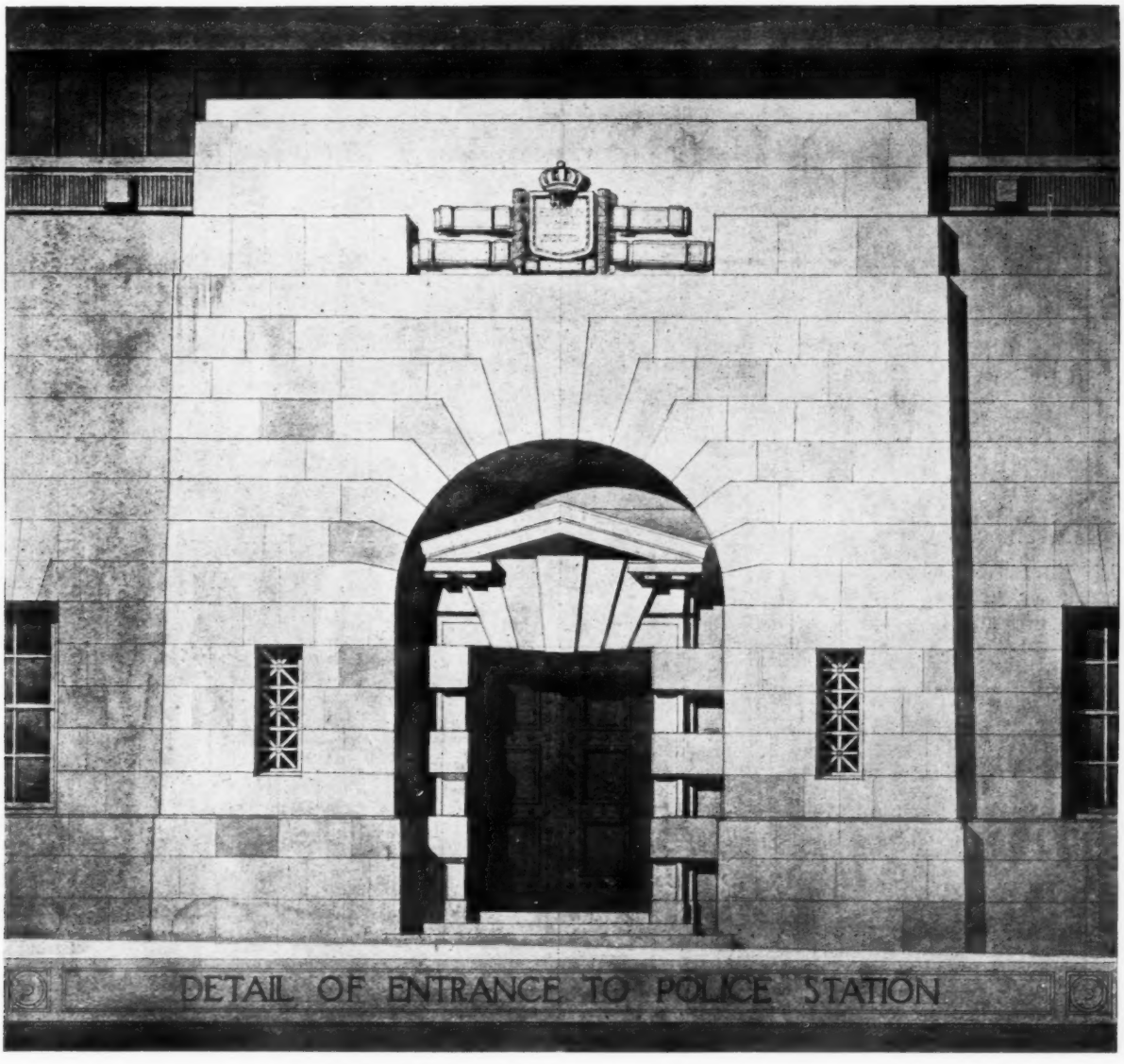
There are still those to whom an angle demands a domical termination, and others to whom the all-important is a detail of a fitting or a complete heating and lighting installation; one who in his zeal to crowd in an extra half-inch detail mounts it sideways! How absolutely essential it is that a detailed drawing should be submitted is apparent in one case in particular, where the one-sixteenth scale indicates an excellent composition. In the absence of a larger scale one automatically supplies the detail; but the ½ in. submitted lets the whole scheme down and indicates that the author is not familiar with academic proportions.

C. F. W. DENING.

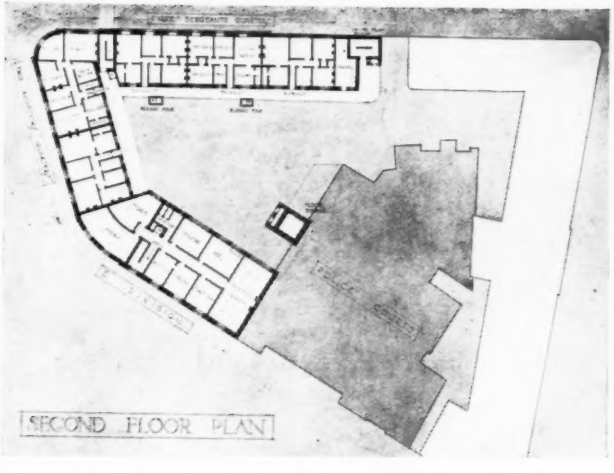
* Vide the report of the Assessors—Messrs. W. Curtis Green, A.R.A., and George Oatley, F.R.I.B.A.

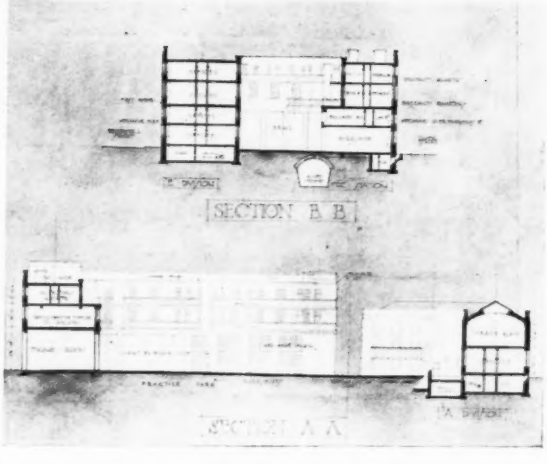


BRISTOL POLICE AND FIRE STATION COMPETITION: ELEVATIONS AND SECTIONS.
IVOR JONES AND PERCY THOMAS, FF.R.I.B.A., ARCHITECTS.

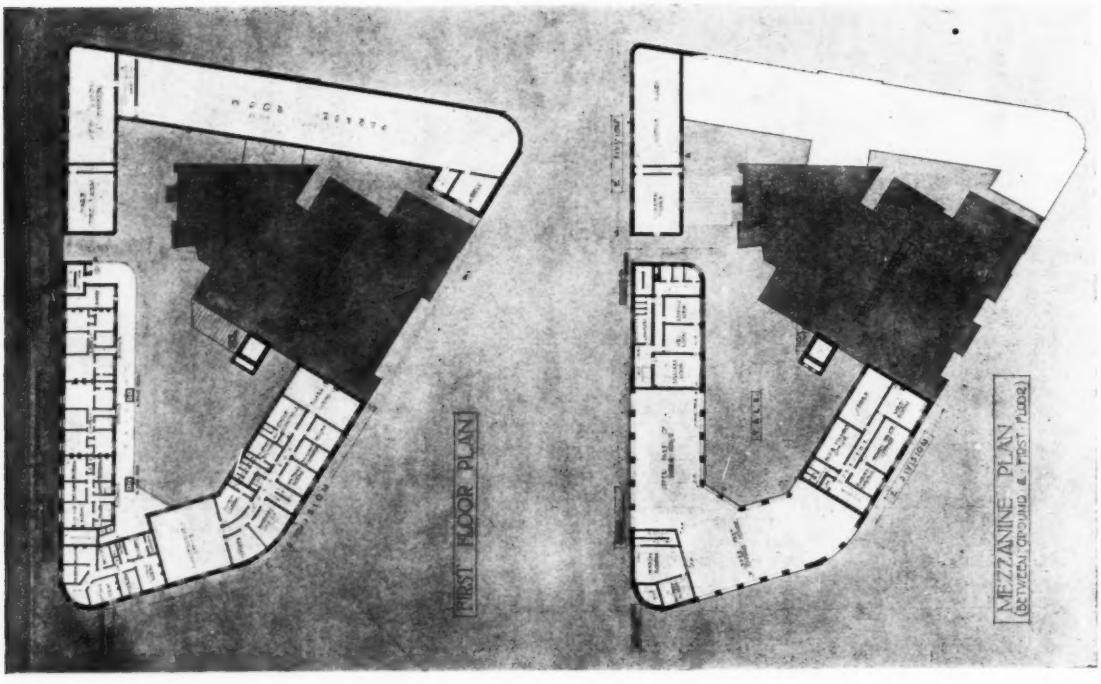


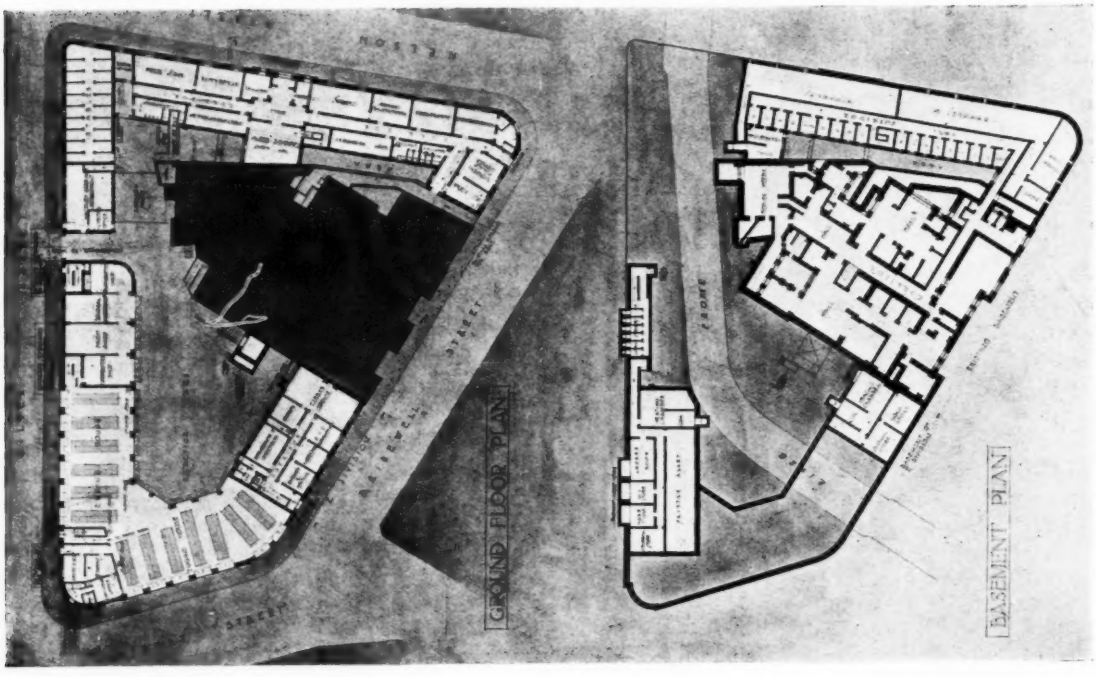
DETAIL OF ENTRANCE TO POLICE STATION





BRISTOL POLICE AND FIRE STATION COMPETITION. IVOR JONES AND PERCY THOMAS, FF.R.I.B.A., ARCHITECTS.



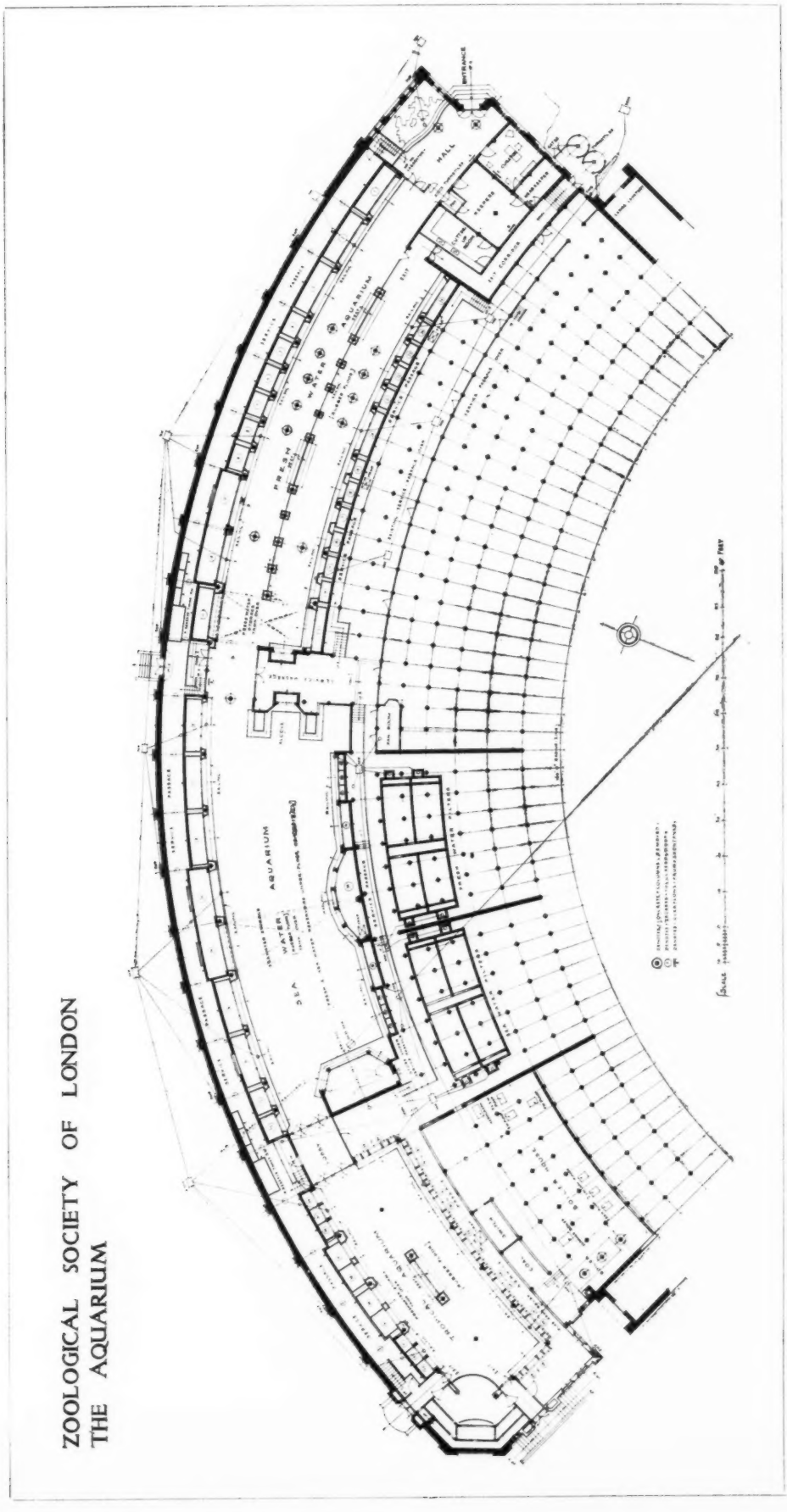


BRISTOL POLICE AND FIRE STATION COMPETITION: PLANS. IVOR JONES AND PERCY THOMAS, FF.R.I.B.A., ARCHITECTS.

Current Architecture. 229.—The Entrance to the New Aquarium at the Zoo

J. J. Joass, F.R.I.B.A., Architect

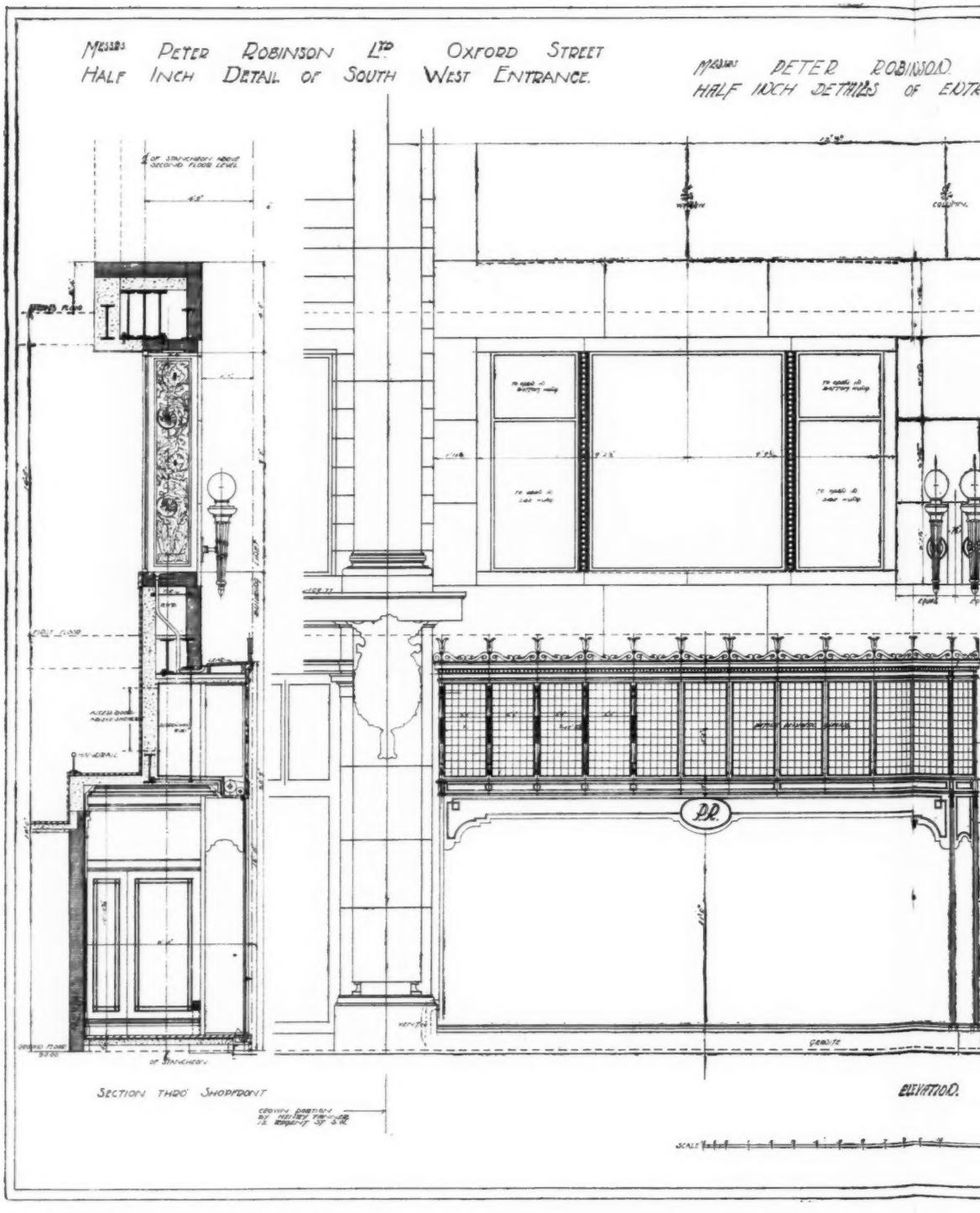
The new Aquarium at the Zoo has been built beneath the mountains of the Mappin Terraces, the high level storage tanks and other practical details being concealed beneath the peaks. Some further particulars are given on page 681.



A PLAN OF THE NEW AQUARIUM AT THE ZOO. J. J. JOASS, F.R.I.B.A., ARCHITECT.

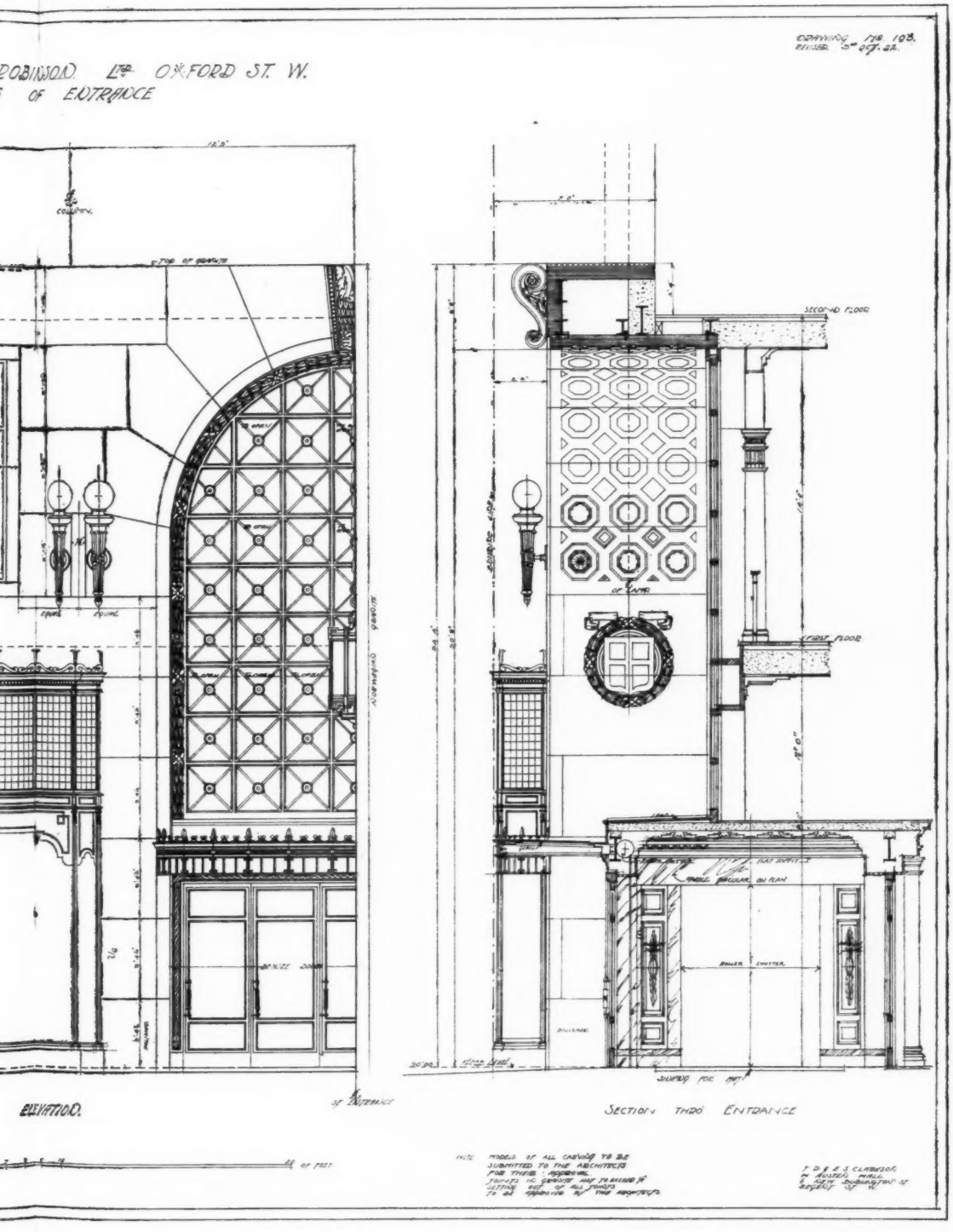
Architects' Working Drawings. 75.—New Premises for Messr
Detail of Shop Front a

T. P. and E. S. Clarkson and H. A



The shopfront treatment of Peter Robinson's embraces the use of great entrance arches running through two floors, i conjunct beyond the wall surface, and the illusion of great weight being carried by plate glass is thus avoided. The show-cases and gri facings of the first two floors and Portland

for Messrs. Peter Robinson, Ltd., Oxford Street, London :
o Front and Entrance
n and H. Austen Hall, Architects



ors, in conjunction with a flat architrave treatment of the window openings. The shop windows to Oxford Street project ow-cases and grilles, marquises, and doors to the entrances are carried out in bronze. Grey granite is used for the exterior s and Portland stone for those above.

The Building Exhibition

The Opening Ceremony

THE exhibition was opened by the Minister of Health, Mr. J. Alfred Gotch, P.R.I.B.A., presiding over the gathering in the Pillar Hall.

The Right Hon. J. Wheatley, in performing the opening ceremony, said the nation needed working-class houses in large numbers, and needed them at a low price. "Politicians do not produce houses. I want manufacturers to increase the number of people employed in the industry, and the capital invested in it, so that, when we are getting additional houses, we may have an output of material which will enable us to continue at the same time ordinary building work. Personally I do not see why a nation which wants houses should not be able to organize its industry in such a way that, instead of paying people for registering at the labour exchanges, they should have wages for delivering the goods. I would appeal also to manufacturers, and not to them alone, to consider how the methods of production can be improved, so as to ensure that the increased demand for building materials will not result in any increase in price. That is very essential, for there is a limit to the amount of rent which the working classes can pay, and there is a limit to the extent to which the taxpayers will contribute subsidies. There should be not merely expressions of goodwill, but co-operation in industry and improvements of methods of production, so that, over a given output on skill and capital, we shall be able to get an ever-increasing result. To all the people engaged in the industry I appeal to take a pride in their work, and, so far as they can do so, ensure that we are not going to have for the children who will be the citizens of this country twenty or thirty years from now houses unworthy of our race. I want the operatives to see that the houses they build are good houses; that they are the houses in which we may expect good and great men and women to grow. I want everyone connected with the industry to realize that we are dealing here with something that is fundamental to the successful future of the country of which we are all citizens, and of which we are all proud."

Major J. Petrie proposed a vote of thanks to Mr. Wheatley, and Mr. H. J. C. Johnston, President of the Institute of Clayworkers, seconded the motion.

Mr. H. Matthews, President of the National Federation of Building Trades Employers, proposed a vote of thanks to the chairman.

"Why I go to the Exhibition"

Some Representative Views

In reply to a questionnaire on the above subject which we addressed to the Presidents of the Allied Societies, we have received a number of replies, of which a selection is given below. The answers, it will be seen, are unanimous in stressing the practical value of the exhibition.

Mr. Edward T. Boardman, F.R.I.B.A.[1] (President, Norfolk and Norwich Association of Architects)

I think this is a very necessary exhibition to hold, and regret that I have not the time to spare to visit it more often.

Mr. Francis Jones, F.R.I.B.A. (President, Manchester Society of Architects)

The fact remains that one does go, in spite of feeling extremely exhausted after spending any length of time there, and I have come to the conclusion that the reason is, one sees various materials shown to the best advantage, which is more suggestive than seeing a sample in one's own office, or an advertisement in a building paper. For this reason, I believe, the exhibition is extremely useful to architects, builders, and the general public.

Mr. Sidney F. Harris, F.R.I.B.A. (President, Northamptonshire Association of Architects)

Why I go to the Building Exhibition? Because it is a convenient and fairly easy way of getting in touch with the new materials, construction, and devices connected with building, and it presents a good opportunity of judging by comparison the respective merits of the exhibits; moreover, it affords facilities for discussion with, and obtaining information from, the representatives of firms whose productions one may be meditating the use of or be interested in.

Mr. W. T. Jones, F.R.I.B.A. (President, Northern Architectural Association)

To learn.

Mr. Eric Morley, F.R.I.B.A. (President, Leeds and West Yorkshire Architectural Society)

Having tramped many weary miles at Olympia and elsewhere in search of building exhibits which embody really good and modern ideas, I am now of the opinion that only about 10 per cent. of the stands at a building trade exhibition are of any new or outstanding interest to the architectural profession. At the same time, although this percentage is so small, it is, from our point of view, the really vital part of the exhibition, and it is only by visiting such places and forming there our own opinions that we architects, especially those of us who practise in the provinces, can hope either to keep fully up to date or to be able to place before our clients the fullest possible information regarding their so many and so varied requirements.

Mr. J. Arthur Smith, F.R.I.B.A. (Vice-President, Hampshire and Isle of Wight Association of Architects)

One of the many advantages of the Building Exhibition is the opportunity afforded architects to become acquainted with, and to inspect, exhibits of the various improvements in materials and manufactures, which are developed from time to time by the trades. Many of these improvements are introduced to us in our offices by representatives of the firms producing them, but the Building Exhibition affords the additional advantage of the illustration of their application in building.

Mr. Stephen Wilkinson, A.F.C., F.R.I.B.A. (President, York and East Yorkshire Architectural Society)

Because it is by the aid of such exhibitions that we architects are able properly to visualize the contents and value of the various manufacturers' catalogues—by seeing their wares in actual reality; an exhibition being of far greater value in this respect than any number of the most expensive and elaborately got-up catalogues. Also by the collective exhibition of the latest materials and methods of construction the architect is able to satisfy himself as to their respective worth, and introduce the same into his buildings without involving long and tedious journeys for the purpose of inspection.

An Architect at the Building Exhibition

TO derive full benefit from a visit to any exhibition, it is highly necessary that the visitor should have from the start a clear and definite idea of what he wants to find—a merely roving inspection may result in the discovery of chance points of interest, but more likely in a general hazy impression that lots of things of great utility have been seen.

The Building Exhibition may be of real benefit to architects as providing an *entrepot* where they may see how far their needs and desires for good material—both structural and decorative—are in the way of being met; what improvements in the aim, contrivance, and manufacture of domestic and other appliances are obtainable; and which firms supplying necessary materials and appliances present their specialities in such a way as to lead to the supposition that a responsiveness to current tendencies and a general businesslike grasp may be expected of them. An architect is naturally predisposed to favour an exhibitor who shows his goods on a well-designed stand, but as stand-design is being dealt with by another writer in connection with this exhibition it will merely be touched on in these notes.

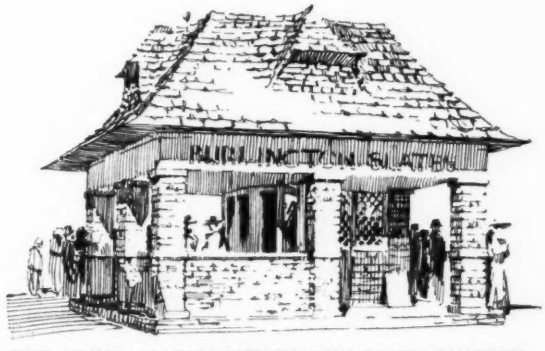
Materials.—The writer is old enough to remember the day when an architect desiring bricks of pleasant texture and varied colour was put to strange shifts to secure them. He probably had to visit the fields and insinuate his way into some obscure corner where a pile of "throw-outs" could be found, which were not considered fit for use, or he might perhaps buy bricks from three or four different fields and combine them—an expedient dangerous in several directions. We do move, for now as the result of steady demand, every maker who can produce them puts multi-colour bricks on the market, and most of them in this exhibition show these most attractively in well-designed stands, which afford a great contrast to the dismal heaps of specimens with which we were formerly expected

THE STAND OF LAMB & SONS.

to be satisfied. In the present show the stands of Messrs. Lamb and Sons, "featuring" Worcester Park bricks; Messrs. W. T. Wright, with some very pleasing purplish so-called "Dutch" sand-stocks from the Midlands; and such old-established favourites as the T.L.B. and Colliers' stands show what resources are now at the command of architects. One constantly hears the expression "bricks and mortar" as synonymous for building, and mortar also has come into its own again, for these exhibitors now clearly realize and show on their stands how much the colour effect of their material depends on the free expression of the joints—no longer restricted to the thinnest possible and pressed back with a hard ruled line in the "weather-joint" beloved of the old-fashioned text-book.

Even the useful but unlovely Fletton now strives to acquire texture and colour, the London Brick Co. showing bricks of this make having their faces roughened with a herringbone texture, which certainly gives them a certain liveliness, and seems worth trying. These are known as "Ruff" bricks; their appearance is pleasant—their lasting qualities require demonstration; if proved, they have a future. The Ravenhead Brick Company, in their "Rus" brick, wire-cut on face, have a somewhat similar article, which has been on the market for many years, but has not apparently been much used in the south.

Of another type is the exhibit of Messrs. J. Woodward, of Swadlincote, who show salt-glazed ware of every description, including blue and green salt-glazed bricks. Being of good colour, and with the slight variety and surface irregularity inherent in salt glaze which makes it so much more interesting than enamels, these are heartily recommended to the exponents of Brighter London.

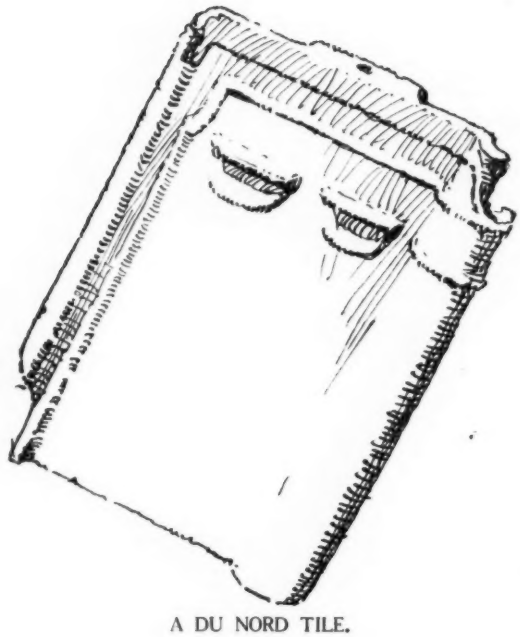


THE STAND OF THE BURLINGTON SLATE QUARRIES.

After the walls comes the roof, and, perhaps as a transition, the beautiful little exhibit of the Burlington Slate quarries, Kirkby-in-Furness, may be mentioned. The walls are of slate-stone in random courses, the flooring of slate flags, and the roof (with every slaters' trick judiciously used) is a joy. Near by is an exhibit by Setchell and Sons, Ltd., of slates from the Old Delabole slate quarries—a very beautiful material sympathetically used. One has a recollection of the subtle silvery tone of slate-hung walls in old Cornish cottages. The Leckhampton stone quarries show, on a small pavilion, a pleasant example of Eynford stone slates.

Roofing tiles are rather less in evidence than heretofore. Interest perhaps centres on the foreign invasion. Marseilles tiles have now become a commonplace, and now we have Beauvais, Du Nord, and Dutch "Teeuwen." Du Nord tiles, which are shown by Messrs. Langley, have the characteristics of French pantiles, but on a small scale, and with interlocking fitting and a lug for nailing, which removes the nail-hole to a position where it does not prejudice the effective lap of the tile. "Teeuwen Brand" tiles are imported by Messrs. France and Sons, of Newcastle-on-Tyne, and are of several interlocking patterns. The Mulden tile resembles the Marseilles type, and is like it in being wired-on every fourth or fifth course, an extra row of battens being recommended for thus securing the tiles. Included in this exhibit is what many of us have been looking for for years—a pantile with all the appearance of the old black-glazed ones of East Anglia, with the addition of waterbars and grooves at head and side laps, designed to make it more resistant to driven rain and snow than the ordinary pantile, but preserving all its visible characteristics.

The Crittall Manufacturing Co. has as usual an interesting show with several novelties. The Crittall Standard casement is now so well-established that the introduction of a process by which these can be made immune from rust, and painting be rendered needless, is a matter of general



A DU NORD TILE.

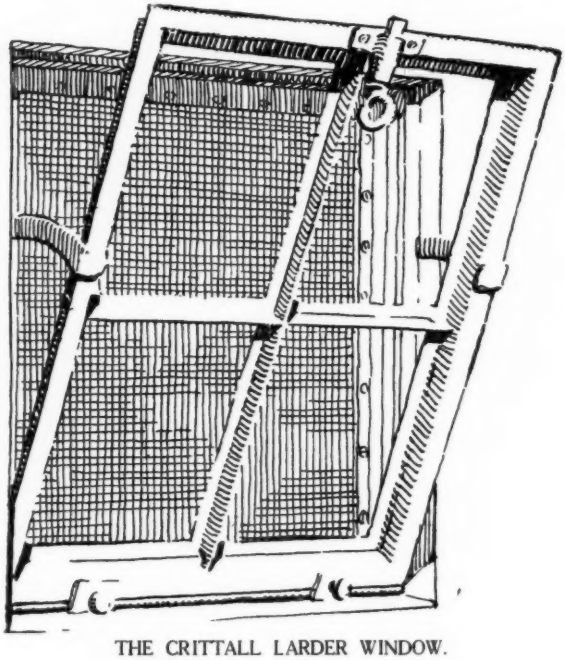
interest. This virtue is claimed for the Zincspra process, which we shall watch carefully. A very useful little extra-pattern casement for use in larder windows is shown at this stand. It incorporates a bottom-hung, inward-opening, four-pane casement, and an outer wire-gauge-covered frame (both removable at will for cleaning), and complete with spring catch and quadrant stays costs only 21s.

The array of wall-boards grows apace, and the difficulty of judging between their various claims does not lessen. A novelty, however, is the Uralite Company's "Cellactite," which is a bitumen-impregnated asbestos fibre board claiming to be resistant to all the forces of Nature—including fire.

Some very fine exhibits of panelling and the like are on show. One of the most charmingly designed stands in the exhibition is that of Bath Artcraft, Ltd., and some very attractive furniture as well as panelling is shown there. Very attractive also is the exhibit of Drytone, Ltd., the panelling in British Columbian cedar and hemlock being most pleasant in surface, in colour, and design. The process and all that it claims were fully described in last week's JOURNAL, and deserves exhaustive trial.

In the sphere of wall tiling, besides such old friends as Carters, of Poole, we noticed a very charming exhibit by the Malkin Tile Works, of Burslem, in which the potentialities of pleasant soft, grey and brown egg-shell tiles were exploited to the full by judicious introductions of points of interest in the form of coloured tesseræ and spots of gilding, and the use of wave patterns in broad, simple panel divisions. We also noticed on this stand a humorous but clever "Egyptian" fireplace.

Fittings.—The bulk of the fittings shown relate either to heating or hot water, which seems the crux of modern house convenience. Before starting on the tangled task of weighing up the relative claims of the many ingenious inventions



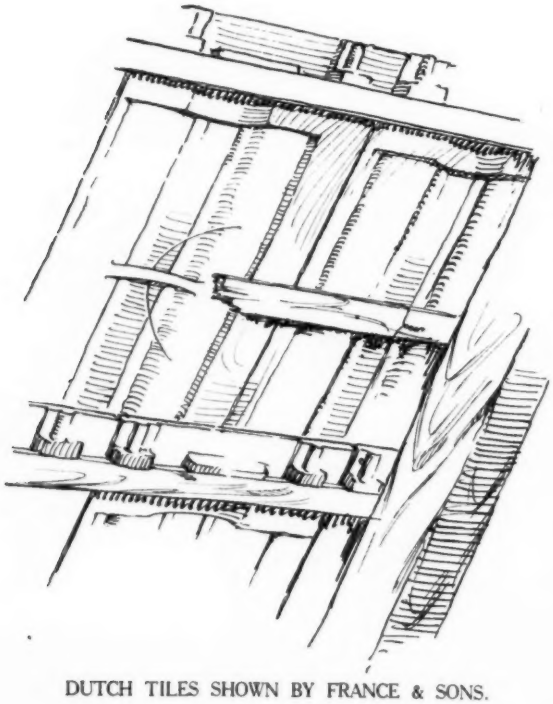
THE CRITTALL LARDER WINDOW.

designed to make the way of the housewife easy, a few novelties in other directions must be noticed.

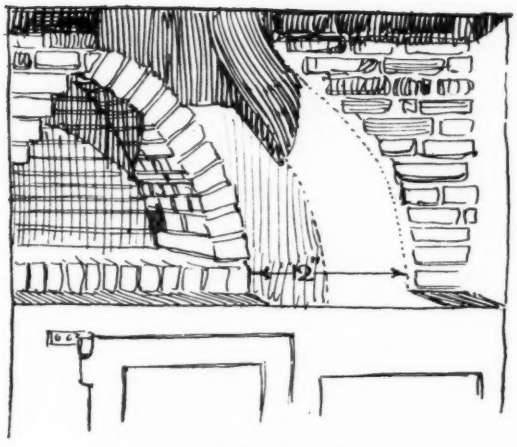
Skylux, Ltd., show gearing and window-openers of various types to suit every conceivable requirement of inward and outward opening lights, and all without either cords or complications. The basis of most of these is in the free use of ball-and-socket joints and screw adjustments between parts. The simplest fanlight openers are both inoffensive and inexpensive, and they appear mechanically sound. The casement-stays, though efficient, are not of attractive appearance compared with the ordinary stay-bar and pins.

The "Elsan" indoor closet provides a new third alternative to the cesspool or earth closet in cases where public sewers are not available. It consists of a nine-gallon container, surrounded by a glass-enamelled casing forming a ventilated space. The whole apparatus is portable and not of unsightly appearance. A chemical compound is used in connection with the apparatus, which is claimed as a disinfectant, deodorizer, and liquifier; one gallon is stated to last six months.

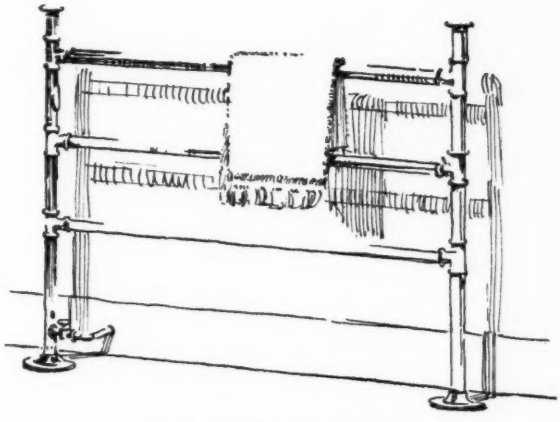
In the sphere of domestic heating, things have so far settled down that the "hearth fire" now reigns supreme among open grates. Novelties are uncommon—the Eagle hearth grate, in which the grate-bars, as well as the back-



DUTCH TILES SHOWN BY FRANCE & SONS.



THE TRIPLEX FIRE.

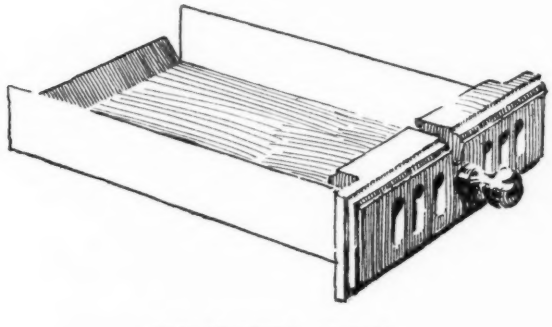


THE FENLON TOWEL RAIL.

bricks, are of fireclay is the most arresting. Among solid fuel cookers the old type kitchen range is badly in the background, and attention concentrates on "combinations" of one sort or another. The "Ure" back-to-back seems a practical proposition where new construction permits of the plan to be schemed to suit. By its use the fire may be enjoyed in a living-room, while cooking takes place in the scullery. The arrangements for flue cleaning and access to the back boiler are well devised.

Somewhat akin to one another are the "Foresight" and the "Triplex"—both barless fires working a bath boiler, hot-plate, oven, hot closet, and other sidelines, such as plate-warming, firewood drying, etc., and doing it all in their stride. These can both be built into the opening of an existing kitchener with a minimum of alteration to flues, and this writer would want considerably more time than he has so far been able to give to decide which (if either) is superior to the other, and why.

The Interoven Stove Co. are showing a new type of their well-known speciality, in which considerable expansion in width has taken place, affording increased cooking space. Messrs. Cornes and Haighton, one of the earliest firms to move towards the improvement of the once-normal kitchener, are showing the Bentley Yorkshire range, which is a strong, serviceable, and not-too-ingenious appliance most suitable for working-class dwellings. Among boilers, as well as our old friends the "Hydresse," "Sentry," and "Glow-worm," there is a new cousin, the "Birnwell," which has points. The departure of the flue instead of obstructing the hot-plate is made the occasion for extra



THE BIRNWELL ASHPAN.

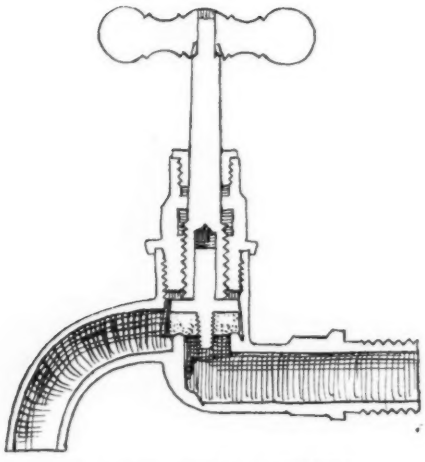
space, the mudholes are well placed for access, and an ash-pan with a "pouring back" gives promise that emptying will be a less dusty job than is normal.

Gas water-heating now opens up a wide field. There is the "Potterton" gas-heated boiler for a circulating system, geysers to suit every need, by Messrs. Ewart, Fenlon, and others, and a novelty in the "Clarkhill" automatic water-heater—a pressure appliance applicable to an extensive supply system in which the opening of any tap automatically raises the gas, giving instant service, ceasing immediately on shutting off. The extreme of simplicity and cheapness is the Pollard portable water-heater, a simplified geyser of unobtrusive appearance applicable with great ease and without expensive pipe-work. This is worthy of note as a geyser which can be cleaned and repaired!

A very simple and useful accessory also is Fenlon's gas-heated hot-water towel rail. This is hand-filled, and requires only a $\frac{1}{4}$ in. gas supply and no other connection. The towel rail is often the most difficult part of the hot-water system to scheme and connect. This little appliance, which is entirely independent, fulfils a need.

An attractive new gas-cooker is the "Anti-waste," a Continental pattern with several novel features. The cooker can be dismantled piece by piece for cleaning—mostly without the use of tools; the oven-burners are between an upper or baking oven and a lower or grilling one, both of which have fall-doors, the hot-plate burners are of novel type, controlled by three-point taps, which can be set at off, full-on, and minimum, while the several parts can be dissociated instantly for cleaning.

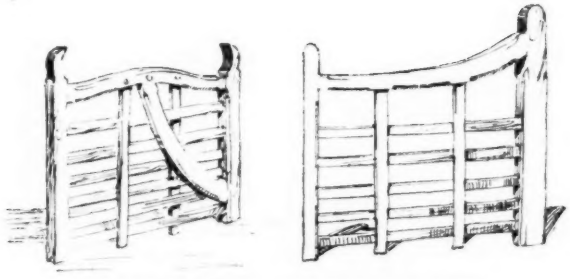
THE ANTI-WASTE BURNER.



THE "HOT METAL" BIBCOCK.

Of miscellaneous building accessories the "Hot Metal" bibcock shown by Messrs. John Knowles & Co., seems an advance on the ordinary cast tap in substance and interior finish. The well-designed and soundly-made wicket and carriage gates shown by the Fernden Fencing Co. are worthy of commendation.

The display of sanitary fittings is less extensive and varied than usual. The frequent introduction of lavatory basins into bedrooms makes it remarkable that more effort is not directed to producing a type which shall take its place less obtrusively—probably the best that can be done at present, within the limits of a moderate purse, is one of the pillar type, in which unsightly plumbing is relegated to comparative obscurity.



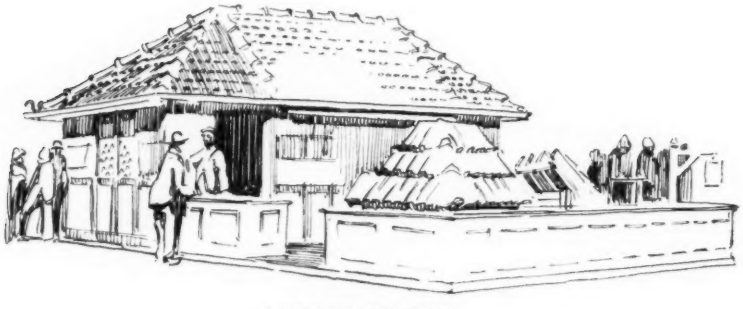
FERNDEN WICKET AND CARRIAGE GATES.

There are, of course, numerous displays of patent roofing materials along two main lines—asbestos and bitumen. Good articles may be found among both, but it is a matter for wonderment how long asbestos-cement firms will remain in the conviction that the not unpleasant natural greenish-grey colour of their products is improved by dyeing them a sickly pink. Messrs. Bell's "Poilite" pantiles are a step forward, both in colour and the introduction of a light and shade effect. In simple roofs, which will stand their rather coarse scale, they appear to advantage.

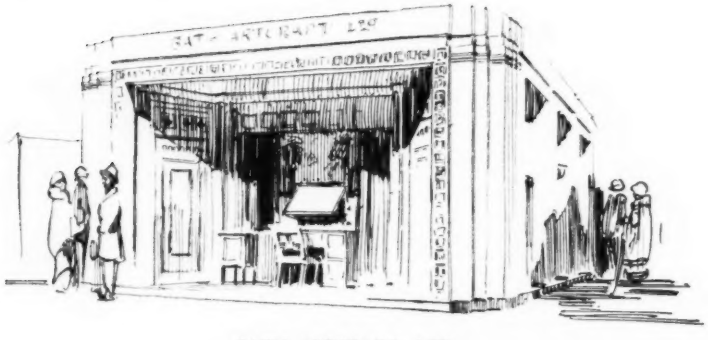
EDWIN GUNN.

Some Exhibition Stands

Sketched by J. D. M. Harvey



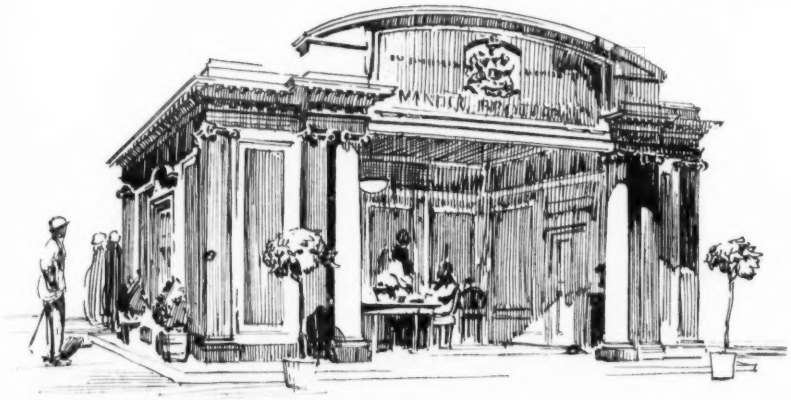
LANGLEY, LONDON



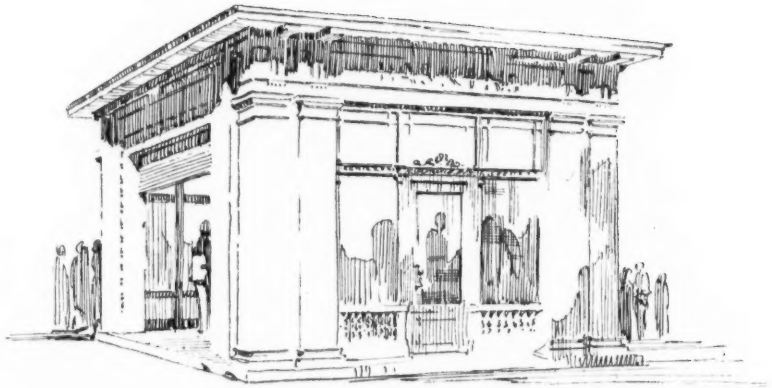
BATH ARTCRAFT, LTD.

Some Stands at the Building Exhibition

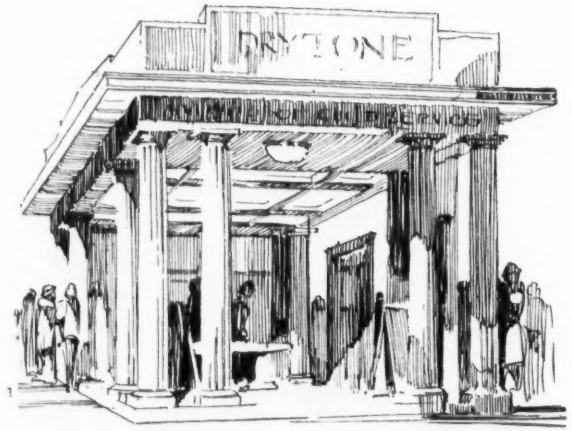
Sketched by J. D. M. Harvey



MANDER BROS., LTD.



SAML. HASKINS AND BROS., LTD.



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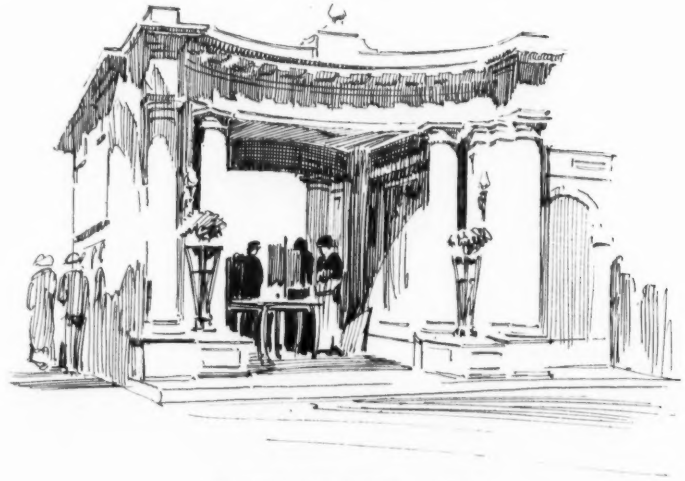
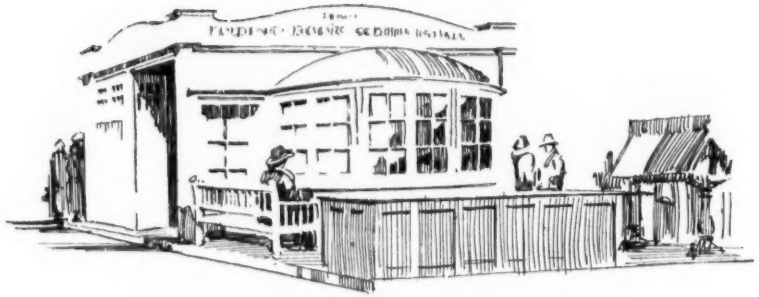


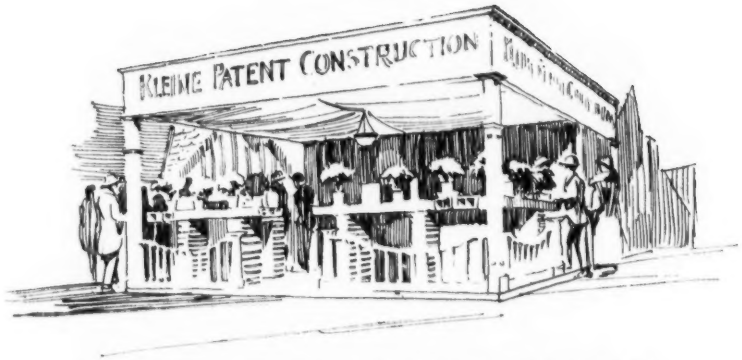
RAINES AND PORTER, LTD.

Some Stands at the Building Exhibition

Sketched by J. D. M. Harvey



THE EDUCATIONAL SUPPLY ASSOCIATION, LTD.



KLEINE PATENT FIRE-RESISTING FLOORING SYNDICATE, LTD.

G. R. SPEAKER AND CO.

THAMES BOARD MILLS, LTD.

Some Stands at the Building Exhibition

Sketched by J. D. M. Harvey

S. AND E. COLLIER, LTD.

BELL'S POILITE AND EVERITE CO., LTD.

Decorative Materials

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

ONE of the most interesting purposes which the Building Trades Exhibition serves is that it epitomizes the trend of architectural development. Manufacturers are at the same time both leaders and followers of the general tendencies of the day. Their supply follows the demand at the same time that it creates a demand. For example, there is little doubt that the ever more extensive use of substitute materials is in no little degree the result of the trade pushing these products at the precise moment when there was an unexpressed need for them. On the other hand, the enormous increase in cheap decorative effects is rather the result of a general demand for better colour and decoration, and less drabness in the cheaper kinds of buildings.

A survey of the decorative exhibits this year yields more than ever the impression of an attempt to bring colour and design into everyday building activities, and into a class of work which heretofore had paid scant attention to decorative refinements and the æsthetic side of building. And this is very much to the good. There is absolutely no reason why beauty should be the sole prerogative of the rich building owner, and that the less fortunate must be content with dullness and drabness. Of course much can be done to enliven buildings, both within and without, by the judicious use of paint, an expedient which has been insufficiently exploited in the past, but there are other effects nowadays which lie within reach of those confined to modest expenditure. Take, for example, such a universal necessity as a door. Finely figured doors have, for the most part in the past, been reserved for those who could afford the expense of mahogany and the like; to-day there is a quite extensive choice of figured doors at much cheaper prices. Messrs. Drytone, Ltd., show a very beautiful door in figured pine enhanced by a simple architrave painted blue. Then there are the veneered doors manufactured in Columbian pine by the Woco Door Company. Messrs. James Latham, Ltd., too, have a good selection of figured woods, the use of which would add great interest to any building. For those who desire the more expensive products there is, of course, a very wide range, and Messrs. Bath Artcraft, Ltd., show a very beautiful panelled interior with carving in the Grinling Gibbons manner.

There is an interesting revival in the use of glass as a decorative material, and here again a delightful variety of effects is obtained at moderate cost, not, of course, by stained glass, for there are few things more odious than inferior stained glass, but by the use of coloured glass strips in conjunction with mirrors. Suggestions for this and other kinds of decoration are shown by Messrs. the London Sand Blast Decorative Glass Works, Ltd. For certain kinds of interiors, both private and public, this offers a most attractive decorative medium.

There is a tendency nowadays to use a combination of bricks and roofing tiles for interiors, especially in conjunction with the fireplace. Although many good brick fireplaces have been designed their number is far exceeded by the bad ones. Failures are generally due to an attempt at too much cleverness, resulting in something which is just funny, or which is so ponderous as completely to overwhelm the whole room. In many of these attempts the

structural significance of brick and tile is quite lost sight of. Although this is not so serious—though, on the whole, it is always to be deprecated with any materials having such marked structural significance—internally, it is far more reprehensible externally, and the construction of an eaves soffit in roofing tiles, an example of which occurs at the exhibition, is a perverse use of materials which is altogether to be deplored.

A general discarding of local building methods is unfortunately one of the penalties which we pay for increased transport facilities, for all that the Cotswold district still happily retains something of its architectural character, and long may it continue to do so. Messrs. the Leckhampton Quarries Co., Ltd., show a little pavilion charmingly designed, built in the Cotswold stone, and roofed with Eyeford slates laid in diminishing courses; the floor is paved with an artificial stone made by the company.

With the advent of cast iron the decorative use of metalwork passed under a cloud from which it has not yet thoroughly emerged. Much of the charm of the eighteenth-century domestic architecture is due to the discreet use of metalwork for fanlights, balconies, porches, railings, and the like. Messrs. the Carron Iron Company show that it is still possible, however, to obtain metalwork of the finest quality, and in the iron grille which faces their stand can be seen a good simple design in the eighteenth-century tradition, although not imitative, and well executed. A new use of metalwork has recently come about in connection with the construction of shop-fronts, and the exhibition offers many notable examples of work of this kind. Messrs. Haskins, for example, show a beautiful bronze shop-front; indeed, their whole stand is one of the most attractive at the exhibition. Messrs. E. Pollard & Co. also have examples of extended metalwork for shop-fronts. Faience offers decorative opportunities which have not always been exploited to the best advantage. Messrs. Carter & Co., Ltd., show glazed wall tiling for interior and exterior work, where light and cleanliness are essentials; these materials are unequalled, and a large range of colours and patterns is available. There is no excuse for the prevailing presumption that in the working parts of a house, such as the kitchen and scullery, all attempts at decoration can be dispensed with, and if a little care is expended in the choice of materials and in the colour arrangements of skirting, dado, and frieze, the kitchen can be made in its own way as attractive as any other room in the house. The number of decorative floor coverings, too, has enormously increased in late years. There is a large range of composition floorings which can be laid *in situ* together with a skirting of the same material, the colours of which are extremely pleasant. Then there are rubber floors such as those shown by the Hooley Hill Rubber and Chemical Company, mosaic floors and parquet and figured wood floors, such as the Austrian oak-panelled floor of Messrs. Morner & Co.

Fibrous plaster still offers one of the most satisfactory materials for internal decoration, and on the whole it is one that is poorly represented at the exhibition: this may be partly due to the fact that newer materials are taking its place. One of the particular advantages of fibrous plaster is the absence of all pretensions. So many materials nowadays try to be something that they are not; asbestos imitating wood, concrete imitating stone, and so on. With fibrous plaster there is never any such deceit; moreover, it is a material which is easy to handle, has few limitations, and can be coloured to accord with the general decorative scheme.

Bricks, Tiles, Terra-cotta, and Slates

By ALFRED B. SEARLE

TO produce something really new in bricks is now extraordinarily difficult, nor is it particularly desirable unless it is as useful or as beautiful as it is novel. Consequently, the bricks which are on show may best be described as a selection from various well-known manufacturers rather than an exhibition of rarities or novelties. One firm—The London Brick Co. and Forders, Ltd.—make a great feature of Fletton bricks, and also of what might be termed "rustic" bricks.

Sand-faced bricks of varying tones of red and brown are shown in great variety by most of the brickmaking firms who exhibit, and bricks with broken colours ranging from "silver grey" through all shades of red to a brown so dark as almost to be black are both abundant and attractive. If the bricks shown by S. and E. Collier, of Reading, and by T. Lawrence and Sons, Bracknell, Berks, are mentioned together, it is with no desire to compare them but rather to show how widely different may be the bricks made by two firms and yet each, in its own way, may be exceedingly beautiful. A firm which, so far as we are aware, has not previously exhibited in the Building Trades Exhibition is W. T. Wright & Co., Ltd., Sileby, near Loughborough, whose structure erected in 2 in. sand-faced bricks shows their products to great advantage.

Blue bricks and brindles are well shown by the Haunchwood Brick and Tile Co., Nuneaton, who have long been known for the high quality of their products. A few blue bricks are also shown by Stoneware, Ltd., of Tamworth, the quality of which is excellent though the samples are not displayed to good advantage.

For the first time in the history of this exhibition, paving bricks are given a show adequate to their importance, and though the stand is out of the way and might easily be missed by many visitors, the British Paving Brick Association is to be commended for its enterprise.

Glazed bricks are shown by three well-known firms, namely, the Leeds Fireclay Co., Ltd., Stanley Bros., Nuneaton, and James Woodward, Ltd., Swadlincote.

Roofing Tiles.

With a few exceptions, all the best-known manufacturers of roofing tiles have stands at the exhibition, and the tiles shown are—as is only to be expected—precisely what every architect would anticipate, so that there is no need to describe them in detail, for they are familiar sights at each building trades exhibition.

The one exception to this happy group is a newcomer from the borders of France and Belgium, namely, the Courtrai-Du Nord Co., which has opened an office in Borough High Street, London, and bids fair to be a "cat among the pigeons." This firm, with the shrewd knowledge of human nature possessed by the Belgians, has two entirely distinct stands with different names, on both of which are exhibited foreign roofing tiles. On each stand are portions of a roof made of tiles which have been in use for many years, to demonstrate the durability of these tiles. It is particularly interesting to compare the foreign tiles with those made in this country, and so far as accuracy of shape and fitting are concerned, the comparison is all in favour of the English article. Durability cannot be tested in an exhibition, but so far as can be judged the English tiles are fully equal to the foreign ones in this respect.

Glazed Tiles.

The desire for matte glazes still continues and, as a result, some very beautiful effects are shown—chiefly in

fireplaces and tesselated floors. The Leeds Fireclay Co., Ltd., have never before shown such beautiful work as this time, nor have their earlier designs shown that high artistic sense of touch combined with simplicity of idea, which is characteristic of some of their oatmeal coloured fireplaces. These strike a new and very pleasing note in this class of ware, and deserve careful consideration where neatness and simplicity are desired, though baldness is to be avoided.

Carter & Co., of Poole, and the Malkin Tile Works Co., Ltd., of Stoke-on-Trent, also show some very beautiful glazed tiles in the form of panels and fireplaces in which the use of large plain, matte surfaces relieved with a small ornament in colour or in mosaic provides a restful decoration of great durability and charming effect. The tesselated flooring shown by both these firms would be difficult to surpass in the beauty and quietness of its tone, whilst yet possessing the brightness needed in decorative work of this description. Glazed fireplaces of an older style are shown by James Woodward, Ltd.

Terra-cotta.

Terra-cotta occupies only a minor place in the exhibition, though the Byzantine structure in this material, shown by the Leeds Fireclay Co., would have been very striking—especially when illuminated—if it had not been so closely surrounded by other structures. A doorway on the stand of Messrs. Stanley Bros. is of excellent quality, and typical of what this firm can produce. Several other manufacturers of terra-cotta who have stands at the exhibition do not make any serious attempt to display this part of their work, but prefer to concentrate on tiles, and particularly on fireplaces made of tiles, as already mentioned.

Slates.

One of the best structures in the exhibition is built of Leckhampton stone. It is not roofed with slates, but with thin stones from the Leckhampton quarries—a roofing material which offers many advantages for country buildings.

Three firms exhibit true slates, each having a pavilion designed to show the particular slates to good advantage. The Burlington slate quarries are in Lancashire, and the slates are of the dark-blue Westmorland type, of excellent appearance. Mr. John Macquire, of Bermondsey, is a roofing contractor who exhibits both tiles and slates with equal impartiality.

Some beautiful slates are shown by Setchell and Sons, Ltd., Finsbury Court, E.C., the sole agents for the Old Delabole slate quarries in Cornwall. Grey and green slates form the chief feature of their stand, but the beauty of the russet-red slates is too great to be overlooked.

Gas Equipment

Gas Fires.

At a number of stands at the Exhibition gas-fires of the usual portable type, to stand in front of existing coal-grates, may be seen in great variety, and after they have been viewed one can but admit that the old, unsightly, badly-designed gas-fire is now a thing of the past.

Modern gas-fires are obtainable in a large number of very chaste designs, either plain or "period" in character. Those with the plainest lines usually appeal most to the artistic eye of the architect.

Again, individual choice is still further varied by the exceedingly wide range of very fine finishes in which gas-fires are now obtainable, which is readily noticeable at the Exhibition.

Improvements in Built-in Fires.

For some years past the attention of architects and builders has been repeatedly drawn to what has been spoken of as the "built-in" gas fire with ecomomy flue, i.e., a gas fire which is designed to be put in *as part of the building*, and fitted to a flue specially constructed with a smaller area than that which is necessary for a coal fire. It must be mentioned in passing, however, that such flues should be treated in identically the same manner as those which are constructed for coal fires, merely being reduced in area.

On the stand of the Davis Gas Stove Company (who are members of the well-known "Radiation" group) an improvement in "built-in" fires is shown. They are known as the "Rubston" gas fireplaces, and are obtainable in a number of designs complete with mantelshelf, hearth, and curb. The material of which they are constructed resembles red bricks, or a kind of red sandstone finish, but they can also be obtained in grey sandstone finish if thus required for special architectural surroundings.

The most striking feature in connection with gas-cookers shown at the Exhibition is the fact that they have been designed to be easily cleaned. Not only are their interiors enamelled, but the exteriors of the ovens are now also made in imitation tiling.

The raising of the oven of the ordinary gas cooker about six inches from the ground appears now to be a fairly common practice.

The burners too are of the latest efficiency pattern, and with all other fittings they are readily removable for cleaning purposes.

A stove of great interest to the bachelor girl or man is one which is known as the "Cabinet," consisting of a modern thoroughly efficient gas-grate above the fire of which—and contained within the canopy—is constructed a cabinet, with a fall-down front door inside of which may be found a small oven and a grill and boiling burner.

Domestic Refuse Destructor.

A small gas-fired domestic refuse destructor, known as the "Burn-all," is an interesting feature of The Davis Gas Stove Company's stand. This refuse destructor is a compact and hygienic apparatus for the cleanly, rapid and economical disposal of every kind of house and garden refuse, either wet or dry, and at a trifling cost for gas. The contents of the sink basket, potato peelings and all kinds of household refuse, can be emptied into its capacious and conveniently placed hopper, and if the gas burner is lighted five minutes or so before use, when once the refuse is alight, the gas can be extinguished and the refuse will rapidly burn itself out, at no further cost for gas.

Gas-fired Washhouse Coppers and Washing Machines.

Some very useful gas-fired washhouse coppers are shown in various parts of the exhibition, also a type of apparatus known as a washing machine, which is becoming increasingly popular among housewives. This apparatus is heated by gas, and is so constructed that no rubbing or scrubbing of the clothes is necessary, the washing operations being entirely automatic. The clothes are cleansed and sterilized by pressure of steam and hot water, which is driven through them by means of a special syphonic process, which is one of the features of the apparatus. It is worthy of note that it is either obtainable complete with stand and gas burner, or may be purchased without the latter in order that it may be stood on top of what is known as a hot-plate, or over a ring burner.

Gas for Hot Water.

The use of gas for the production of hot water for domestic use is still very rapidly increasing. Some years ago it used to be considered that only a fairly wealthy

occupier could afford to install gas for this purpose, but owing to the introduction of highly efficient apparatus, this idea is now exploded.

There is no doubt that for installation in new houses being erected, the combined gas boiler and cylinder type is the ideal apparatus, as it takes up the minimum amount of space, costs the minimum amount to supply and fix, and provides the greatest efficiency for all the gas which is consumed. This type of apparatus is also obtainable with a thermostatic valve for reducing the gas consumption when the water in the cylinder has reached a certain temperature; and with a cut-out valve by which all but a few gallons of water for washing up or floor cleaning purposes, is thrown out of circulation. Thus only the amount of water which is required is heated, and economy in working is assured.

Gas for Central Heating.

While on the subject, it is worthy of mention that the use of gas for the production of hot water or steam is also making steady progress, for the heating of buildings by central heating systems. On Messrs. Thomas Potterton's stand, in addition to the combined gas boilers and cylinders above-mentioned, a large boiler unit may be found.

This well-designed and specially constructed boiler is capable of dealing with a central heating system consisting of from eight to ten hot-water radiators, each of, say, twenty-five to thirty square feet of heating surface. The gas consumption of the boiler when full on is 160 cubic feet per hour. When larger installations are required, two or more boilers connected together may, of course, be fitted.

Gas Geysers.

A number of gas geysers for bathrooms, and those of the automatic type for supplying hot water to any number of points in a house, are also to be seen at the Exhibition, and it is worthy of note that large apparatus of the latter type are now being installed in many cases for factory canteens, or for fulfilling the requirements of factory inspectors by providing a readily obtainable flow of hot water for the use of the workers for cleansing purposes. The hot water may be delivered either from ordinary taps; by jets, or in a constantly flowing stream. Such apparatus are also to be found in use for heating plunge baths for football clubs or in sports pavilions.

An interesting feature regarding the geysers on Messrs. Ewart's stand is a new pattern of their well-known dual valve, by means of which, when the water is shut down, the gas is automatically turned off at the same time. The new type of this valve, instead of being more or less an integral part of the machine, may readily be removed, if at any time any mechanical defect becomes apparent. Instead of the machine itself being taken away for the necessary repairs to be carried out, the valve can be readily exchanged on the spot, with practically no break in the continuity of the supply of hot water.

Washing-up Machines.

In addition to the larger sizes necessary for canteens, hotels, restaurants, etc., one of a size suitable for domestic use is also shown.

Electrical Machinery and Equipment

By S. M. HILLS, A.M.I.E.E.

THOSE who look into the distant future, or who try to picture what conditions may be some fifty years hence, have suggested that the first step in planning a new town would be to provide an electric generating station. Power in flexible form could then be obtained to operate the hundred and one appliances that would tend to expedite building operations. There is no doubt that as time goes on electric power will come more and more to the aid of the builder. One cannot suggest that the present exhibition shows that the above-mentioned dream is about to mature, but there are signs of increased interest in electric power by the building fraternity.

In all large building operations hoisting and lifting of material are essential, and here an electric motor can most conveniently and efficiently replace the older steam crane. In several industries the advantages of individual electric motor drive for machinery have been recognized, but in the building industry, and in former building exhibitions, one found a large preponderance of belt-driven machines.

Messrs. Anderson-Grice & Co., Ltd., show interesting examples of motor-driven machines. A gravity saw for operating on materials such as mason stone, slate, etc. A Jenny hand-polisher which has a capacity of 9 ft. by 4 ft., with 14 in. rubbing discs. A noteworthy feature of this machine is the single-piece soleplate which makes the machine very simple to mount and prevents the spindle bearings from getting out of alignment.

The mechanical portion of a three-ton electric derrick crane is also exhibited, and forms a typical example of their range of such cranes from a capacity of 15 cwt. to 15 tons. It is claimed that the design of these cranes provides the nearest approach to a true horizontal movement of the load between normal and minimum radii.

The Hoisting Appliance Co. have also an interesting exhibit of lifting. Here can be seen in operation as fixed to a scaffold structure a one-ton builders' self-landing hoist. It is no inexpensive matter to erect the Scotch derrick, and whilst this structure will possibly hold its field for some time to come where very large loads have to be handled, there are many cases where much smaller loads are dealt with, and here such an appliance as the one exhibited should be of valuable service.

Messrs. A. A. Byrd & Co. are showing a complete range of their Wallace electric woodworking machines for planing, rabitting, ripping, cross-cutting, moulding, etc. The machine can be taken to any part of the factory or building and connected to the nearest wall-plug or lamp-socket. In large work it is often much more convenient to be able to take the machine to the work instead of bringing the work to the machine. These advantages of electric operation have for some years past been used for drills, etc., and there should be wide scope for the use of woodworking machines of a portable character.

At the stand of Waygood-Otis, Ltd., can be inspected a perfect model of the latest pattern escalator similar to the ones recently erected to the order of the London Underground Railway Company.

In factory design, transportation of material always has to be considered, and in many respects electric trucks afford a ready and efficient means of conveying loads from one position to another. They are simple in operation, economical in use, and perform their allotted task quietly and efficiently.

Messrs. Slingsby have for many years specialized in the design of such trucks and some interesting information concerning electrically operated elevating platform trucks, lifting-tiering trucks, etc., is to be obtained at this stand.

Electrically operated woodworking machinery is again represented at the stand of Messrs. Sagar & Co., Ltd., where can be seen the "Premier" combined hand and roller feed planing machine, for planing out of twist, making glue joints, bevelling, rebating, grooving, etc. An electrically-driven band-sawing machine, tenoning machine, and circular saw bench are also exhibited.

Power vacuum cleaners are represented at this exhibition by Messrs. Sturtevant Engineering Co., Ltd., and the British Vacuum Cleaner Co., Ltd. The Sturtevant Co. are showing in operation their No. 8 turbine cleaning plant, which is operated by a 5-h.p. electric motor, direct coupled to a turbo exhauster. Control is effected by an Igranic push button control board, which can be employed on the remote control principle. The plant is intended to be connected to a fixed pipework system with suitable hose connection points. A characteristic feature of this plant is that the electrical energy consumed varies with the number of hose points in actual operation, and is correspondingly increased or decreased as one or more hoses are put into operation.

The British Vacuum Cleaner Co. exhibit a representative range of B.V.C. portable and stationary cleaners of the positive pump and turbine fan types. Engineers will be interested to get particulars of the B.V.C. pneumatic suction plant for removing boiler flue-dust and ashes, whilst this same system can in a sense be reversed in process and used as a means of conveying powders, a method of considerable advantage in some manufacturing industries.

Lighting, heating, and cooking are not at all well represented. Considerable advances are daily taking place in design of electric lighting installations and fittings. Light is being looked upon as a tool and an aid to production, and it is very much to be regretted that better use has not been made of an exhibition such as this to educate the building industry up to the better use of electric light. Cooking and heating by electricity are making far greater progress both domestically and industrially than many people realize.

The Carron Company have on their stand, amongst many ordinary types, an electric cooker and a radiator or so, but they seem to be the only exhibitors with apparatus of this nature on show.

The lighting effects of exhibition could, in many instances, have been improved. In some cases it was evident that the stand contractor had been left to put in a specified number of lights, and he had done so using shades that dated back to the old carbon lamp era with the latest type of half watt lamp fixed therein. Result: neither from a reflecting point of view nor a decorative point of view were the shades of any real use. All that happened was that the bright filament glared into the eyes of the visitor. In other cases bowl reflectors were employed without any regard to the fact that there was no ceiling or top to the stand to reflect on to. A machinery exhibit somehow looks unindustrial when illuminated with semi-indirect bowl fittings. Why not use a proper intensive industrial type reflector, which should ordinarily be used to provide correct illumination for the operator?

The beauty of many fine specimens of hardwood could have been enhanced by the use of suitable ship reflectors, which would have reflected a soft light downwards and allowed the full effect of the fine graining to be seen. In some cases the glare of an incorrectly placed light simply turned the highly polished panel into a mirror of reflected light, preventing the grain being seen or appreciated. Some panelled rooms or walls displaying beautiful craftsmanship would have been much improved by means of better illumination. True it was opening day, and many little improvements will be made as time goes on. It still remains, however, that at this and in fact at most exhibitions one sees examples of stands that have cost much in design and erection, considerably marred in effect by careless lighting arrangements.

The New Aquarium at the Zoo

The new aquarium, which was opened recently, is constructed under the Mappin Terraces, but extends considerably beyond the outer circumference.

The illustrations on pages 665–667 show the ground plan and a perspective view from the north-east.

The ground plan is in the form of a quadrant about 350 ft. long and 50 ft. wide, and is divided into three parts, for fresh water, salt water, and tropical fish, and the aquarium is probably the most complete in the world.

A unique feature of the building is the lighting, which is entirely derived through the tanks themselves, the whole of the interior, walls, ceiling, and floor being black, and entirely without light.

The architect was Mr. J. J. Joass.

The engineers for the heating arrangements and waterwork were Sir Alexander Gibb and Partners. The general contractors were J. Jarvis and Sons, and the heating and waterwork were carried out by Ashwell and Nesbit. The tanks were waterproofed with Colemanoid by the Adamite Co., Ltd., and glass work was carried out by Alfred Goslett & Co., Ltd.

The Exhibits Described

JOHN TANN, LTD. Row C, Stand 47.

One of the most important exhibits here is the "Grade 2" anti-blowpipe door and safe. As the result of a three days' independent test the construction of these safes and doors is certified by Messrs. David Kirkaldy and Son, testing engineers, to be proof against the oxy-acetylene blowpipe, and proof against mechanical tools and appliances. The crane-hinged water-tight door of this quality includes many features. The rendering of this type of door watertight by a combination of clenching-mechanisms and liquid-tight packings, is of great importance for the prevention of damage by flood or by water following a fire. By a new process the firm are making complete fire and burglar-resisting steel strong-rooms watertight throughout. These have a new type of fire and burglar-resisting manhole door, providing a means of access through the roof of the strong-room in case the passage to the main door is choked with debris and water as a result of fire. The anti-blowpipe and other quality strong-room doors and safes are fitted, as an extra precaution, with a patent anti-blowpipe and anti-explosive device. This patent anti-blowpipe device has been tested and certified by the British Oxygen Company, the experts in the use of the oxy-acetylene blowpipe; and the patent anti-explosive device has been tested and certified by Messrs. Curtis and Harvey, Ltd., the explosive experts.

Address: 117 Newgate Street, London, E.C.1.

NAYLOR BROTHERS (LONDON), LTD. Row H, Stand 166.

The decorative scheme of this stand is itself worthy of note, the colour schemes and design being the work of one of the leading West End decorative artists. The stand shows the Naylor finishes in actual use. The stand exhibits four rooms, such as may be found in any middle class home: drawing-room, dining-room, bedroom, and bathroom, the walls, the doors, and the woodwork of which show the standard of finish obtained with the Naylor products. Many additional specimens of materials and work are to be seen, both on panels showing colour effects, and finishes applied to wooden strips showing each coat from the bare wood up. The pillars on the stand are finished with "Petrumite," an imitation stone paint; the drawing-room and bedroom are finished in distemper, with a stencilled frieze; the dining-room has oak panels finished with the Naylor "Encaustic" copal varnish, giving a flat finish, and the bathroom is papered, and the paper varnished with "Suwidec" varnish. The doors and woodwork in the various rooms are finished with "Suwena" enamel, S.E.G. paint, and "One Coat Oak" and "Suwidec" varnishes. As with many others, the virtue of such an exhibit of actual rooms is in that it assists the client to judge how his own house would appear under different treatments.

Address: Slough, Bucks.

THE ADAMITE CO., LTD.
Row E, Stand 98.

Mr. Frederic Coleman has arranged a striking exhibit on this stand, where the Adamite Co., Ltd., show " Atlas White " Portland cement and " Colemanoid " (" Colemanite "), the colloidal concrete hardener and waterproofer. The principal exhibit on Mr. Coleman's stand is " The Spirit of the Rocks," a statue executed in white concrete stone, the sculptor being Mr. F. Doyle Jones. The aggregate employed with the " Atlas White " Portland cement to produce this cast-stone is Cornish granite, the cement being brushed off the surface to expose the aggregate. The production of the stone in which " The Spirit of the Rocks " is cast, is in the hands of Messrs. Emerson and Norris, Ltd. Mr. Doyle Jones's modelling and the manner in which the work has been produced have brought out the possibilities inherent to surface treatment of cast-stone. The granular texture and vibrant quality are sympathetic to light under all conditions. " The Spirit of the Rocks " shows the suitability of white concrete in the form of cast stone for architectural and sculptural expression. Beside " The Spirit of the Rocks," Mr. Coleman shows a doorway designed by Messrs. Williams and Cox, F.R.I.B.A., in a manner of the Tudor period, suitable for domestic buildings. This doorway is carried out in cast concrete stone by Messrs. Emerson and Norris, Ltd. A charming result may be obtained by the use of this material, properly treated, by careful attention to texture and colour. Cast concrete stone possesses all the charm of stone as regards its appearance, while no stone possesses superior wearing qualities, and few classes of stone have anything like so long a life. The cast-stone in the doorway shown on the Adamite Company's stand is manufactured from " Atlas White " Portland cement and selected aggregate carefully graded. The doorway is so arranged that it will illustrate both exterior and interior finishes. Many examples of the use of " Colemanoid " and " Atlas White " Portland cement in various lines of interest to architects and contractors are also shown, as well as a comprehensive exhibition of British aggregates.

BRITISH FIBROCEMENT WORKS, LTD.
Row G, Stand 144.

The stand has been specially designed to illustrate the many varieties of " Fibrent " asbestos-cement manufactures. The slopes of the roof illustrate " Fibrent " diagonal and straight pattern slating in grey, blue-black, purple, red, and antique brown. " Fibrent " corrugated sheeting is also shown. One slope shows " Fibrotiles," of which the company are the sole manufacturers. The external treatment shows the use alternatively of " Fibrent " corrugated flat sheets. Scalloped slates and weather sheeting are also shown. The interior shows the use of flat sheeting and the several finishing methods that may be adopted. The end wall shows " Fibrent " panel sheets and the method of fixing with rebated joint. " Fibrent " flat sheets ¾ in. thick are used in the floor fixed direct to joists, and further illustrate the many uses of " Fibrent " products in modern construction.

Address : Erith, Kent.

Copyright : Frederic Coleman.

"THE SPIRIT OF THE ROCKS."

Modelled by F. Doyle-Jones and Executed in White Concrete Stone.

ART METAL EQUIPMENT CO., LTD.
Row F, Stand 108.

This firm show steel furniture, doors, partitions, shutters, etc. The firm's rolling steel doors or shutters comply with the L.C.C. and Fire Offices' regulations. The working parts have ball bearings to ensure ease of operation. Steel can be adapted to meet all requirements. It is finished in stove enamels in art shades, ornamented with drawn steel mouldings and enriched with bronze where special decorative effects are desired. Economy of space by the use of steel is important in the fitting-up of record rooms, libraries, strong rooms, filing departments, and archives, etc., where every square foot of space is of great value. Steel shelving is easily adjustable and can be easily moved into different positions as often required by changed conditions. The material used is the best obtainable. The steel is hydraulically flattened, free from scale and buckle, and thoroughly cleaned before being stove-enamelled. The exterior surfaces are generally rubbed to a smooth egg-shell finish.

Address : 184-186-188 Shaftesbury Avenue, London, W.C.2.

THE "TEN-TEST" FIBRE BOARD CO., LTD. Row E, Stand 87.

"Ten-Test," shown on this stand, has been put to many varied uses at the British Empire Exhibition. It is a permanent material for casing interior walls and partitions, and exterior walls and roofs, and it may also be used for constructing hoardings, signs, temporary buildings, such as garages and pavilions. Having an absorbent surface, "Ten-Test" is particularly suitable for exterior use, because all kinds of cement, artificial stone, bituminous, and other renderings adhere to it inseparably. The matt surface is suitable for two-coat flat oil and distemper work, and every kind of enamelled or rubbed-down finish. Recent National Physical Laboratory tests show that "Ten-Test" retains its original properties after repeated boiling in water. At the British Empire Exhibition the material has been used extensively for show stands and for the ceilings and walls of the offices and main buildings. Outside it has been used in the construction of kiosks, a demonstration bungalow, some half-timbered fifteenth-century style work, and for casing the two 100 ft. steel towers and the dome of an advertising exhibit. The renderings used on "Ten-Test," for these and many other works at Wembley, are being demonstrated at Olympia.

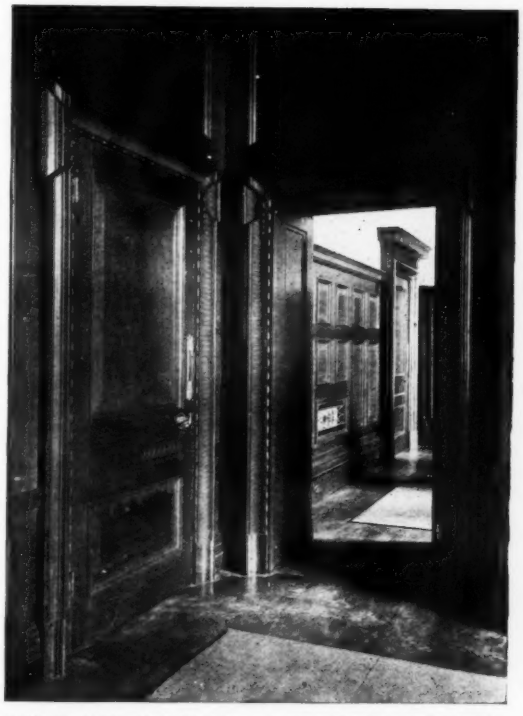
Address : Bristol.

WAYGOOD-OTIS, LTD. Row F, Stand 121.

The high-speed gearless-traction lift machine, fitted with patent "Micro" drive self-levelling apparatus, is the firm's latest form of lift machinery. It gives smooth running and the greatest ease in handling when running at high speed. Owing to the absence of any reduction gear the machine is arranged so that the car will stop level at any floor of a building when running with any load and at any speed up to 800 ft. per minute. A model is also shown of the latest pattern escalator for conveying a large number of passengers in a continuous flow. It is similar to those being built and erected by the firm for the London Underground Railway Company. Other exhibits are a standard electric lift machine arranged for continuous current, and a hand-lift suitable for use in private residences. The latter is worked by a handle and winding gear from below with an automatic foot-brake, giving easy control and quiet running.

Address : 54 and 55 Fetter Lane, London, E.C.4.

A WAYGOOD-OTIS ESCALATOR.



DOORS AND PANELLING IN ISLINGTON MUNICIPAL BUILDINGS. BY SAMUEL ELLIOTT & SONS.

SAMUEL ELLIOTT AND SONS (READING), LTD. Row J, Stand 190.

On approaching the entrance to this stand one sees a classic portico apparently leading to a temple, but from the side of the stand it is perceived that the portico is resting upon the end of an oak half-timbered building. The surface of the oak is treated with a speciality of the firm. The interior consists of two parts, one a quaint oak panelled room, the work in the mantelpiece of which claims attention. The other part of the stand is occupied by panelling (executed in fine mahogany, having solid figured panels), to be used in a contract the firm have secured for work in a large public building. The anti-cyclone revolving door forms an exit from this part of the stand. This door is approved by the L.C.C. for music-licensed premises, and is automatically collapsible, being a combination of a swing and revolving door.

Address : Reading.

THE EDUCATIONAL SUPPLY ASSOCIATION, LTD. Row R, Stand 309.

Here are "Esavian" folding and sliding partitions and screens, folding and sliding doors, and "Esavian" folding and sliding windows. It is claimed that all problems connected with folding and sliding partitions, doors, or windows can be solved by using the "Esavian" principle. Other exhibits include garden furniture, library furniture, and laboratory furniture.

Address : Stevenage House, 40–44 Holborn Viaduct, London, E.C.1.

SAMUEL HASKINS AND BROS., LTD. Row P, Stand 278.

This stand has been designed by Mr. Keith Arnold, architect, and takes the form of a rectangular Doric pavilion supported by flat pilasters. The firm's exhibit consists of a "Kalamein," an extruded bronze shop front. "Kalamein" is Haskins' economic process of drawing bronze on a hardwood core. A pair of "Firola" doors for the enclosure of party-wall openings is also shown. Over eighty sets of these have been installed in Messrs. Peter Robinson's new premises. A feature of the stand is the unusual lighting effect, which consists of a cold light for the exterior of the stand contrasting with a glowing interior.

Address : Blackhorse Lane, Walthamstow, E.17.

THE "CARRONIA" COMBINATION GRATE.

CARRON COMPANY. Row H, Stand 164.

This exhibit comprises ranges, firegrates, baths, and electric and gas cooking and heating appliances, all of which are in keeping with the Carron standard. An outstanding feature of the stand is the new "Carronia" combination firegrate (Preston's patent). This grate, which is built on new lines, is slow combustion in action, and has no complicated regulating devices. All the heat is utilized, and the firegrate is regulated simply by adjusting the canopy. The oven is heated by hot air. The "Carronia" gives a copious supply of hot water and is economical in fuel. The firegrates on view include mantel registers—examples of the "Glen" and "Castle" series being shown—interior grates in armour bright and rustless steel, and grates fitted with back boilers. The constructional ironwork of the stand, displaying a variety of columns, railings, etc., was manufactured by the company and erected by their own men.

Address: Carron, Stirlingshire.

GEORGE M. CALLENDER & CO., LTD. Row D, Stand 67.

In addition to the model reservoir lined throughout with "Callendrite" sheeting, which is under a practical water test for the duration of the exhibition (described in our last issue), there are many other exhibits of outstanding interest on this stand. To demonstrate "Protex," a material for keeping walls dry, one portion of a wall is treated with "Protex" applied directly on to the brick, and afterwards rendered with plaster; and another portion shows the "Protex" applied to plaster and papered over. The water jets, which saturate the wall from the back, practically demonstrate the effectiveness of "Protex" as a damp resister. "Veribest" ready roofing is also shown. This is a self-finished roofing material of high-grade quality, prepared from pure refined bitumen in 1, 2, and 3-ply. Each roll contains 216 sq. ft., complete with galvanized nails and jointing cement. A model is also exhibited to show the application of "Bitubond" building composition to a cavity wall.

Address: 25 Victoria Street, Westminster, S.W.1.

ROBERT ADAMS. Row D, Stand 58.

On this stand are working models of all the new patterns of the "Victor" door springs. In addition to those with the standard depth of box, others are shown of the shallow type, which are so often required at the present time, not only for buildings, but for important ship work. These shallow spring hinges have been supplied for several of the new Cunard liners, and for many of the new buildings in the City of London, Kingsway, Regent Street, etc. "X-it" panic bolts, an extensive range of fanlight openers, closers, and fasteners, and new models of casement bolts, stays, and fasteners, metal windows, and accessories are also shown.

Address: 3 and 5 Emerald Street, Holborn, London, W.C.1.

CHARLES CHURCHILL & CO., LTD. Row Q, Stand 291.

In "Alundum" safety products the firm show a range of floor and stair nosing tiles in various colours, plain, and with countersunk screw holes. Other exhibits are mosaic tiles, $\frac{3}{4}$ in., $1\frac{1}{16}$ in. square, and 1 in. hexagon, in various colours; aggregates, for treating cement floors and terrazzo to render them slip-proof, in two sizes and various colours; pre-cast terrazzo tiles; samples of pre-cast stair treads and slabs, some treated with aggregates and others with tiles and aggregates combined; and samples of rubbing bricks of various shapes and sizes for rubbing down terrazzo. The firm also exhibit Manning abrasive cloths and papers, including waterproof "Speed-Grits," for the wet rubbing down of enamels, varnishes, etc.; waterproof flint-paper for the wet rubbing down of paint; garnet paper for sanding woodwork; and metallic cloth and paper for polishing metal.

Address: 9–15 Leonard Street, Finsbury, London, E.C.2.

C. A. PETERS, LTD. Row D, Stand 69.

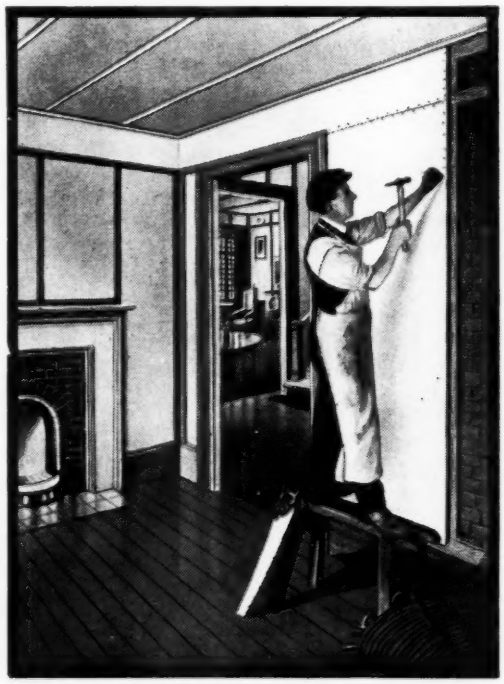
In this pavilion samples are shown of different kinds of wood showing the effect and colour of the firm's wood preserver, "Carbolineum," also the finish when varnish is applied. Tests are given to prove the efficacy of "Carbolineum" for preventing decay and dry-rot. "Peteroid" coloured waterproof cements can be used in all decorative schemes, also aggregates and stuccoes, samples of which are included in the exhibit.

Address: Stores Road Works, Derby.

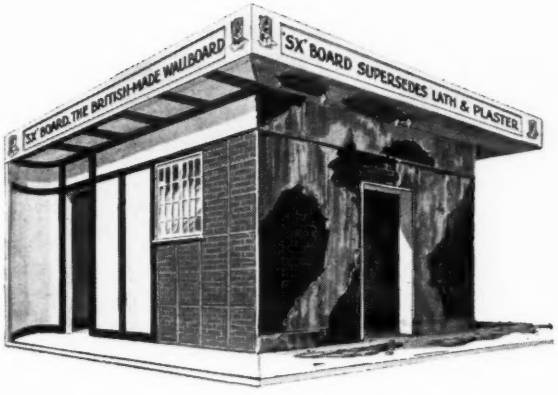
MACANDREWS AND FORBES, LTD. Row O, Stand 265.

Here is a practical demonstration of the manner in which "Fiberlic" wallboard can be used for ceilings and walls. The wallboard obtains its special qualifications from the raw material of which it is manufactured. It can be applied to ceilings and walls very quickly and easily, and distinctive and economical interiors can be obtained by the use of "Fiberlic" and a few wooden fillets or mouldings. The wallboard can be painted, stained, enamelled, or distempered—in fact, any treatment that may be applied to wood may be equally applied to "Fiberlic." The Ministry of Health have approved the wallboard for use on any State-aided housing scheme or subsidized houses.

Address: Bush House, Aldwych, W.C.2.



THE APPLICATION OF FIBERLIC WALLBOARD.



THE STAND OF THE THAMES BOARD MILLS, LTD.

THAMES BOARD MILLS, LTD. Row G, Stand 150.

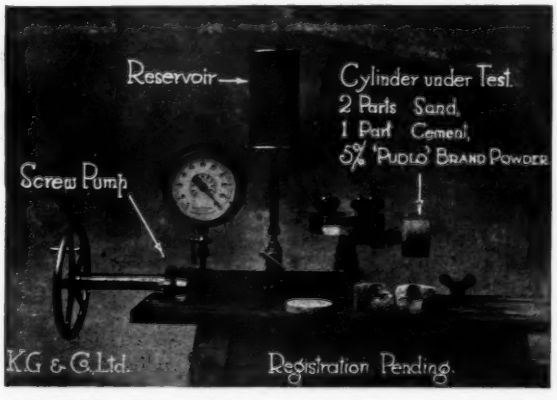
The manufacturers of " SX " board are occupying their old position with a stand designed by Mr. H. Spencer Stowell, M.S.A. The exhibit is constructed entirely of " SX " board, and shows the advantages of the board and a method of using it in a simple, effective, and economical way. The various ways of applying the board to form panels of different designs are shown by dividing the stand up into a number of miniature rooms. The styles of panelling are simple and economical, and such as could be used in any ordinary work. The merits of the British-made board are too widely appreciated to need emphasis. Considerable quantities of " SX " board have been used in connection with the British Empire Exhibition at Wembley, where the manufacturers are also exhibiting. Amongst its many uses " SX " board offers distinct advantages for ceilings, as it will not crack or fall, and is entirely unaffected by vibration.

Address : Purfleet, Essex.

KERNER-GREENWOOD & CO., LTD. Row C, Stand 49.

Visitors to this stand will be interested in the original drawings by Mr. Leonard Squirrell and other artists which have been recently used to illustrate this firm's advertisements in the building press. A prominent position is given to the apparatus by which cylinders of cement and sand are subjected to water pressures up to 300 lb. per sq. in. The cylinder of sand and cement is waterproofed with " Pudlo " brand powder, under test at that pressure for the whole period of the exhibition, and will be broken open on the final day in view of all who care to attend. All the other other exhibits are of a practical character and demonstrate the waterproofing qualities of " Pudlo " brand powder when used with cement in mortar or concrete. Several of these models were constructed on the site by casual hired labour, which provides good proof of the makers' claim that " Pudlo " is capable of efficient results in the hands of the labour employed by the ordinary builder.

Address : King's Lynn.



THE HYDRAULIC TESTING MACHINE ON THE KERNER-GREENWOOD STAND.

THE CHARRIER AND MARBUT CARVINGS, LTD. Row P, Stand 275.

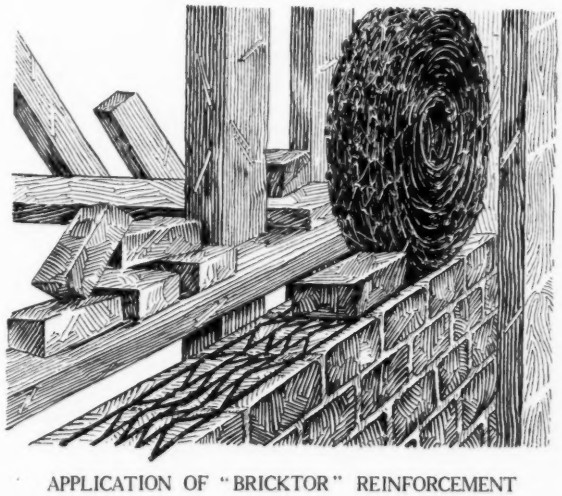
Exhibited here are some fine samples of panelling and doors made with the firm's machine-carved mouldings which are made in the following different grades : the " Charrier " mouldings, which are all classic models from ancient Greek, Versailles, Jacobean, etc., designs ; the " Marbut " mouldings, chisel-carved, of a cheaper make, fine design, and perfect finish ; embossed mouldings, a fine selection of the best class of pressed mouldings ; and hard or soft wood plain mouldings.

Address : Putney Market, Putney, S.W.15.

JOHNSON'S REINFORCED CONCRETE ENGINEERING CO., LTD. Row G, Stand 146.

This company again display in a practical manner their specialities of concrete reinforcements, viz., " Lattice," " Keedon," " Bricktor." " Lattice " mesh reinforcement has been designed, and is manufactured exclusively for concrete floors, roofs, walls, roads, culverts, tanks, and similar constructions. It provides a completed article ready for laying in concrete, reducing the labour charges, and risk of displacement to a minimum. " Keedon " fitments used in conjunction with ordinary round mild steel bars for concrete beams, columns, etc., have, it is claimed, proved to be efficient and economical, and, in application, have the advantage of combining rigid and adjustable members with a non-slipping bar. " Bricktor " is a reinforcement for all kinds of brickwork, partition slabs, concrete block work, etc., where extra strength and lightness of construction are required. The firm have carried out extensive works in reinforced concrete, some typical examples of which are to be seen in the photographs exhibited.

Address : Manchester.



APPLICATION OF "BRICKTOR" REINFORCEMENT

THE CEMENT MARKETING CO., LTD. Row F, Stand 117.

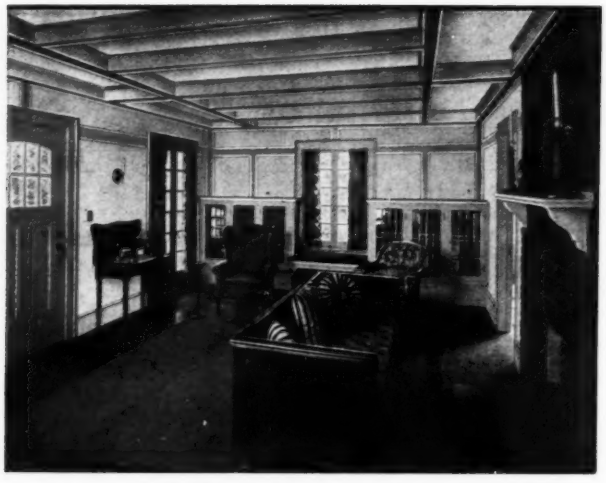
This firm is the selling organization of The Associated Portland Cement Manufacturers, Ltd. ; The British Portland Cement Manufacturers, Ltd. ; Martin, Earle & Co. ; and The Wouldham Cement Co., Ltd. Samples are shown of raw materials used in the production of Portland cement, and of the finished high-grade cement sold by the company. On the stand is also the exhibition office of the company.

Address : 8 Lloyds Avenue, London, E.C.3.

ASSOCIATED CRAFTS, LTD. Row P, Stand 274.

This firm exhibit " Dekart," a material which bears the closest resemblance to oak or any other hardwood. It is a British product, manufactured in London. Its initial cost is considerably less than that of the materials it imitates. By the use of " Dekart " it is possible to reproduce at a reasonable cost charming panelled interiors in conformity with English traditional design. " Dekart " plaster sheets, tiles, and mantels are also shown.

Address : Bridge Works, Cricklewood Broadway, N.W.2.



A BEAVER BOARD INTERIOR.

THE BEAVER BOARD CO., LTD.
Row R, Stand 379.

This stand occupies an island site, and is divided into four sections. Two sections illustrate the finished panel effect obtained by " Beaver " wallboard for two rooms, and the remaining two sections illustrate the correct methods of applying the wallboard. " Beaver " wallboard, a material for constructing and finishing all walls and ceilings, is made from spruce timber of Canada, reduced to fibrous form, and pressed into sturdy panels. The panels can be nailed direct to the studding and ceiling joists, or fixed over brick or concrete walls by the use of battens. It can also be applied over old plaster walls and ceilings. The surface of the wallboard can be finished with oil or water paint, distemper or enamel, when the joins are covered with moulding strips to secure the complete and artistic panel effect. " Beaver " green board and black board are prepared specially for use in nurseries, schools, and colleges, etc. The writing surface is hand-plated and hand-rubbed with a series of liquid slating coats.

Address : 133–136 High Holborn, London, W.C.1.

D. ANDERSON AND SON, LTD. Row F, Stand 118.

This exhibit comprises all classes of " Red Hand " roofing, sarking, and lining felts and dampcourses, also " Rok," " Stoniflex," and " Hippo " roofings. The special exhibits consist of a section showing the construction of a " Belfast " roof, and a section demonstrating Anderson's flat roofing system. Both these form the actual roof of the stand, and access to them is gained by a stairway. " Rok " roofing and " Ferro-Rok " are used as roof coverings on the Belfast roof. Wood fencing is shown treated with " Sidol " wood preservative. The stairway to the " Belfast " roof and the flat roof and all the other woodwork of the stand is treated with the same preservative. A model of a patched slated roof is on view to demonstrate the application of " Bondex " plastic compound.

Address : Park Road Works, Stretford, Manchester.

WALTER CARSON AND SONS. Row K, Stand 207.

Among the exhibits on this stand are pure liquid paints for the highest class exterior and interior decoration ; " Vitrolite " for general decorative work, conservatories, forcing houses, and all horticultural buildings, and " Muraline," a washable water paint in forty artistic shades. Other specialities shown include " Muraprime," a priming for " Muraline " and all distempers ; " Coverine," a white undercoating which transforms black into white in one coat ; " Japolite," a super-white japan ; " Velvarine " decorators' enamel ; " Plastine " imperishable putty ; " Matamure," a wall paint with a perfect matt finish ; " La Belle " enamel, in thirty-two artistic shades ; metallic paints for radiators and all interior metal work ; Maurice's " Porcelaine " enamel in over fifty colours ; graphite paint for steel and iron construction work ; hard gloss paint for exterior and interior work ; implement paint for garden and farm implements ; and a wood preservative for park and garden palings and trellis work.

Address : Grove Works, Battersea, S.W.11.

G. R. SPEAKER & Co. Row G, Stand 152.

The exhibit shows how " Eternit " asbestos-cement materials can be used, in combination with timber framing, to produce artistic and sound effects at a comparatively low cost, yet of an absolutely permanent character, with the added advantage of fire resistance. " Eternit " rough-cast sheets are fixed on the external walls direct to studding. The roof is covered with " Eternit " straight cover red tiles in " Duchess " and " Ladies " sizes, fixed to slating battens. Small model roofs are shown about the building demonstrating the " Eternit " diagonal (" C ") and honeycomb (" F ") system of laying. Another economical method of roofing is shown in " Eternit " corrugated roofing sheets (in lengths 4 to 10 ft.). The internal walls and the ceilings of the stand are lined with plain grey " Eternit " sheeting. A special and recently-introduced feature is the veneered " Eternit " sheeting, which is demonstrated in the small ante-room.

Address : Eternit House, Stevenage Road, London, S.W.6.

ALLAN URE & CO. Row C, Stand 33.

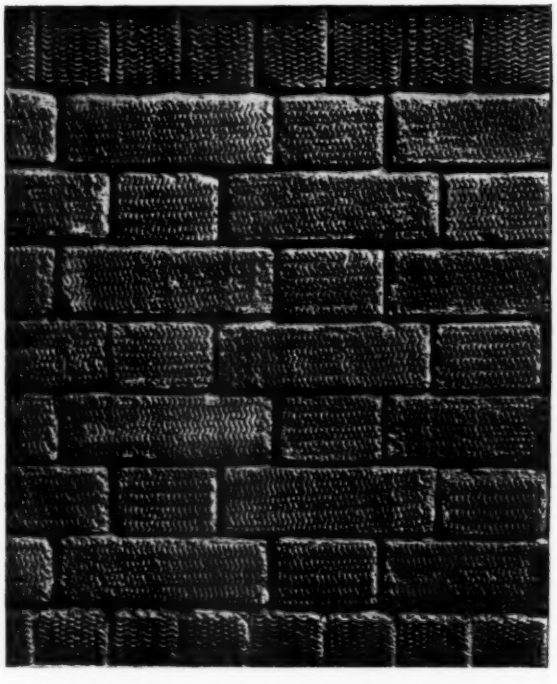
The " Ure " back-to-back grate, which meets modern requirements by making the living-room into an attractive parlour or sitting-room, is seen in operation. The oven is in the scullery, and it also permits of clothes being dried rapidly. The living-room fire heats the hot-water service, cooks in the oven, and boils or stews on the hot-plate at one and the same time. A plentiful supply of hot water is guaranteed, and a gas-grill and boiling-ring can be fixed on the hot-plate. Gas being fitted in the oven, converts it into a gas-cooker for use in summer. The grate is being extensively used in municipal and other housing schemes throughout the country.

Address : Springbank Foundry, Keppochhill, Glasgow.

LONDON BRICK COMPANY AND FORDERS, LTD.
Row F, Stand 128.

This building is faced with multi-coloured " Ruff " bricks, so that architects and builders will have an opportunity of seeing the effect in actual work. The " Phorpres " multi-coloured ruff bricks are manufactured in a pleasing range of colours and of unique design, and at the same time preserve the robust strength and durability of the " Phorpres " Flettons. Produced by an entirely new machine, recently invented for this purpose, the " Phorpres " multi-coloured ruff brick is made under a registered process, from material selected with the utmost care. This new facing brick should appeal to everyone who is interested in cheap house building.

Address : Africa House, Kingsway, London, W.C.2.



A MULTI-COLOURED "RUFF" BRICK WALL

VULCANITE, LTD. Row E, Stand 102.

Models are exhibited showing the application of Vulcanite flat roofing to wood or concrete roofs. This roofing has been, and is being, laid in all parts of the British Isles, and in many cases the roofs have been used as gardens, playgrounds, and even watertanks. Tar macadam has recently been adopted as a new finish to the roofing, instead of the usual sand and gravel. This new finish is well suited for promenades and similar purposes. "Rexilite," also shown, is a high-class figured surface bitumen roofing felt. It is equally well adapted to all classes of building, and is suitable for all climates. "Pyramid" and L.W. bitumen felt, another of the firm's specialities, has been produced to meet the demand for a light roofing and sarking felt. Its popularity can be judged by the fact that recently 1½ million square feet were ordered for the latter purpose. Different specimens of dampcourse are also exhibited.

Address: Blackfriars House, New Bridge Street, London, E.C.4.

THE BIRNWELL IRON CO., LTD. Row B, Stand 14.

The "Birnwell" boiler exhibited provides constant hot water and cooking facilities, as well as warming the house, all with the one fire. It will burn house refuse successfully, and at all times it is claimed it can be relied upon to carry out its manifold useful purposes economically and efficiently, with the absolute minimum of trouble. The boiler is complete with cast-iron tray, legs and ashpan, air-check, shaking bottom, stoking tools and lifter. The bright parts are ground and polished. Each boiler is tested (and bears a certificate of test) to 100 lb. pressure per square inch, and is guaranteed for a period of five years. The installation is by Richard Whittington & Co., Ltd., 3 Risborough Street, S.E., and the bathroom fittings and the "Smoothtop" gas cooker are by the Falkirk Iron Co., Ltd., who are the manufacturers and sale distributors of the "Birnwell" boilers.

Address: 1 Regent Street, S.W.1.

RAVENHEAD SANITARY PIPE AND BRICK CO., LTD. Row G, Stand 136.

This stand is decorated internally and externally with the firm's "Rus" and sand-faced manufactures. The interior exhibits consist of fire-surrounds in both "Rus" and sand-faced, and the exterior of garden ornaments, such as vases, sundials, chairs, forms, etc., and "Rus" paving blocks and clinker pavors. About fourteen years ago the firm were requested by some architect friends to produce a multi-coloured matt surface brick. After a period of experiments in method of manufacture, and blending of raw materials, to fix the effect desired, the firm produced a facing-brick of the required type to which they have given the protected name of "Rus." It was immediately forced upon the firm that this type of building facing opened up a freedom in artistic decoration which had never before been possible, and so they organized a scheme of training in handcraft decorative work and architectural design, which has resulted in some very fine specimens of handcraft.

Address: St. Helens, Lancashire.

A DECORATIVE ROUNDEL IN "RUS" BRICKS.

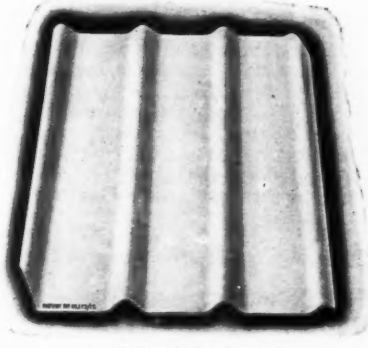
A ROOF OF OLD DELABOLE SLATES.

SETCHELL AND SONS, LTD. Row Q, Stand 294.

On this stand are exhibited the products of the Old Delabole Slate Quarries, for whom they are the sole distributing agents. These slate quarries have been in continuous working for over 60 years, and the slates they produce are renowned all over the world for their durability and charm of colours. The roof of the exhibit is covered on one side with green randoms, and on the opposite side with rustic red and green randoms mixed. On the hip end green-sized slates are used. The vertical external walls are covered with grey slates in small sizes.

Address: 26–27 Finsbury Court, E.C.2.

TURNER BROTHERS ASBESTOS CO., LTD. Row H, Stand 160.



A "TRAFFORD" TILE.

This stand takes the form of a small steel-framed building, and shows the practical application of Turner's Trafford tiles (Asbestos-cement). After exhaustive tests the engineers and architects selected Trafford tiles for the Stadium covered stands and the permanent exhibition buildings at the British Empire Exhibition, Wembley. Here it was essential that the roofs should be weather-tight under all atmospheric conditions, and that the material employed should not conserve or radiate sun heat or external cold. The nature of the structures demand also that the material must be permanent without requiring treatment or any other form of maintenance. The adoption of this tile materially assisted in producing the light superstructure of the Stadium covered stands and the main buildings, and in forming the arched roofs over the main avenues and corridors of the permanent buildings.

Address: Rochdale.

THE IRONITE CO., LTD. Row F, Stand 106.

Here are shown "Ironite" brand cements for flooring and waterproofing. The products are British manufacture from start to finish. Wherever an industrial floor is needed it is claimed that "Ironite" flooring completely fulfils every requirement. It is claimed to be wearproof, waterproof, dustproof, and greaseproof, and particularly suitable for warehouses, factories, breweries, dairies, garages, stables, bank strong-rooms, and cinemas. Samples are also exhibited of surfaces treated with "Ironite" and cement slurry. This can be applied with a brush by unskilled labour. It saves the cost of rendering concrete, breeze blocks, brickwork, and other porous surfaces. A miniature working model of the "Besnard" universal automatic crane is also shown.

Address: 11 Old Queen Street, Westminster, S.W.1.

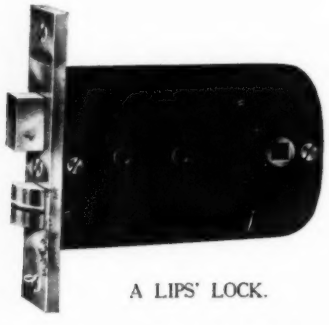
RONUK, LTD. Row F, Stand 114.

The whole of the woodwork of this exhibit has been prepared and polished by the " Ronuk " improved sanitary methods. The specially trained workmen of the company's polishing contract department work under the supervision of experts with over twenty years' experience. Demonstrations of simple and scientific floor maintenance are constantly being given. The floor of the stand is of ordinary deal boards, which have been prepared with " Ronuk " special staining.

Address : Portslade, Essex.

LIPS, LIMITED. Row J, Stand 196.

This firm exhibit cylinder locks and latches, lever locks, door furniture, door checks, floor springs, and safes, and most of the locks have the internal parts drop forged, thus eliminating any faults which so often occur in cast parts. Latch bolts



A LIPS' LOCK.

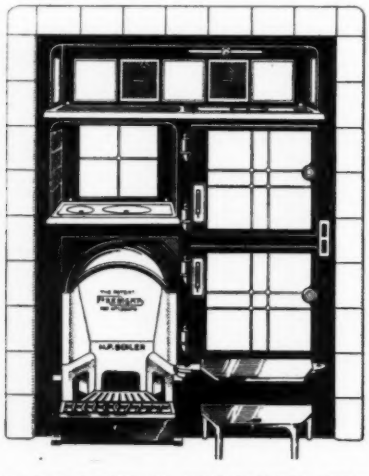
have a separate spring to work the latch independent of that which works the follower. This results in the smooth working of the lock. The system of master keying is unique. Two separate keyholes are used, one for the master key, and the other for the service key. Each key operates a separate set of levers. Many of the models shown are open-capped, and it is possible to see all the inner parts without dismantling the lock. A great attraction is the sectional working model, ten times the actual size, of the ordinary cylinder used. This model illustrates how the key, when inserted, lifts the five pins to the correct height and then allows the inner cylinder to turn.

Address : Kingsway House, Kingsway, W.C.

SAMUEL SMITH AND SONS, LTD. Row L, Stand 226.

Many advantages are claimed for the " Foresight " combination grate, to be seen on this stand. It cooks the food, ensures a plentiful supply of hot water at all times, enables several boiling utensils to be in use at the same time, and is converted easily and quickly from a cooking range into an open fire. It warms the room as it cooks. The coal consumption is regulated by an automatic movable canopy, and the draught is regulated easily by a sliding ventilator in the fret. The working parts cannot burn away or get out of order as they are away from the fire, the flues are easily cleaned, and the maximum heat is radiated in the room from a special all fire-brick back. All parts are easily replaced, should breakage occur, as they are all standardized ; an extra hot plate and close fire is obtained by swinging the trivet over the fire.

Address : Beehive Foundry, Smethwick.



THE "FORESIGHT" COMBINATION GRATE.

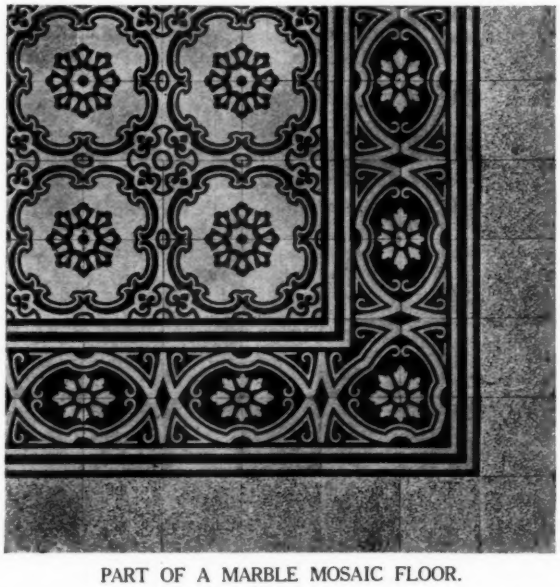
TUKE AND BELL, LTD. Row D, Stand 65.

The exhibits of this firm comprise a country house sewage installation, the " Ideal " sewage distributor, the " Carlton " revolving distributor, water-softening apparatus, and a water-pressure filter. The country house sewage installation comprises a semi-septic tank, with its fittings and covers, an aerobic filter with specially-designed distributing apparatus, to reduce the amount of attention necessary to the minimum, and a final humus pit. The installation is capable of dealing with the sewage from an eight-person house. The water-softening apparatus is of a simple design, and based on the Dr. Clarke process. The water-pressure filter is for purifying water for country houses and institutions.

Address : 27 Lincoln's Inn Fields, London, W.C.2.

THE MARBLE MOSAIC CO., LTD. Row R, Stand 311.

On this stand are examples of the firm's mosaics in marble and glass, terrazzo, glazed and vitreous wall tiling, "Imperator" (registered) cast marble work for plinths, lavatory divisions, etc., and " Linolith " jointless flooring. Features of the stand are the two types of flooring tiles in plain and ornamental



PART OF A MARBLE MOSAIC FLOOR.

patterns. These tiles are new to this country, although they are largely used in Italy. They are exceedingly hard, being made under hydraulic pressure. A large number of designs are available, and prices are moderate.

Address : Linmos House, Charles Street, St. James, Bristol.

THE SPEDOL MANUFACTURING CO., LTD. Row O, Stand 263.

This stand has been designed by a decorator customer of the firm, and the specimens of work shown have been executed under every-day working conditions. Each side of the stand is executed with a different " Spedol " product, and shows the work that can be done with reliable materials. Particular attention is directed to the " Stempeau " and " Spemac " panels, as examples of craftsmanship in distemper and enamel work. One side of the stand has been designed to represent the back of a house where the uses of " Ferroarmor," a rust-resisting paint, is demonstrated. Among other of the company's products exhibited are : " Stempeau " distemper, " Stempeau " ceiling white, " Spemac " enamel, " Spedol " varnishes, " Spedol " genuine ready-mixed white-lead paint, " Spedol " colours ground in oil, " Spedol " dry colours, and " Swift " liquid driers.

Address : Brentford, Middlesex.

A PARISH HALL ROOFED WITH "POILITE" PANTILES.

BELL'S POILITE AND EVERITE CO., LTD. Row P, Stand 279.

The specialities of the company are demonstrated upon an aerial tower, 60 ft. high, and octagonal at the base. The roof of the octagon shows the application of " Poilite " russet-brown pantiles, and other forms of " Poilite " tiling. The portion above the octagon is 11 ft. square, and is clad externally with the new " super " corrugated " Everite " sheeting, known as "Everite Big Six," and the portion above this is 7 ft. square, and is clad externally with " Standard Everite " corrugated sheeting. The roofing between the two square portions of the tower shows the application of " Poilite " straight cover slating in various colours, and the top of the tower is covered with a hipped roof of " Poilite " red standard diagonal tiling. The open space under the octagonal roof provides accommodation for samples of all the various forms in which " Poilite " and " Everite " are produced.

Address : 59½ Southwark Street, London, S.E.

FERODO LTD. Row D, Stand 60.

This firm exhibit a full range of samples of their fabric stair treads, with several models showing the methods of fixing the nosings and treads to various types of stairs. The treads are specially woven from cotton, and treated by a process to make them durable and long wearing. They are supplied in two thicknesses in various colours, which are permanent. The material is claimed to retain its non-slipping qualities and good appearance however well worn. The treads are easily fixed to new or worn staircases in wood, stone, or metal, and do not injure the foundation of the step. Samples are also shown of " Feroleum " nosings and flooring material. This is made from fine Para rubber and " Ferodo " fibre, and can be obtained either with a corrugated or plain surface.

Address : Sovereign Mills, Chapel-en-le-Frith.

THE EXPANDED METAL CO., LTD. Row G, Stand 151.

The exhibit consists of samples of the company's products and examples of their uses, and photographs of various works carried out. The exhibits include " Expamet " expanded steel, which has been in use all over the world for more than thirty years, for reinforcement for concrete in foundations, walls, floors, roofs, bridges, culverts, and silos; RR. 6 in. mesh " Expamet " reinforcement for roadways, pavings, etc.; " BB " and " Expamet " lathings for interior and exterior plaster work; " Ribmet " ribbed lathing; " Exmet " reinforcement for brickwork, concrete-block work, partition slabs, and asphalt, etc.; and mild steel wall-ties for cavity walls. Sections are shown of a culvert reinforced with " Expamet," of flooring reinforced with " Expamet," and of paving reinforced with RR. 6 in. mesh " Expamet."

Address : York Mansion, Petty France, Westminster, S.W.1.

J. A. KING & Co. (" King " Fireproofing). Row F, Stand 109.

The exhibits on this stand are as follow : " King " concrete partition blocks, 3 ft. by 12 in. by 2 in., 2½ in., 3 in., and 4 in. thick. " King " wall blocks of the following thicknesses : 2 in., 2½ in., 3 in., 4 in., 4½ in., 6 in., 8 in., and 9 in., hollow for cavity wall or single wall construction. " King " plaster slab partitions : 6 ft. long, 12 in. high, 2 in., 2½ in., 3 in., and 4 in. (hollow) thick. " King " plaster slab ceilings : 2 ft. wide, 3 ft., 3 ft. 6 in., 3 ft. 9 in., 4 ft., 4 ft. 8 in. long; ⅝ in. and ¾ in. thick. " King " roof slab construction, which takes the place of roof boarding and rafters, and is fire-resisting and insulates against heat and cold. " King " puggling slabs, made to suit spacing of joists, and the " King " ferro-concrete glazing bar. The " Ferro-Glass " (ferro-concrete and glass construction) is constructed with glass prisms having small ferro-concrete beams formed between. It is used for pavement floor, roof and stallboard lights. There is no exposed iron to rust, and no painting is needed. " Cristol-glass " is a high-relief glass in copper glazing for domes, laylights, and vertical glazing.

Address : 181 Queen Victoria Street, London, E.C.

SIEGWART FIREPROOF FLOOR CO., LTD. Row E, Stand 92.

This firm specialize in a fire-resisting floor which requires no centering whatever, and the exhibits consist of a display of these beams showing the simplicity of this construction. The exhibits demonstrate by actual construction the methods employed for obtaining either a finished soffite ready for limewhiting, or by the firm's special expanded metal joint, an ideal key for plaster work. The " Siegwart " floor consists of a series of hollow beams, made of ballast concrete, and reinforced with mild steel rods. The beams are delivered on the site in a thoroughly matured condition; they are placed on the bearing provided, and the narrow joint between them is grouted with sand and cement. The floor is then ready for other trades to finish. By this method centering is entirely eliminated and the loss of time occasioned by the concrete maturing on the site is obviated.

Address : Thanet House, 231 Strand, London, W.C.2.

LANGLEY, LONDON. Row H, Stand 157.

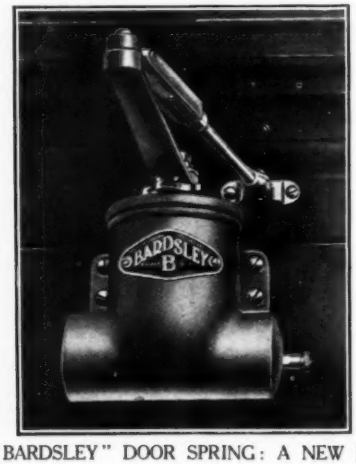
This stand has been erected from the designs of Messrs. Welch and Hollis, architects, to display Marseilles, Du Nord, and Beauvais roofing tiles. The Du Nord tile is an improved form of pantile, and its interlocking roll gives the effect of the Roman tile. This tile is light in weight, and owing to its thickness and close texture is practically non-absorbent. Features of the Beauvais roofing tile are its extreme hardness and fine dark red colour. The tile is almost as hard as iron, practically speaking, impervious to moisture, and is guaranteed by the makers for thirty years against frost. The London County Council have used Marseilles tiles in large quantities on all four of their big housing schemes, and at the L.C.C. meeting of January 30, 1923, the chairman of the Housing Committee said : " The advantage as to cost has been overwhelming." The Corporations of Manchester, Liverpool, Glasgow, and other big cities have used them on hundreds of houses.

Address : 161 Borough High Street, London, S.E.1.

A "MARSEILLES" ROOFING TILE.

NETTLEFOLD AND SONS, LTD. Row F, Stand 111.

Exits and entrances have long been the special concern of this firm, who, in addition to a wide range of locks, hinges, and door furniture, including a number of patterns specially suitable for housing schemes, are showing several new lines in



THE "BARDSLEY" DOOR SPRING: A NEW MODEL.

door and window fittings. In the lock section is a new automatic lavatory lock. This not only counts and registers the pennies put into it, but refuses bent coins, or the like. An electric lift lock, any part of which can be taken out and replaced in a few seconds without removing the case of the lock, is also shown, as well as a reversible four-way rim lock with a double spring live bolt action. This latter is specially suitable for carrying a heavy furniture, and can be used on either a right or left hand door. Another little device is the " Reliable " night-latch guard, which is easily fixed and gives complete security. A self-locking casement stay is another interesting innovation. It can be operated with one hand, and cannot rattle in the strongest wind. The " Bardsley " oil door-check and spring is again exhibited.

Address : 54 High Holborn, W.C.1.

HOOLEY HILL RUBBER AND CHEMICAL CO. Row C, Stand 37.

The Hooley Hill Rubber and Chemical Co. exhibit all varieties, shades, and thicknesses of rubber flooring and tiling, and the Universal Rubber Paviors (Manchester), Ltd., various illustrations of road paving blocks, showing the methods of applying their new patented rubber roadway.

Address : Audenshaw, near Manchester.

THE STANDARD CONCRETE MACHINE CO., LTD. Row S, Stand 316.

An outstanding feature of the firm's standard concrete machine is that after the mould box has been assembled any type of plain or ornamental block may be produced without the addition of loose packing pieces or inserts. This considerably expediting production. The moulding dimensions of the machine are from 1 in. to 3 ft. wide, 1 in. to 6 ft. long, 1 in. to any practicable measurement high, and a maximum weight of 2 tons for the largest product. The action of the mould box will appeal to all practical workers in concrete and artificial stone, for the mass production of these materials. The mould box is withdrawn from the product, not the product from the mould box. The machines give an unlimited variety of castings. A low-priced power-driven concrete mixer is also shown.

Address : 317 High Holborn, London, W.C.1.

THOMAS POTTERTON. Row C, Stand 46.

This firm exhibit a selection of the standardized types of " Victor " gas boilers, and a working example of a system supplying hot water for general domestic use. A small installation for warming purposes, with circulating radiators, heated by gas, controlled automatically, is in operation as an instance of supplementary heating equipment for residence or offices, or as an example of treatment for small conservatories, greenhouses, and garages. " Thermostats," in both the water-type and the atmospheric type, for the automatic regulation of gas consumption, can be seen in action. The " Victor Combination" boiler, which uses coke or other smokeless fuel, or gas, is shown for the first time. This is specially designed for use in private houses where a kitchen range is not installed, and solid fuel is required for winter duty. Standard types of sectional boilers for central heating and applied equipment are also shown, as well as water treating plants for the elimination of impurities.

Address : Ravenswood Road, Balham, S.W.12.

THE HEMEL HEMPSTEAD PATENT BRICK CO., LTD. Row F, Stand 119.

This is an exhibit of " Hempstead " specialities. " Hempstead " hollow partition blocks are made in all thicknesses from 1½ in. to 4½ in.; they are made to take nails or screws, and can be sawn or tooled as required. " Hempstead " hollow building blocks are made in sizes 12 in. by 9 in. by 6 in., and 12 in. by 9 in. by 8 in. They are being supplied for numerous housing schemes in various parts of the country. " Hempstead " hollow floor tiles are stocked in sizes 10 in. by 10 in. by 4 in., 10 in. by 10 in. by 5 in., 10 in. by 10 in. by 6 in., and 10 in. by 10 in. by 8 in.; other sizes can be supplied to suit patentees' requirements. The " Hempstead " specialities are soundproof, and are guaranteed fire-resisting to the melting point of steel, 2,786 deg. Fahr.

Address : Hemel Hempstead.

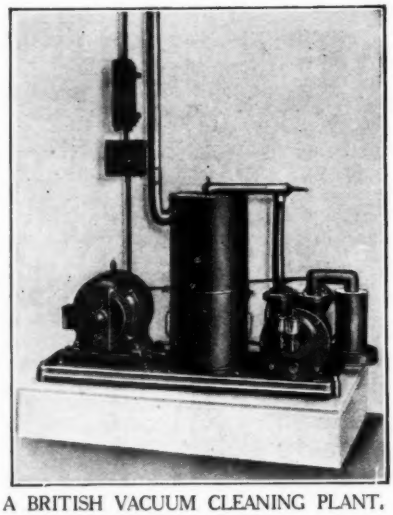
THE BRITISH MAGNESITE FLOORING CO. Row R, Stand 304.

This firm, after experiments extending over many months, have perfected their system of intermediate reinforcement, and are now prepared to guarantee their " Magbestic " floors against cracking and bulging when laid on boards, as they do all other foundations approved by them. The boards are first made sound, and then nailed every two or three inches, leaving the nails protruding from the floors about a quarter of an inch. The " Magbestic " underlay is then laid. When quite hard it is ready to receive the wire netting and the finishing coat of " Magbestic." This method creates an intermediate reinforcement between the two layers of " Magbestic," and prevents the flooring from cracking and bulging, due to the boards being loose or twisting.

Address : City House, 158-160 City Road, London, E.C.1.

THE BRITISH VACUUM CLEANER AND ENGINEERING CO. Row J, Stand 182.

On this stand are heavy duty portable and stationary vacuum cleaning plants. The company claim that their positive type vacuum-cleaning plant is satisfactory for the majority of vacuum-cleaning problems. They also supply a turbine or multi-stage fan type of plant for factory and very rough floors, where there is a considerable quantity of dust and small



A BRITISH VACUUM CLEANING PLANT.

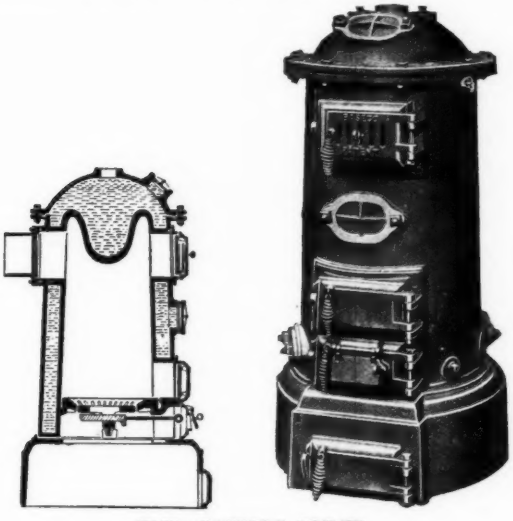
refuse present. The company's plants have been installed recently in the Garrick Theatre, London; Cairn Hydropathic, Harrogate; The Capitol Cinema and Café and the New Tivoli Picture House, London, and many other buildings. The company also supply a pneumatic suction plant for dealing with the removal of boiler-flue dust.

Address : Parsons Green Lane, London, S.W.6.

O. BRUSTER. Row L, Stand 220.

Mr. O. Bruster (successor to Bruster and De Launoit) exhibits the "Baseco" and the "Glow Worm" boilers. By the "Baseco" boiler the maximum efficiency is obtained with a minimum consumption of fuel by reason of the special water-pocket in the dome, and waste gases are considerably reduced. The construction of the dome permits of this portion being very easily removed, thus exposing the whole of the interior, and affords easy access for the removal of incrustation. The whole of the boiler surface exposed to the fire is backed with water, and the waterway extends down several inches below the firebars, so that any deposit which may accumulate at the bottom of the boiler will not cause it to fail by burning through at the firebar level.

Address: 4 Lloyds Avenue, London, E.C.3.



THE "BASECO" BOILER.

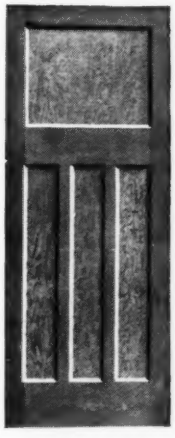
THE INTEROVEN STOVE CO., LTD. Row K, Stand 210. Row L, Stand 233.

At the former stand (No. 210) the company demonstrate the outstanding points of the new "Super-Interoven" stove, and at the other the "Super-Interoven" stove is shown actually working. The "Interoven" and "Super-Interoven" convertible cooking and heating stoves (Pascall's patents) cook all the meals, bake bread and pastry, and give an ample supply of hot water for baths and domestic purposes, and a cosy fire all day. They are instantly convertible from a cooking stove to an open fire sitting-room grate. Over 60,000 "Interovens" are now in use. Other specialities of the firm include "Bewty" expanding barless fire fronts (Pascall's patent) for modernizing old-fashioned sitting and bedroom grates at a small cost; "Bewty Minor" and "Bewty" dog grates; "Ten-in-one" adjustable stool bottom grates (Pascall's patent), and wrought welded range boilers of every description.

Address: 156 Charing Cross Road, London, W.C.2.

WOCO DOOR COMPANY. Row R, Stand 305.

"Woco" doors are manufactured from Columbian pine, seasoned by a special process to ensure their durability, and to prevent warping, twisting, or shrinking, while the 3-ply panels used are of rotary-cut veneers from Columbian pine selected logs, prepared with a special damp-proof cement. The doors take an ordinary oil stain and wax compound polish readily and inexpensively. The grain effect is restful and pleasing to the eye. The doors have been on the English market since 1907, and during the past three-and-a-half years have been sold under a guarantee. The "Woco" door factory, which has been established for over thirty-four years, owns its standing timber and logging camps and operates its own sawmills and extensive plant for seasoning, the special process used having been perfected after many years' experience. The company carry a regular stock of some 15,000 doors in London, and the same quantity in Liverpool, so that prompt deliveries can be made to meet all demands.



A "WOCO" DOOR.

Address: Dashwood House, London, E.C.2.

MANDER BROTHERS, LTD. Row G, Stand 141.

This large pavilion is decorated with the firm's paint and enamel specialities. For the outside a bold and effective scheme of colouring has been adopted, consisting of columns in black ebony finish, panels in cobalt, violet, "Vernasca," and stiles in egg-shell gloss white enamel, a large fascia being done in a shade of "Suffield green." This, with the lettering in gold, and a touch of gold on the capitals of the Corinthian columns, forms a striking yet harmonious whole. The interior, decorated with "Aqualine" water paint and egg-shell gloss white enamel, shows a scheme of colouring in dove grey, apple green, and cream, with stencilled design in bright green on the panels. The whole forms an excellent illustration of the effects to be obtained with comparatively inexpensive materials.

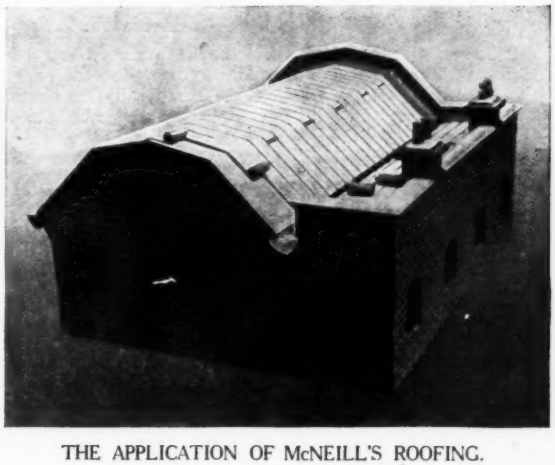
Address: Wolverhampton.

F. McNEILL & CO., LTD. Row J, Stand 184.

The chief points of quality about the "Lion" brand roofing and roof lining felts are their fine and even texture and their solidity and pliability. "Lion" roofing is used in immense quantities at home and abroad, in the most important contracts for Government departments, railway companies, and by large building contractors. It is made in various thicknesses, and is suitable for all climates. Models are shown to illustrate the most economical and efficient method of using it. Models are also exhibited to demonstrate the advantages of the "Combinite" system of roofing for flat or sloping roofs, and the fireproof and soundproof qualities of "Slagbestos." The firm are also manufacturers of dampcourses to the Ministry of Health's specifications.

Address: Bunhill Row, London, E.C.1.

THE SUPER "INTER-OVEN" STOVE.



THE APPLICATION OF McNEILL'S ROOFING.

HENRY BANGER. Row O, Stand 264.

The " Conbloc " concrete block-making machine exhibited on this stand—to which reference was made last week—is timber-framed, with an iron interior. This machine will make any block necessary for a building, as well as Banger's patent handled hollow block. The latter is designed for speed in building. The removable handle enables the block to be manipulated expeditiously. It is particularly suitable for 9 in. work. Banger's patent non-slip roof tile is rigid when laid in position, and cannot slip or blow off; it forms a windproof roof, and no board or felt is needed. It is made in burnt clay or concrete. Banger's patent concrete roof slab is suitable for large plain roofs or farm buildings. No woodwork needed for this form of roofing. Banger's patent weather tile, made in concrete by moulds supplied by the patentee, and samples of the Pentewan (Cornwall) sand are also shown.

THE CONBLOC MACHINE.

Address : Constitutional Buildings, East Grinstead.

THE LEWBART MANUFACTURING CO., LTD. Row B, Stand 11.

The Lewbart disinfector is a simple means of disinfecting lavatories automatically. It enables the lavatory to be cleansed and deodorized by the simple act of pulling the chain. When the chain is pulled, the water rushing down the pipe moves a lever which releases the desired quantity (from eight to twenty-five drops) of disinfecting fluid. At the same time a quantity of the falling water is led into the mixing chamber, which mixes the fluid and makes a fifty to one solution or any other strength desired. This solution slowly enters the pan only after the flush has taken place. It does not mix with the water remaining in the pan, but floats on the surface, thus forming a protective barrier or film.

Address : 2 and 3 Norfolk Street, Strand, W.C.2.

THE BURLINGTON SLATE QUARRIES. Row N, Stand 248.

This pavilion has been designed by Mr. J. J. Taylor, of Westminster, to demonstrate the uses of the slate and stone from the Burlington slate quarries. It is floored with slate flags. Some of these are rectangular, whilst others of random sizes and irregular contours are arranged in the " crazy pattern " paving. The main piers carrying the roof are of slate stone in varying thicknesses, having weathered bed-joints in accordance with local custom. The enclosing walls are constructed in a similar manner. The roof and the upper parts of the enclosing walls are covered with slates to illustrate some of the sizes, qualities, and colours produced at the quarries. The slates are known as " North Lancashire " or " Westmorland Dark Blue."

Address : Kirkby-in-Furness, North Lancashire.

ROANOID, LTD. Row D, Stand 70.

" Roanoid " is a non-inflammable composition which is intended to replace metal in fittings for interior domestic use. Such articles as door handles, finger plates, slip bolts, switch and bell covers, switch plates, shutter and cupboard knobs, drawer pulls, curtain rods, curtain brackets, curtain rings, stair rods and eyes, hat and coat hooks, and sash lifts are manufactured in eighteen art shades. The fittings do not require to be polished or cleaned at any time; they cannot corrode or tarnish. The polish is produced by friction. " Roanoid " makes the completion of a decorative scheme possible, no matter how elaborate. Its installation saves time, labour, paint, polish, and adds to the artistic beauty of the home.

Address : 29 West George Street, Glasgow.

KLEINE PATENT FIRE RESISTING FLOORING SYNDICATE, LTD. Row F, Stan 116.

This exhibit comprises fire-resisting floors, roofs, and staircases of reinforced hollow bricks. Among the important buildings in which the firm's construction has been used are the following: The new Chemical Laboratory, Edinburgh University (A. F. Balfour Paul, architect); Audley House, Margaret Street, W.; 4 New Burlington Street, W. (Niven and Wigglesworth, FF.R.I.B.A., architects); 49-50 Newgate Street, E.C.4 (Farrow and Turner, architects); Queen Mary's Maternity Hospital, Hampstead (F. Danby Smith, F.R.I.B.A., architect); Westminster Bank, Harley Street, W. (Campbell, Jones, Son, and Smithers, architects); Tivoli Palace, Strand, W.C. (Bertie Crewe and Gunton and Gunton, architects); Johnson's Dye Works, Bootle (Briggs and Thornely, FF.R.I.B.A., architects); Tower Buildings (W. Aubrey Thomas, architect); King Edward VII College, Lytham, St. Anne's (Briggs, Wolstenholme and Thornely, FF.R.I.B.A., architects); Town Hall, Sheffield (F. E. P. Edwards, F.R.I.B.A., city architect); " Sheffield Telegraph " Offices (Gibbs, Flockton and Teather, FF.R.I.B.A., architects); Arts Building, Liverpool University (Briggs, Wolstenholme and Thornely, FF.R.I.B.A., and F. W. Simon, architects); the Library, University College, Reading, and the Royal Berks Hospital, Reading (Charles Smith and Son, F.R.I.B.A., architects); Messrs. McCorquodale's Printing Works, Cardington Street, N.W. (S. Clifford Tee, F.S.I., architect).

Address : 133-136 High Holborn, W.C.1.

ROBT. INGHAM, CLARK & CO., LTD. Row G, Stand 140.

The stand representing the associate houses of Messrs. Robt. Ingham, Clark & Co., Ltd., and R. Gay & Co., Ltd., consists of five columns arranged around a forecourt having two private offices at the back. The columns are decorated with " Pearline " white enamel. The front of the offices, which forms a background for the white columns, is decorated with " Gaymatt " flat oil finish and is of a deep blue colour. A door, occupying a central position, is finished on one side with " Omnilac," a vintage varnish, and the reverse side illustrates the use of flat enamel for interior decorative effects. The sides and back of the stand are decorated with " Gaymatt " flat oil finish in various shades. " Walgay " washable distemper has been used on the walls of the offices. Panels illustrating the finish to be obtained with various other products of the associate houses are also displayed.

Address : West Ham Abbey, London, E.15.

E. POLLARD & CO., LTD. Row H, Stand 159.

This firm show fireproof, interlocking, curvilinear, and wood lath revolving shutters. A full-size working model of the fireproof rolling doors is erected on the stand for demonstration purposes. This shutter fulfils the L.C.C. and Fire Insurance regulations. The firm are the patentees and sole makers of the " Kwikserving " system of store equipment, builders of shop-fronts in bronze metal, wood, granite, and marble. A complete shopfitting organization at the service of architects. Among the architects for whom work has been executed by the company are the following: Messrs. W. A. Wilson, F.R.I.B.A., Stanley J. W. Burmister, A.R.I.B.A., Miller and Son, J. C. King and Sons, Josephs and Sons, C. J. McNair, Licentiate R.I.B.A., and H. L. Cabuche, O.B.E., F.S.A.

Address : St. John's Square, Clerkenwell, London, E.C.1.

THE RUBEROID CO., LTD. Row H, Stand 155.

This exhibit includes " Ruberoid " roofing, dampcourses, sarking, and roofing felts, insulating papers, and preservative paints. " Ruberoid " roofing can be used for flat, pitched, or curved boarded or concrete roofs. It is made in three colours—grey, red, and green—and these colours are permanent. In addition to the smooth finish, " Ruberoid " is also made with a slate surface, formed by rolling natural crushed slate evenly into the surface during manufacture. Models show the method of application to roofs of various types, and provide examples of flashings and gutters, etc. There are, however, " Ruberoid " roofings on important buildings in practically every town in the country, and actual examples of their work can be easily inspected by arrangement.

Address : Lincoln House, 296-302 High Holborn, London, W.C.1.

HOYLE, ROBSON, BARNETT & CO., LTD. Row O, Stand 260.

This stand, which houses the commodities of Messrs. Hoyle, Robson, Barnett & Co., Ltd., and Messrs. John Smith and Son (Haltwhistle), Ltd., shows the products of the associated firms in actual use. Outside and in are equally employed for display. " Saneros," a water paint; " Protectaros," a high-gloss finish; and Hoyle's S.P.P. (semi-prepared paint) are all shown in various ways on the exterior. The interior is given over to a variety of schemes in " Saneros," and " Hoyflat "—a flat oil paint. The virtues of " Tynewhite "—a white enamel, and the lustrous qualities of " Tynelac " and " Palusto "—varnishes made by John Smith and Son, Ltd., are shown in the decorations and on panels. One half of the interior is given over to a display of paint-making on a machine made by the Brentside Engineering Co., Brentford, London.

Law Reports

Improvement—Covenant—Right to Premises

Seddon v. *Commercial Salt Co.*

March 12. King's Bench Division. Before Mr. Justice Shearman.

This was an action by Mr. Henry Seddon, of Leamington Spa, against the Commercial Salt Co., Ltd., of St. Pancras Lane, London, to recover possession of the Lawton Salt Works at Chester, on the ground of alleged breach of covenant.

For the plaintiff, Mr. Greaves Lord, K.C., said the plaintiff was the lessor by assignment of the property, and the defendants were the lessees, and the covenant, *inter alia*, stipulated that the defendants should keep the property in proper repair. The defence was a denial of the breach, that the plaintiff had waived his rights and consented to some of the breaches alleged, and defendants counter-claimed for relief. Counsel explained that the defendants had pulled down a lot of the old buildings and had allowed others to get out of repair, and although the plaintiff asked them to put things right, they had not made good, although they had erected some new buildings. The rent was £600 a year, payable in advance.

His lordship: What is there at the back of it; they have modernized the place, and now you want to get it back?

Mr. Greaves Lord did not pretend that he had all the merits, but there had been breaches of covenant and his client wanted possession.

Mr. Harold Sheldon, surveyor, spoke to having surveyed the works and given instructions for certain repairs to be done. These had not been all done, although some were completed after the writ was served. Witness agreed that £4,000 had been expended by the defendants upon buildings. Some of the buildings were so old they had to be pulled down for safety. Another witness said that pipes had been relaid and the general plant improved, with the result that the output of salt had been more than doubled. As soon as notice was served all the repair work was done. Mr. G. Bailey, of Manchester, civil engineer, and surveyor also gave evidence.

His lordship, in giving judgment, said this was an oppressive action, for the sake of getting the benefit of improvements made by the tenant to property. Defendants had turned a somewhat antiquated business into a flourishing one. He had come to the conclusion that there had been a technical breach by the defendants, because although the covenant stipulated that reasonable alterations could be done to the existing buildings, that did not entitle the defendants to pull buildings down absolutely. There was no doubt that the defendants had made improvements, and the plaintiff had not lost a penny piece. So the question was what relief he could give, and he decided defendants should have unconditional relief, and the plaintiff would have to pay all the costs as the action was an oppressive one.

Footpath Rights

The Marquess of Granby v. *Bakewell Urban and Rural District Council.*

March 28. Chancery Division. Before Mr. Justice Eve.

Mr. Maugham, K.C., on behalf of the plaintiff in this case, stated that it was an action to prevent a trespass on the plaintiff's land which adjoined Haddon Hall. Several questions arose in the action. The house had been unoccupied for some years and the property had been in settlement for 100 years. The plaintiff now desired to live there, but he would be unable to do so if these trespasses which took place close to his private garden were allowed to continue. At the same time he had no objection to the local people at all, but only to those who had nothing to do with the neighbourhood and who might not always keep to the paths. He was willing to give permission to the local people, but he wanted to restrain the newcomers. In these circumstances the plaintiff found himself party to an action against the defendants with whom he had no quarrel at all. What he desired was to have a speedy trial and he asked that the motion should stand till the trial.

Mr. Rooper Reeve, K.C., for the defendants, acceded to the suggestion, and desired that the motion should stand over until the trial of the action.

This was agreed to.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Housing Progress.

Mr. Wheatley, the Minister of Health, replying, during the second reading of the Consolidated Fund Bill, to inquiries on housing matters, said that in Scotland the 1923 Act had been practically a dead letter. With regard to the forms of assistance granted under that Act, out of a total of 41,060 houses, 40,141 had had the lump sum subsidy; 721 had received assistance by payment to people who paid the rates, and in 198 cases assistance was given to building societies. In the case of public utility societies, schemes had been authorized in respect of 5,681 houses. Contracts had been let for 3,601 of these, and 529 of the houses had been completed. Loans had been sanctioned to local authorities, under section 5 of the Act, in 104 cases, for a total sum of £1,320,429, and under the Small Dwellings Acquisition Act, in eighty-one cases, involving £1,469,000. The Ministry of Health had received no proposals in regard to the conversion of flats into small dwellings. The 1923 Act had not been an efficient instrument for the solution of the housing problem. The latest figures showed that the Ministry of Health had given to local authorities authorization for 40,198 houses, and to private enterprise for 76,927 houses, making a total of 117,125. For these, contracts had been let to the number of 66,698, or just about half the number for which authorization had been granted. There were under construction at the beginning of March 23,498 houses, and there had been actually completed 6,148 houses. There had been no damping down of the enthusiasm of local authorities and of private enterprise in the building of houses. It had been frequently said that Labour's policy in housing was directed to the destruction of private enterprise in houses. Nothing of the kind. Labour had not driven these people out of the investing field. They had gone out. Labour did not propose to interfere with private enterprise in the building of houses. Labour did not propose to interfere with private enterprise in the manufacture of building material. Labour only touched private enterprise at one point, and that was in the investment of private capital in the ownership of these rented houses. The Labour Party's programme on housing was not a Socialist programme at all. He wished it were. He wished that the country were ready to receive a Socialist programme, and, he added, "we would show you how much easier it is to solve the housing problem along those lines than in trying to patch up the capitalist system, of which you yourselves have made such a mess." In conclusion, the Minister said there was a shortage of men and materials. He hoped, however, that within a week or two he would get a plan from the building industry itself by which the housing problem in this country would be solved within a comparatively short period. He would be delighted when the workers were able to own their own houses.

The Price of Building Materials.

At question time Mr. Wheatley said that steps were being taken by the committee on prices of building materials to investigate the recent advances in the price of bricks, lead, and slates.

State-aided Housing Schemes.

Answering Lt.-Col. Fremantle, Mr. Wheatley said that the number of houses built with State aid in England and Wales by public utility societies and housing trusts during 1919–23 was as follows: 1919, 17; 1920, 971; 1921, 2,266; 1922, 1,153; 1923, 132; total, 4,539.

Mr. Wheatley informed Mr. Alstead that under the 1923 Act the State subsidy was equivalent to about £75 per house, and provision was made for further subsidy by local authorities. Up to March 1 2,552 houses had been completed by private enterprise with the aid of subsidies under the Act of 1923, and a further 13,737 were in course of construction. In addition, local authorities had issued certificates on approval of plans as eligible for subsidy for a further 24,771 houses.

The Past Year's Housing Output.

Replying to Mr. Becker, Mr. Wheatley said that during the year ended September 30, 1923, some 77,000 houses were built.

The Week's News

New Shops for Torquay.

Two large shops are to be erected on an important site in the Strand, Torquay.

Concrete Cottages for Wakefield.

The Wakefield City Council have decided to erect 200 concrete cottages.

Extension of Westminster City Hall.

The Westminster City Council are to extend the City Hall at a cost of £32,000.

Edinburgh's Concrete Houses.

The Edinburgh Town Council have decided to proceed with the scheme for the erection of 1,000 houses at Lochend.

More Houses for Nottingham.

The Nottingham City Council have decided to erect 422 houses (122 parlour and 300 non-parlour) on the Sherwood estate.

Southend Winter Garden Scheme.

The Southend Town Council have agreed to erect a winter garden at a cost of £135,000. The main hall will accommodate 5,500.

Southsea Road Improvement Schemes.

The Town Council have in hand a scheme for the reconstruction of seventy roads throughout the town at a cost of £150,000.

An Exhibition of Colour Posters.

At the A.A., 34 Bedford Square, London, W.C.1, an exhibition is being held of colour posters by F. Gregory Brown. It will remain open until April 25.

Bournemouth Housing Schemes.

The Corporation are considering the erection of another 100 houses. During the past month the Corporation passed plans for nearly 100 new houses.

Barnsley Hospital Extensions.

The Board of Guardians of Barnsley Beckett Hospital (near Sheffield) propose to provide a new block containing wards for women and children. The cost is estimated at £12,000.

Exeter's Old Churches.

Following protests made at a meeting of the Exeter Architectural Society against the sale of old churches in the city, it has been authoritatively denied that the site of St. Stephen's has been disposed of.

Building Developments at Torquay.

Twenty acres of land at Ellacombe, Torquay, is to be developed for building purposes, and it is planned to erect 200 houses there. Building operations are expected to be commenced in September or October.

Church Building and Repair Schemes.

At the last meeting of the Incorporated Church Building Society, held at 7 Dean's Yard, Westminster, several grants were made towards the erection of new churches, and many towards church rebuilding, enlargement and repair schemes.

Burton's Ancient Bridge.

During excavations for the widening of the Trent Bridge at Burton-on-Trent a stone archway of the ancient bridge was revealed under the site of the old mortuary. It is thought to be part of the structure said to have been erected by monks in the time of Bernard, Abbot of Burton, about 1174.

University College School of Architecture.

Two Bartlett exhibitions for students intending to join the School of Architecture at University College are offered for award this year. They are of the annual value of £40 a year, and tenable for five or three years, according to the course. Applications must be made to the secretary of University College, London, not later than May 30.

The Wessex Society of Architects.

At the first annual general meeting of the Wessex Society of Architects, held at Bristol, the following officers were elected: President, G. C. Lawrence, A.R.I.B.A., R.W.A., Bristol; vice-presidents, G. P. Milnes, Stroud (president of the Gloucestershire Architectural Association); W. S. Skinner, F.R.I.B.A., Bristol (president of the Bristol Society of Architects); hon. secretary, H. Stratton Davis, M.S.A., Gloucester; hon. treasurer, T. A. Skinner, A.R.I.B.A., Bristol.

The Centenary of the National Gallery.

In connection with the National Gallery centenary celebrations the trustees have received a gift from Mr. C. Morland Agnew of a portrait by Raeburn, representing the well-known statesman, Henry Dundas, first Viscount Melville (1742–1811), the bosom friend of Pitt. He was Secre ary for War in 1794, impeached for malversation in 1806, but acquitted and restored to the Privy Council in 1807. The picture will be specially valuable to the national collection, where the representation of Raeburn is far from adequate.

Ministry of Health and the British Empire Exhibition.

The Ministry of Health will exhibit in the Government Pavilion and in an annexe. Photographs and plans will illustrate the lay-out of approved housing estates and the design of the houses. The examples have been selected from different parts of the country so as to show the difference in design according to local conditions and the materials available. Two large town-planning models will be found side by side, one representing a common type of industrial town, devoid of intelligent arrangement, inconvenient, and smoke-blackened, and the other showing what can be accomplished by foresight and skilled design upon the same site.

Colour in Architecture.

In a lecture at the Central School of Arts and Crafts, London, Sir Banister Fletcher discussed the further development of architectural style, which was consequent on the removal of the capital of the Roman Empire by Constantine in A.D. 324 from Rome to the old Greek colony Byzantium, which he renamed Constantinople, and to which the Turks gave the name of "New Rome." This daring change was made largely from commercial considerations, and it indicated not only the progressive commerce of those days but also the foresight and enterprise of the first Christian Emperor, which had secured for him the title of "Constantine the Great."

Photo: Central News.

AN ELEVATION OF THE NEW LAMBETH BRIDGE.
SIR REGINALD BLOMFIELD, R.A., ARCHITECT.