

THE ARCHITECTS' JOURNAL & *Architectural Engineer*

With which is incorporated "The Builders' Journal."



FROM AN ARCHITECT'S NOTEBOOK.

Architecture is the poetry of construction.

SIR THOMAS GRAHAM JACKSON:
"Architecture."

9 Queen Anne's Gate. Westminster.

A Louis XIV Oak Carving



Photo: Victoria and Albert Museum.

This ornament is in the centre of an oak window shutter. It is now exhibited in the Museum of Science and Art, Dublin.

A MONTHLY CAUSERIE

Joking Apart

An Architectural Cliché

THE word "cliché"—as everybody may not know—originally stood for the little decorative flourish once in common use by printers to enliven the blank paper on the last page of a book or section of a book, and the word thus came to be wittily applied to signify a sort of trite, repetitive, automatic literary flourish snatched at by jaded and exploited by inferior writers. The odd thing is that those who use the cliché appear to value it for the same villainous stale flavour which disgusts those to whom they offer it, and they flourish their inanity with an air of erudition and knowingness which greatly aggravates their offence. "Like Oliver Twist he asked for more"; "Excellent in parts, like the curate's egg"; "Mr. Punch's advice to those about to marry—Don't"—these examples of the cliché rise to everyone's mind, and many others are familiar to exasperation; but it will be noticed that though the sayings may have been memorable as originally used, the cliché-monger either robs them of all meaning, or actually perverts their traditional sense. Thus, no joke was intended in poor Oliver's mustering courage to ask for a second helping of gruel, and the emotion Dickens aimed at, and surely touched, was not laughter, but tears; the point of the curate's joke is that the egg could *not* have been excellent in any part; and the other "Punch" excerpt is memorable for its absurdity, and not for wisdom.

I refer to clichés in general to introduce a particular cliché—an architectural cliché. This consists not in a form of words, but in a form of ideas: the words in which the idea is expressed vary, but the thought is the same—stale, repetitive, and mechanical; a certain conjunction of circumstances will produce it, as surely as a penny in the slot will produce the bit of chocolate out of an automatic machine. The cliché consists in an expression of grievance when the lay Press illustrates a new building of public interest, or records a ceremony of foundation-stone laying with a presentation silver trowel, or an opening with a presentation "gold" key—both presentations, by the way, made and paid for by the architect—without mentioning the name of the designer of the building, or exhibiting any consciousness that the admired qualities of the edifice are the individual concept of an artist, or that the distinction of the building distinguishes any architect; although the chairman of the Urban District Council, who first suggested that the town should more richly house its Council, the rector, who first perceived that an additional church was a "long-felt want"; the hat of the great lady who nauseated the proceedings with her patronage, and the child with adenoids who handed her a bouquet, are all particularized and described, together with the Builder and, among others, the Firm that supplied and fixed the lightning conductor.

Pray join me in observing with astonishment that I have myself, without premeditation or intention, here done the very thing I was speaking of. The above gibes flowed from this pen almost unbeknown. I wonder at them as I might at harkening to the beating of my own heart, and it occurs to me that it is I who may have been the originator of the time-honoured croak. I more than suspect it. My impression is that it was one of my earliest utterances when I first learnt to speak. The impulse sprang from independent observation made vocal by moral passion, and I have walked in the same all the days of my life. It was my solitary chirp, I fancy, that led the clamour which finally deafened Mr. Squire in the wide field of his interests and led to the institution of the Architecture Club, and what I want to know is—why am I not president of the club?

As potential founder of the Architecture Club, then, I note with pleasure the growing public acknowledgment of architecture, the more general recognition of architecture

as an art instead of a restriction in building proposals, and a general awakening to consciousness that a fine building is, in degree, as much the personal expression of an artist's conception as is a work of sculpture, a painting, or a symphony. Every success, however, carries its qualifications and disappointments, and in this particular ointment I spy two particular flies. The first is that the modest activities of the Architecture Club should provoke implications of the club's being a publicity stunt. This is not the fault of the club, but is due to Publicity on all occasions trying to mask purposes of self-seeking with protestations of just such disinterestedness as belongs to the club.

Spurious motives so colour life to-day that honest ones can scarcely hope for credence and are ashamed to acclaim themselves because of the company in which they would then find themselves. Cunning greed masquerading as disinterested service to the community, sham philanthropy, and hypocritical make-believe of every sort, is the fixed policy of the bulk of commercial enterprise, and the only language spoken by the salesman. One might suppose the warning, "Safety first," which arrests us when we travel about London, to be prompted by the natural concern of a great public service for the protection of its passengers. I once so supposed, and I was glad to remember this instance of a right way of thinking and acting, but a friend who is behind the scenes was greatly amused at my simplicity, and laughed at me. The warning, he told me, was devised to reduce the company's liability for death and injury. The saving in compensation-money shows a good return on the money spent in advertising the warning; the warning is a source of profit to the company, and therefore we are warned. It is, however, not necessary to blame the directors, for the shareholders would throw them off the board if they failed in business acumen. It may be said that the spiritual effluvia in which commercial enterprise involves life is so all-pervading that pure motives are indistinguishable in the general factor, and all honesty is suspect. Even a preacher who reminds us of the duty of charity instantly raises the suspicion that he wants our money. What chance, then, has our Architecture Club of persuading the public that its object is the welfare of architecture and not the welfare of architects?

The second fly I detect in the ointment is the confusion of ideas which the architectural enlargement of the Press thrusts upon the public. It is useless for anyone to hope to gain an understanding of architecture, or to reconcile any knowledge he may already have with current practice and expert opinion, from what he reads in the newspapers. If one distinguished architect expresses his distinguished view on a distinguished subject, another distinguished architect promptly contradicts him, and usually produces excellent reasons for doing so. It has so happened with St. Paul's Bridge, with the Bank of England, and with Waterloo Bridge. We who know what is what can enjoy the racket; but how about poor Miss Smith who took the Home Reading Union's course on architecture last winter, and in the summer turned faint in the Triforium at Salisbury; and what about the Rev. T. Brown, who has been warming himself up in preparation for the office of Rural Dean? These are the persons the Architecture Club is concerned to interest and inform. It might not be a bad thing if our code borrowed the etiquette of the doctor who avoids traversing the opinion of a confrère. The confidence of the public is a great asset to any profession, and it is surely much less harmful to a man to believe that Regent Street is a great achievement in the architecture of the world when it is not, than for him to be allowed to think he is suffering from chicken-pox when he has got shingles.

KARSHISH.

Architectural Style—16

Ornament and Mouldings

By A. TRYSTAN EDWARDS, M.A., A.R.I.B.A.

THE same critics who maintain that the Classic Order is abused if put to a decorative purpose generally overlook the far more flagrant example of a constructional feature so employed—namely, the pointed arch invented by our mediæval forefathers. This, originally an engineering device for roofing the junction of two vaults of different widths, was afterwards “degraded” to be a mere gaud, a motif of ornament, sometimes beautiful, sometimes finikin in its tiny scale, and often meretricious. But this use of the pointed arch for decoration is justified if the proper æsthetic result be obtained; and the fact that the form is capable of resisting certain mechanical stresses is here irrelevant. The design shown in Fig. LXXII should cause intense pain to anyone who holds the view that constructional forms should work all day long and never play. Here is the arch, a shape born of the necessities of roofing an area with stone, appropriated, or some would say misappropriated, by a carpenter who has had the audacity to reproduce and even caricature this same form in wood. In example A we see an ogee arch with cusps in obvious tension; while on the haunches of the arch are little baby arches which are purely decorative. While these latter have the defect of being out of scale with the main arch, the *type* of ornament they represent is suitable for its position, inasmuch as when once you employ pointed arches these prominent elements set the key to the whole building, and demand that they shall be reflected even in the ancillary features of its design, of whatever material they may be constructed. It is noteworthy that the ogee arch, the most graceful of the arch forms produced in the Middle Ages, owes its origin to an

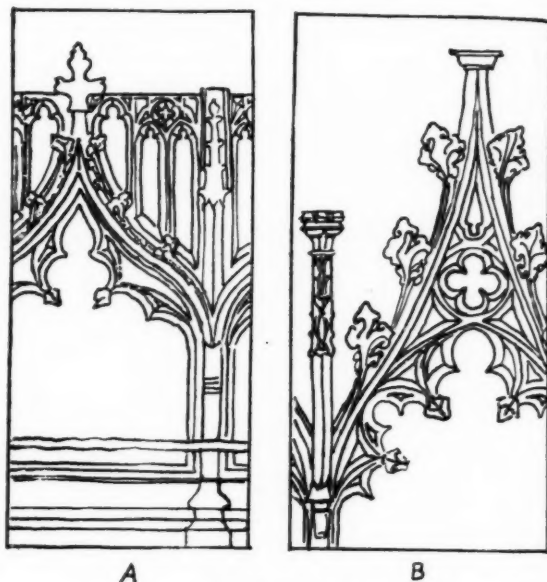


FIGURE LXXII.

attempt to mitigate the discord produced by the junction of two arcs of circles cut off at random. In LXXII B we see how the curves of the ogee soften the harshness of the main arch underneath, and deflect its lines so that they finally become tangential and achieve union in perpendicularity. The fact that the ogee form is very weak constructionally does not impair its decorative value. In example B, the artist has created a design of great beauty, in which the reader will immediately detect some delightful punctuations and inflections. The foliated crockets are here suitably conventionalized.

The difficulty with the pointed arch has always been the unsolved problem of its lateral composition. As the crowns of the arches have no horizontal emphasis, they do not admit of intimate relation to any single line that stretches over several arches at the same time. Each pointed arch is self-sufficient, and lacks the companionable quality of the square-headed window or the round arch, which so readily unites with stringcourse or entablature.

This quality of coherence, so desirable in the composition of the main elements in a building, should also distinguish the forms of ornament. In repetitive design one of the first

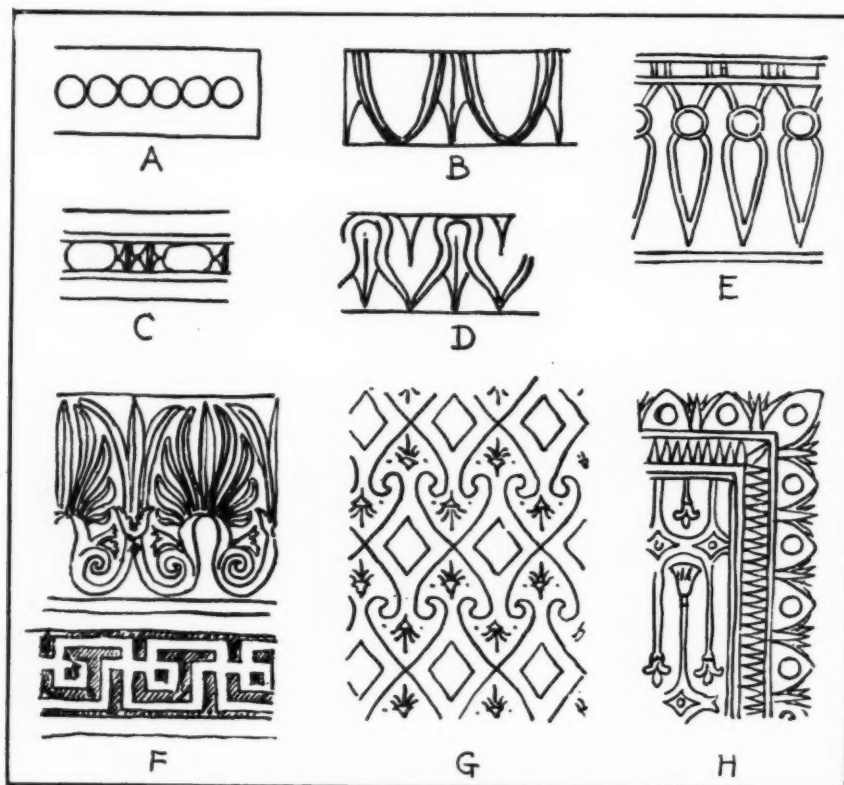


FIGURE LXXIII.

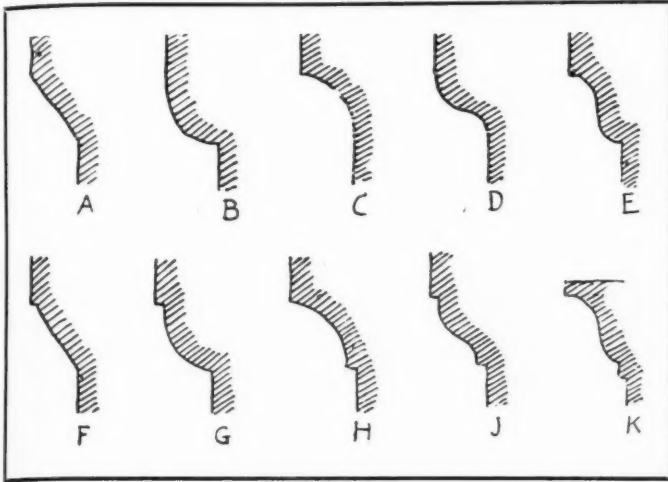


FIGURE LXXIV.

things to criticize is the degree of continuity of the several parts. Can we cut off one part or element without doing injury to the next element in the pattern? That is a significant test to apply to ornament. Examples LXXIII A, C, and E, are not so closely knit as B, D, and F. In the former we may cut the series short by taking away its lateral member, and the residue will still seem quite happy, but in the latter, no matter where we cut the series, there is a gaping wound. In F both the leaf ornament and the fret underneath it have this attribute of continuity in a high degree, and require especially designed punctuations at their lateral extremities. D is also vigorously conceived, and has more cohesion than B, where the egg forms are not very intimately joined together by the tongues between. For this reason B is generally kept fairly small. And C is smaller still, and A could only be suitably employed on a minute scale. In G the diamonds lack cohesion, so the designer has supplemented them by the continuous line ornament, which as it were executes a dance between them. In H we have an example where a repetitive design has given up all hope of punctuating itself, and has boldly called in the aid of an alien border to perform this office for it. In this instance the experiment seems not unsuccessful.

Architectural ornament is so intimately associated with mouldings that these latter acquire the character of ornament. What is a moulding? It is a rather distinguished way of going from one point of a surface to another adjacent to it, but on a slightly different plane. Fig. LXXIV A shows a commonplace unimaginative method of doing this by means of a play. In B and C the planes are united by a curve tangential to one and normal to the other; in D, by a curve tangential to them both; and in E, by a curve normal to them both. These curves may be composed of quarter-circles, quarter-ellipses, or derived from innumerable other mathematical equations; but provided that they have unity in themselves and are formally related to the planes in the manner described, they will have the principal characteristic of a moulding—that is to say, they will make the break of surface *self-conscious*. In F, G, H, J, K, this self-consciousness is heightened by the addition of fillets, which inflect the planes to prepare us for the beginnings of the curvature. In L (Fig. LXXV) we have a familiar architrave moulding, with a strong inflection towards one side. It is easy to imagine how unsatisfactory it would be if symmetrical about its central axis. Even bad mouldings, properly inflected for their position on the building, are preferable to very good ones, if these latter are in the wrong place, or create a

wrong emphasis. M shows an abacus moulding subtler than the ordinary ovolo in that the curve bends in at its upper extremity and approaches a straight line at its lower; thus the difference in the two punctuations constitute an inflection. N is a crude form, being a chord of a circle, cut off each end at random, its direction at the terminals having no definite relationship to the vertical planes of the wall. P is merely D with three fillets. It is noteworthy that J is a more mature form than D, because the latter consists of two quarter-circles which have not the organic unity of the mathematical curve derived from a single equation. Q, an unresolved duality, is a freak design, with every conceivable fault a moulding can have, being two parabolic sections cut off at random, with their apices entirely unrelated to the wall surfaces. R, a traditional Roman Doric capital, shows how the different types of moulding may be combined into a significant group, giving interest and emphasis to the head of the column. It is noteworthy that the

lower moulding marks a change of plane, which gives it a reason for existing. Were this change of plane not manifested, the moulding would have been redundant, for, if taken away, the surface would not have missed it. T, U, and V are mediaeval mouldings; T and U have definition; but V, entirely designed for the interest of its shadows, has a poor section. One asks why not W, or any other wiggly shape the fancy might suggest? It is dangerous to bend the curve of a moulding more than once between its two points of rest, for the result, as in X, is apt to be sloppy and meaningless. Such curves *cannot* have organic unity, because there is no mathematical foundation for them. Y, in which the curve is broken into its proper parts by means of fillets, is immeasurably superior to X, for it represents a vigorous and orderly development. S is an elaboration of the same type of base.

Mouldings are a fascinating and inexhaustible theme. I have here found space only to indicate what a moulding is, and what it is not. Many of the refinements of architecture are entirely dependent upon mouldings, which give just the finish and distinction the eye demands. For what the eye *can* see the eye likes to see, and a building entirely without mouldings is justly described as coarse—that is to say, it will have an unpleasant simplicity and largeness of parts which does not give free rein to our faculty of vision.

(To be continued.)

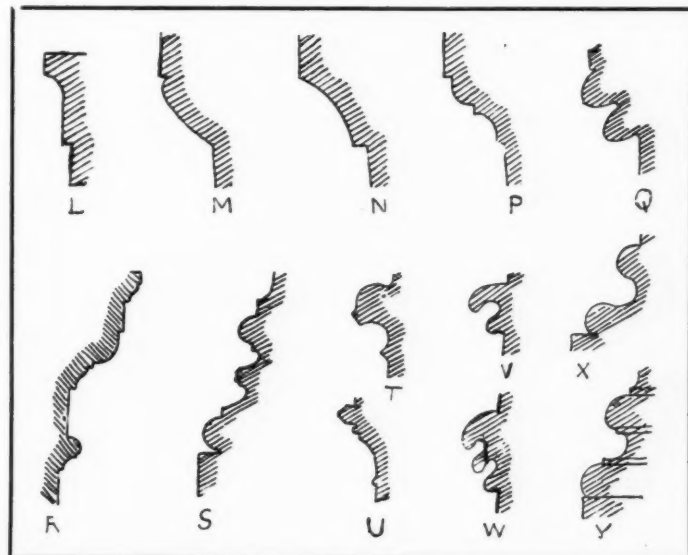


FIGURE LXXV.

The Architectural Treatment of Ceilings

By BASIL IONIDES

IN no country in Europe are ceilings treated with such disrespect as they are in England to-day. In ninety-nine houses out of a hundred they are of plain flat-floated plaster, as smooth as they can possibly be—without a ripple and without any interesting breaks. Yet a beautiful ceiling is a feature of great interest, and it is seen completely, since it cannot be screened by unsightly furniture, etc.

The beamed ceiling of the old farmhouse is often copied to-day, but is almost invariably copied wrongly. The beams in the modern version are too sparse, and are often too deep for their width. They should show a greater width than depth, and the space between should not measure more than two and a half times the width of the beam. Rough beams of hewn oak should be above plain plaster walls, and not above panelling as where a room is rich enough to have panelling, it is rich enough to have an ornamented plaster ceiling, or one of worked and moulded beams. Above rough plastered walls, a rough beamed ceiling will be charming of whatever wood it may be, pro-

vided the colour of the wood is well considered. Preferable to staining it, treatment with chemicals, such as oxalic acid, will often give the woodwork a delightful weather-worn look.

Ceilings of worked wood are apt to be difficult in England, as there are so few old ones from which inspiration can be drawn, and these are all Late Gothic. A ceiling of worked wood must not be too low, whereas a rough wood one may be as low as you or the local council please. If a worked wood ceiling is low, one loses the full value of the mouldings, which will get mixed with the next beam.

Reproductions of plaster ceilings are often of good design, but are apt to lose in effectiveness through unsuitable environment. A low ceiling should be softly modelled, and have

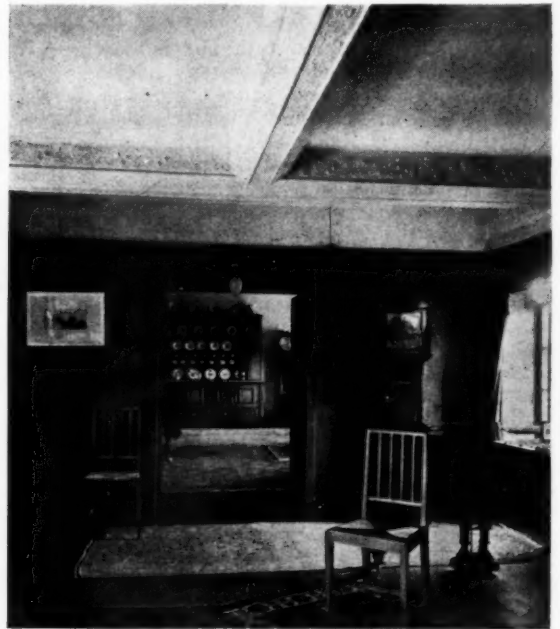
no sharp edges, as these are unpleasant near one's head; but the ceiling of a high room should be very crisply modelled, and should have clean-cut edges. A high ceiling may have a small design provided it is crisply modelled; and a low ceiling may have a large pattern if it has the effect



Showing an old ceiling which has beams which were always meant to be exposed. The joists, however, were not intended for exposure, and are too thin to be really satisfactory. These thin joists are too often exposed. This ceiling should be in plaster panels between the heavy beams.



(Left) A ceiling of about 1810, which is slightly barr-vaulted and is flatly coffered. This is a most successful treatment and a very reasonable one considering the extraordinary effectiveness of the result. Many forms of it could be evolved quite easily. (Right) A ceiling by Gimson showing the softly moulded plaster that is most pleasant near one's head.



This would be lost in a high room.



This Board-room at the Admiralty has a coffered and coved ceiling; this forms the most delightful octagons, which all vary in size as they fall towards the flat ceiling or corners of the room.



A modern ceiling moulded in relief which shows a nice appreciation of the crispness needed for the height of the room. Fine leaf designs like this one should always be crisp in detail.

of softness, in the excellent manner of the late Mr. Gimson. It is, however, with the economical treatment of the average room that most people are concerned, and here it is easy to give interest without incurring much expense. A low barrel vault is always interesting. On paper it looks dull, but when it is *in situ* the play of light and shade on its surface will produce a delightful effect, and the slightly arched tops to the end walls will be found to create an interest there also. It is not an expensive treatment, but it requires that the end walls must be straight and parallel.

Coving is always lovely, and the more odd the shape of the room the more charming does it become. A coved ceiling should not be too perfect in surface; slight marks from the trowel, or float, will greatly help. The curves must be absolutely true, or the effect at the angles is horrid; but the surface of that curve is the part that, with the flat, should be rippled.

Coffering is quite charming. One sees it often in large, rich rooms, but very seldom does one see it very simply done. Yet it is easy and cheap to do. One's panels may be recessed only half an inch; yet with the light cast as it is from an angle, catching the edges, the effect is good. A double form of this, recessing twice, may be adopted; and good effects may be obtained with squares, parallelograms, or octagons, which break the flat surfaces very happily.

In the eastern counties and elsewhere there are houses with their exteriors plastered in patterns that take the form of small repeats very well managed. These were—and are—mostly done with small wooden stamps pressed on to the plaster while it is wet and soft. This is a delightful way of decorating a ceiling, and with the same moulds one can, by placing them at different angles, get many varieties into the pattern, and at a trifling cost. The slanting light emphasizes the comparatively low relief of the work.

The surface of a ceiling is of great importance. Various degrees of roughness may be introduced. This variation of texture is possible even on the same ceiling, and a sort of damask effect can be given by using a repeat making some parts of the surface dead flat and some parts slightly mottled.

It seems to be a rule that ceilings should be whitened, and there was long a prejudice, which is now disappearing, against a coloured ceiling. The white ceiling never really looks white, as the light only reaches the ceiling by reflections, *viâ* the floor or some object near the window, and so the ceiling takes the colour from which the reflection springs—usually the dull colour of a wooden floor. A lightly tinted ceiling will avoid this untoward effect, substituting a much more pleasant appearance. If, however, the surface is glossy, a considerable portion of the pleasant effect is lost, and before a ceiling is made glossy the greatest care should be taken to ensure that there be no flaws, as the smallest crack or scar which is invisible in a matt-surface will show up on a glossy one.

A papered ceiling is seldom very good. Papered ceilings are either painfully dull or else funny, and the funny in decoration should be held in strict restraint. It is possible, however, to find a few papers that will be effective if gaiety is not objected to, or a ceiling may be panelled out with those charming borders that are originally intended for the walls. All these things are useful, but it is out of the necessities that the best results will grow, and now that pendants hanging from the ceiling are in use again, the point where they start may be emphasized, and "roses" used to encircle the electric wire. These "roses"—or bosses—may be made very pretty, and should be coloured to match the electric-light shade and pendant, thus making a complete feature of the light, as it then has a definite commencement. It is by making a beautiful thing out of a necessity that new ideas and new designs will originate most often.

The New Whitehaven Infirmary

ALFRED SAXON SNELL and PHILLIPS, F. and A.R.I.B.A., Architects

THOSE who remember the Whitehaven Castle as it was whilst still in Lord Lonsdale's occupation may recall the charm and quiet serenity of the interior, even when the building was nearly denuded of furniture.

At that time the castle was left in the care of a venerable housekeeper—one of the "old school," placid and dignified, but with a watchful eye upon stray visitors, even though they might be prospective purchasers. We went warily, were mindful of doormats, and thought twice before depositing hats and books on tables whose polished surfaces protested.

One entered from the wide drive by a low door ornamented with a very big knocker, into a long, wide, and very low hall, with its stone-flagged floor, panelled walls, and ceiling. The insufficiency of the lighting from two low and deep windows did but enhance the effect of warm and fitful rays from the wood fire glowing in the deep recess of the fireplace.

Opposite the door, a wide opening led to a square, top-lighted staircase, with low moulded steps and landings, panelled walls, and a domed lantern on top.

Another opening led into a wide corridor, giving access to a number of diversely fitted and furnished rooms on the west front of the building. Here was "my lady's boudoir"—there "his lordship's library," a small dining-room, a finely fitted housekeeper's store-room, and so on. There were intercommunicating doors in most of them, covered with figured material.

On the other side of the building another corridor led to the great kitchen, a fine room fitted with a huge range complete with turnspits, etc., the latter giving some suggestion of a torture chamber, store-rooms, larders, game larders, butler's pantry nobly fitted, and wine cellars.

Behind the corridors, a long room which was used for the entertainment of tenants on rent day. Also a hall, surrounded with dozens of bells from the various rooms in the castle.

On the first floor, and leading off the main staircase,

was a long salon, with a panelled barrel roof—a fitting ante-room to the great drawing-room at one end, and the dining-room at the other. The latter were in the two front flanking towers, and no less than 18 ft. high. The walls and ceilings were panelled, and there were finely moulded eighteenth-century mahogany doors and windows, and polished floors. Many of the rooms on that and the upper floor were panelled, and some of the fireplaces were interesting examples of eighteenth-century work. A "find" was a rough design of one of these fireplaces scratched on a wet surface of plaster. Unfortunately it was impossible to remove this intact.

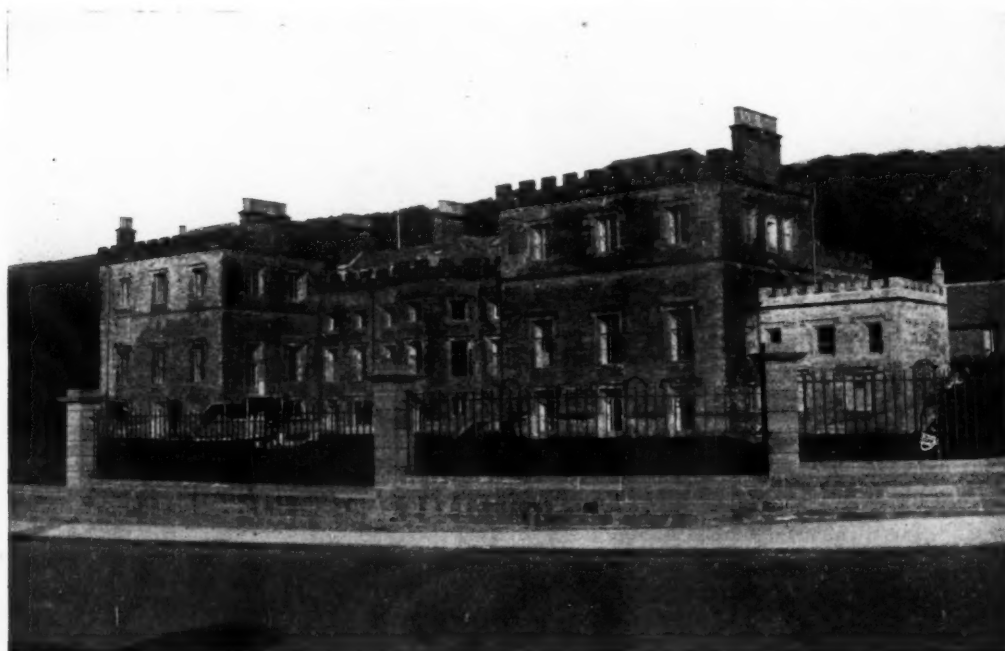
There was a low attic story containing a number of ill-lighted bedrooms.

In the rear of the house were ranges of domestic offices and stables, surrounding a wide courtyard paved with rounded cobbles. In the centre the forms of horses and dogs were outlined in white cobbles round a large circle—a rough representation of a hunt.

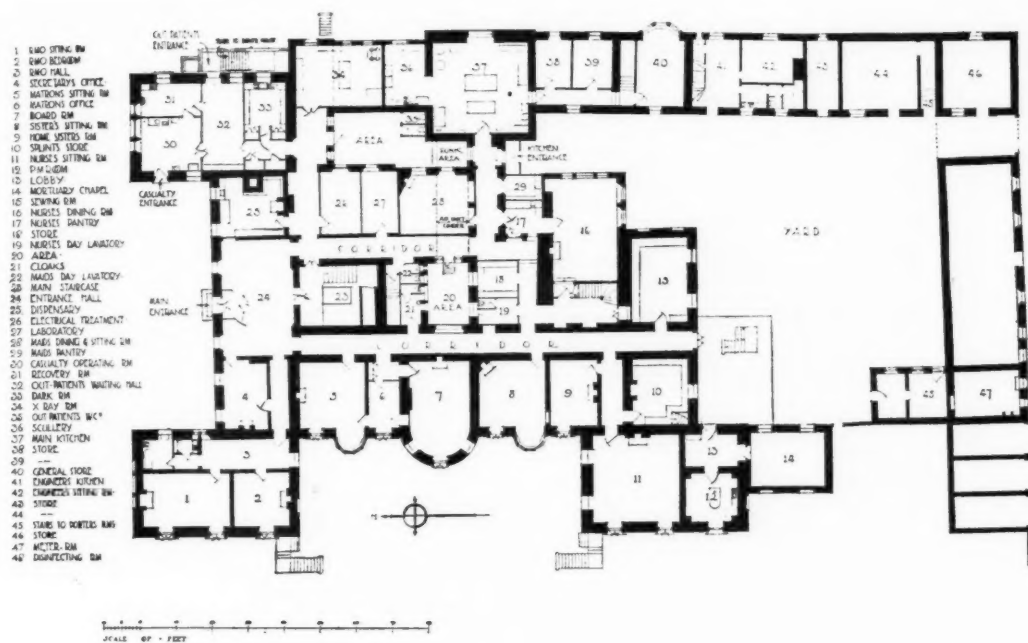
The site of the building is a park of 18 acres, sheltered from the north and east by the wooded slope of the hills. There is a wide lawn on the west front, some six or eight feet higher than the public road, and on the north side wide grass spaces, and an avenue of fine trees leading to entrance gates.

The conversion of such old buildings for the purposes of a hospital presents many difficulties, which in this case were lessened by the more or less rectangular lay-out of the rooms, the evenness of the general level of the floors, and the solidity of construction. Even so, no arrangement of the rooms could give the accepted form of a hospital building with detached ward blocks, etc.; that this, however, is not a consideration of first importance is evidenced by the many famous hospitals of what Sir Henry Burdett called the "composite" class, which are giving the best possible service. Certain it is that, in this case, no new hospital so finely and conveniently situated could have been erected.

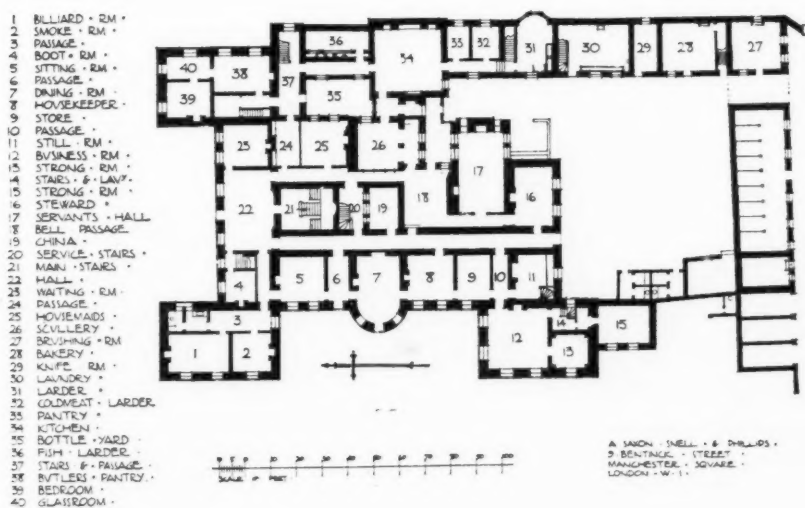
In equipment and finishings—matters of first-rate
(Continued on page 828.)



THE MAIN FRONT.

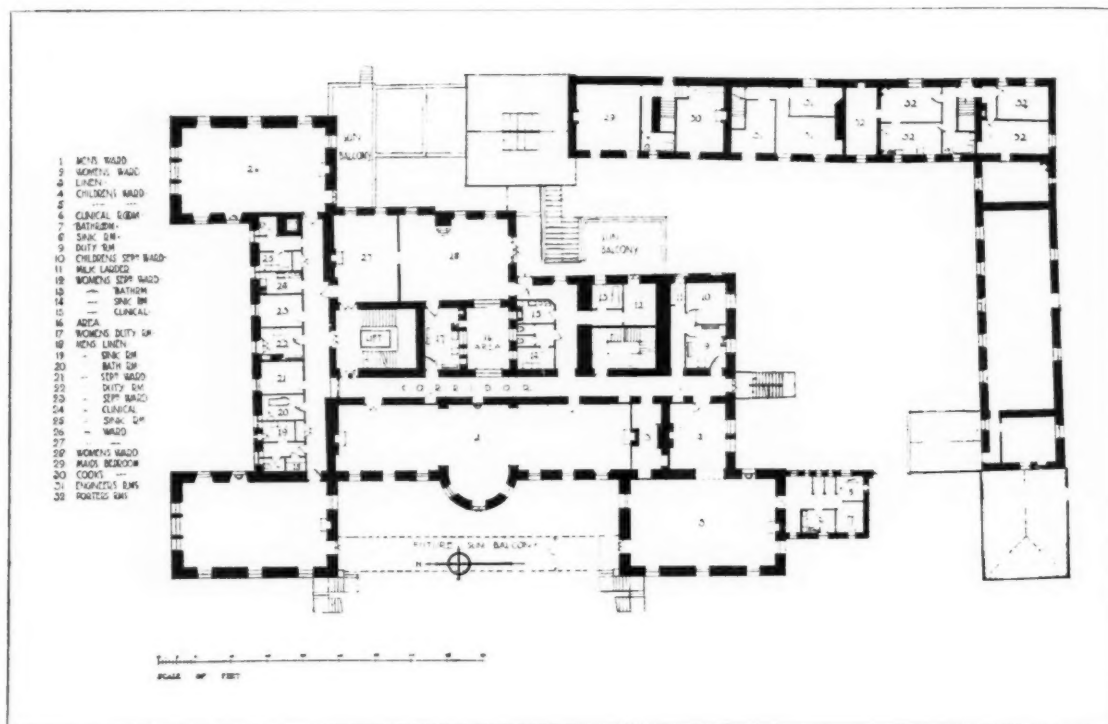


GROUND-PLAN AFTER CONVERSION.

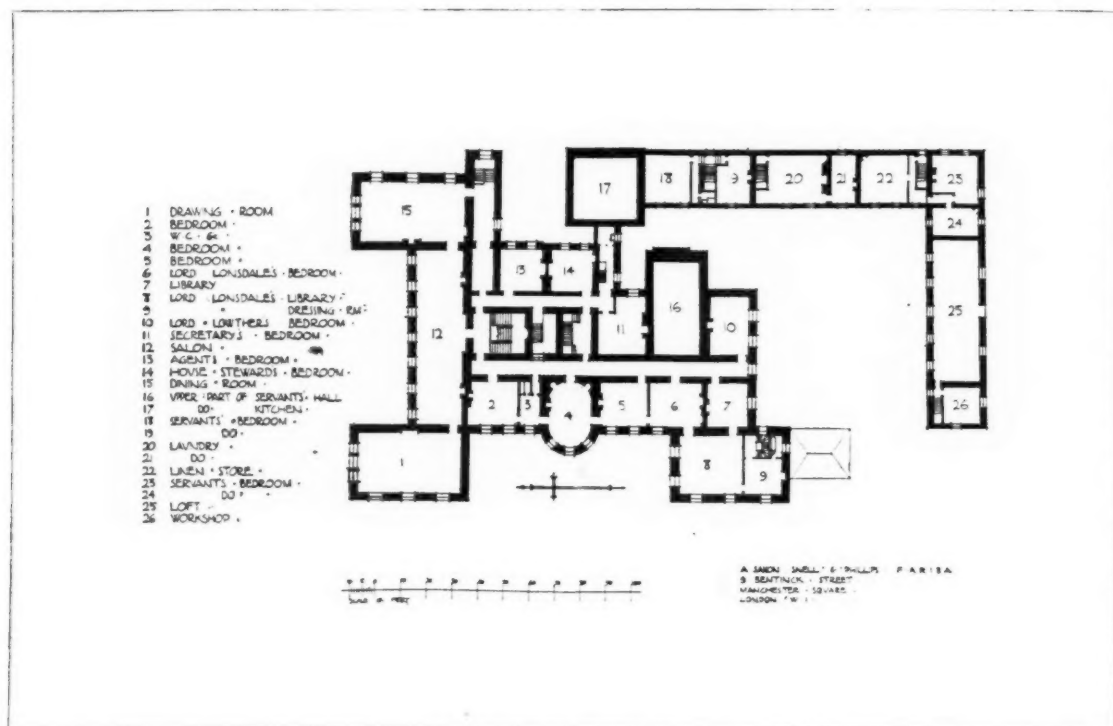


GROUND-PLAN BEFORE CONVERSION.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.
ALFRED SAXON SNELL AND PHILLIPS, F. AND A.R.I.B.A., ARCHITECTS.

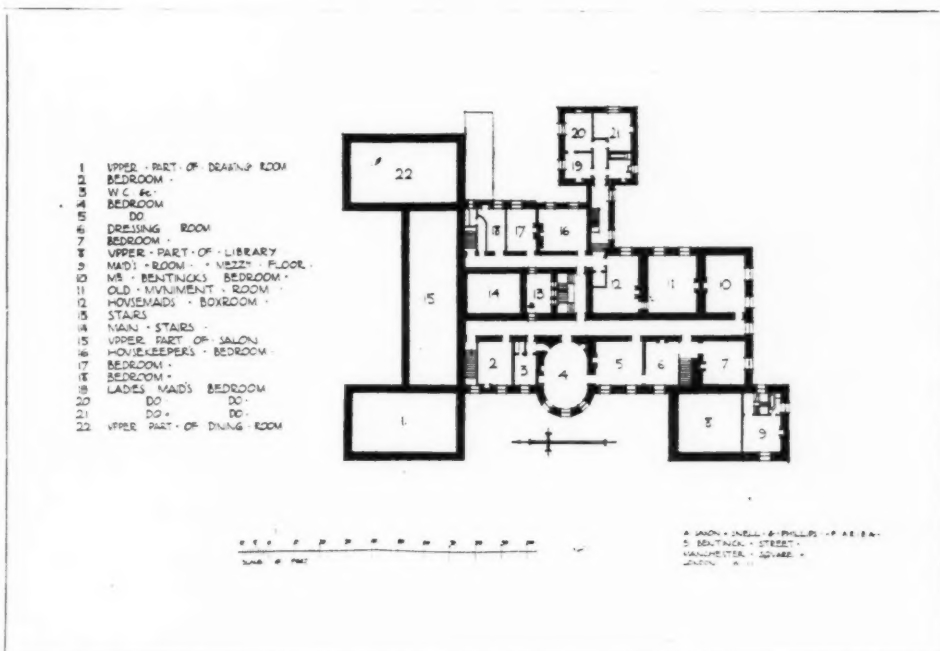
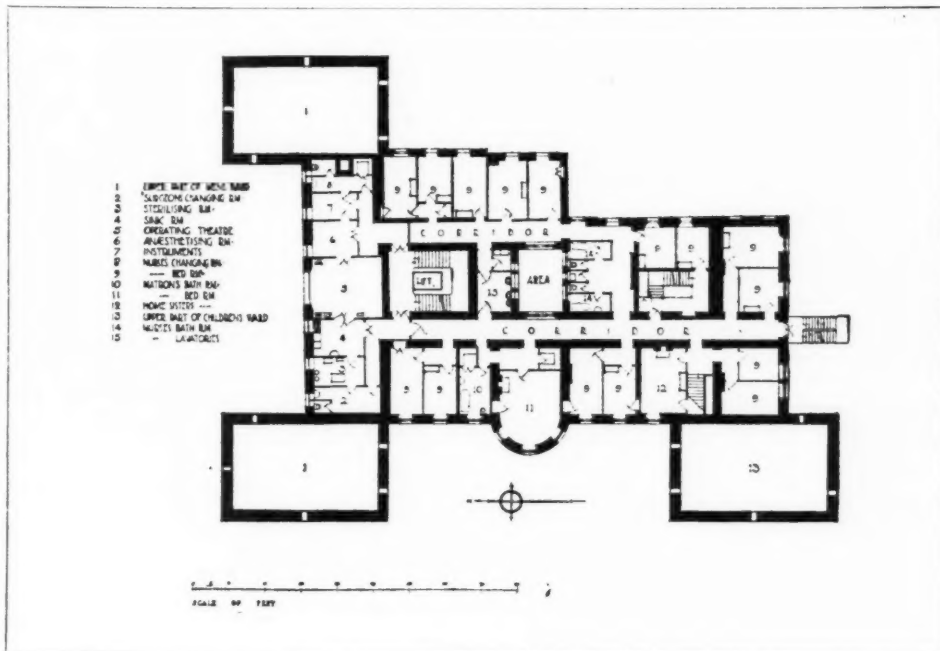


PLAN OF FIRST FLOOR AFTER CONVERSION.

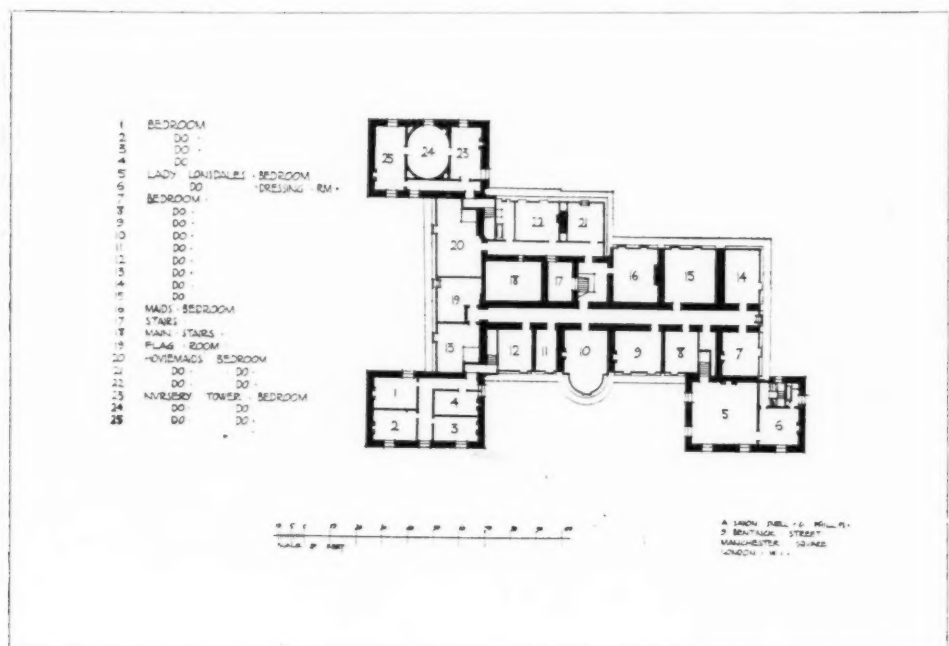
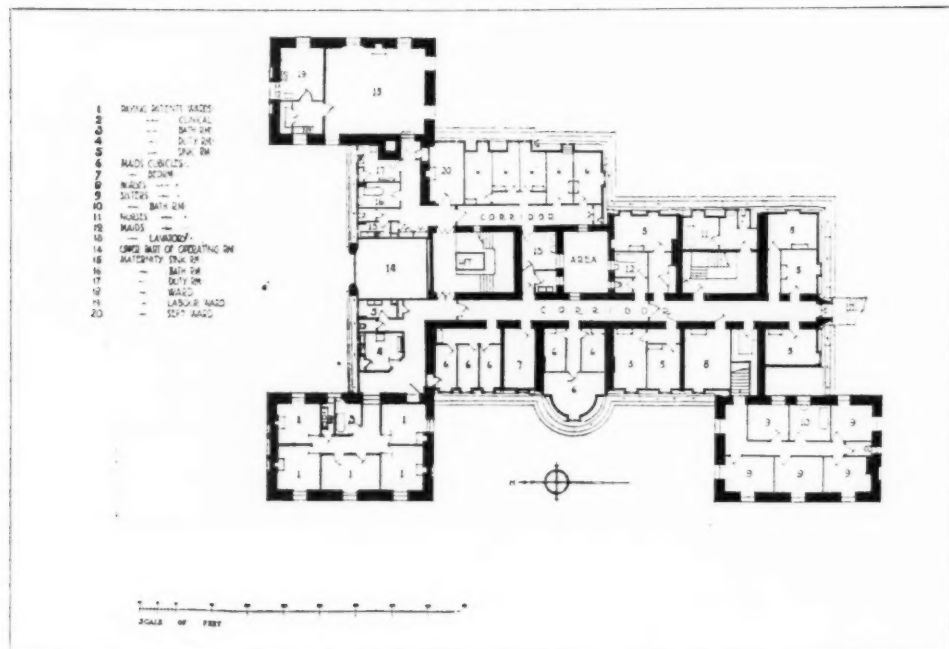


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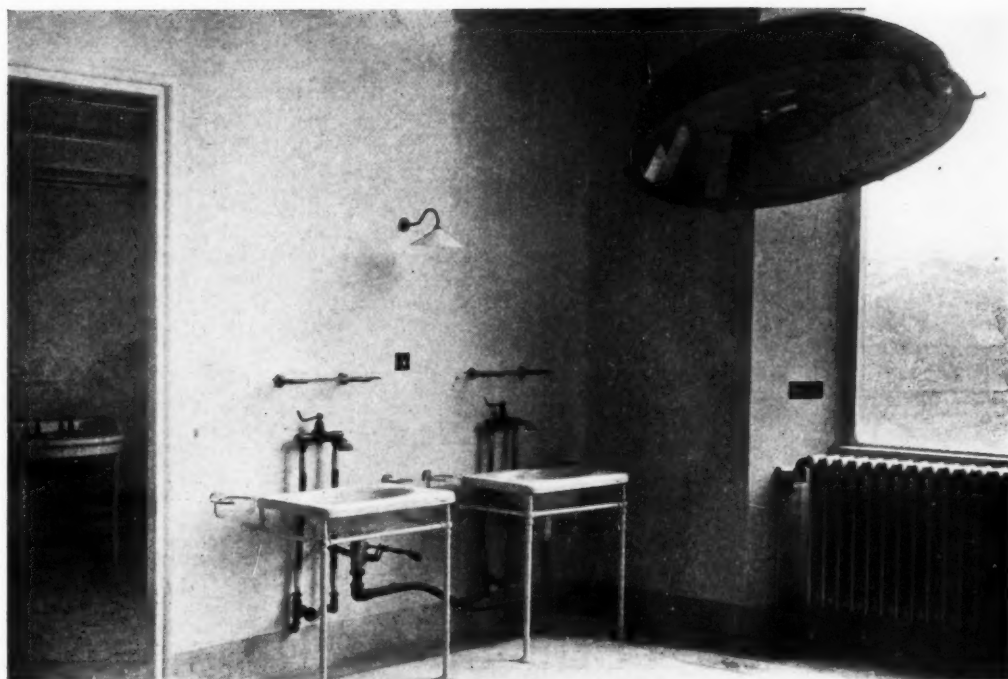
WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.
ALFRED SAXON SNELL AND PHILLIPS, F. AND A.R.I.B.A., ARCHITECTS.



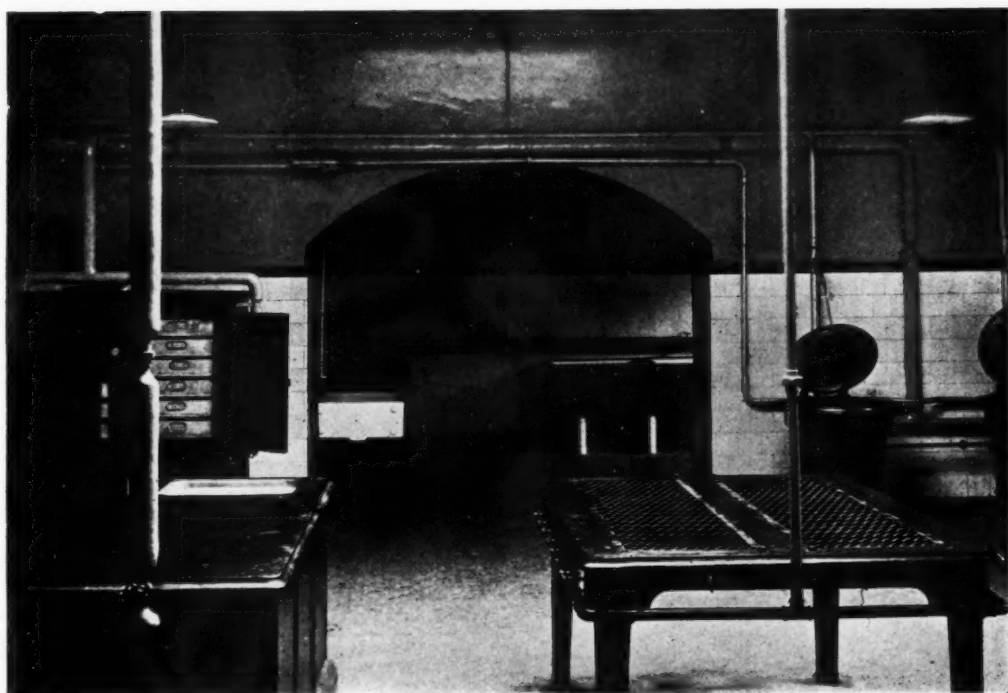
WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.
ALFRED SAXON SNELL AND PHILLIPS, F. AND A.R.I.B.A., ARCHITECTS.



WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.
ALFRED SAXON SNELL AND PHILLIPS, F. AND A.R.I.B.A., ARCHITECTS.



A CORNER OF THE OPERATING THEATRE.



THE MAIN KITCHEN.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.
ALFRED SAXON SNELL AND PHILLIPS, F. AND A.R.I.B.A., ARCHITECTS.

importance—the hospital is abreast of the advance in modern medical science. The alterations in the buildings necessary for its conversion are but generally indicated on the plans, which cannot show the many hundreds of yards of plaster on strapping, the old and heavily paned windows, panelled dados and doors, stone-flagged floors, mouldings, etc., all of which have had to be removed.

The ground floor of the building, with its long range of low rooms, was of no use for sick wards, though admirably adaptable for administrative purposes, and suitable also for the dispensary, X-ray, electrical, out-patients' and casualty departments. The complete and powerful X-ray apparatus was provided and fixed by the generosity of Mrs. William Walker and Miss A. E. Walker, of Whitehaven.

The first floor, with its average height of 11 ft., was equally well adaptable for sick wards, and the upper floors (except the north front) for nurses' quarters.

The men's wards are placed in the north-east and north-west towers, and are each 40 ft. long by 20 ft. wide, and 18 ft. high. They are lighted on three sides, and partly on the fourth. Between them, the old salon is divided up into separation wards, duty room, clinical rooms, sanitary annexes, bathrooms, etc., all leading from a wide corridor. Eleven beds can be placed in each ward, and two in separation wards.

The south-east tower, of the same dimensions, is devoted

to children, with an annexe connecting it to the main corridor and a new sanitary annexe. It will accommodate fifteen beds. On the opposite side of the corridor is a separation ward and duty room, etc.

The women's ward (formed by the removal of several walls) occupies the remainder of the west front. Seventeen beds can be placed in this ward.

The total accommodation provided in the buildings comprises eighty-six patients' beds, and forty-seven staff bedrooms, besides quarters for the resident engineer and the porter.

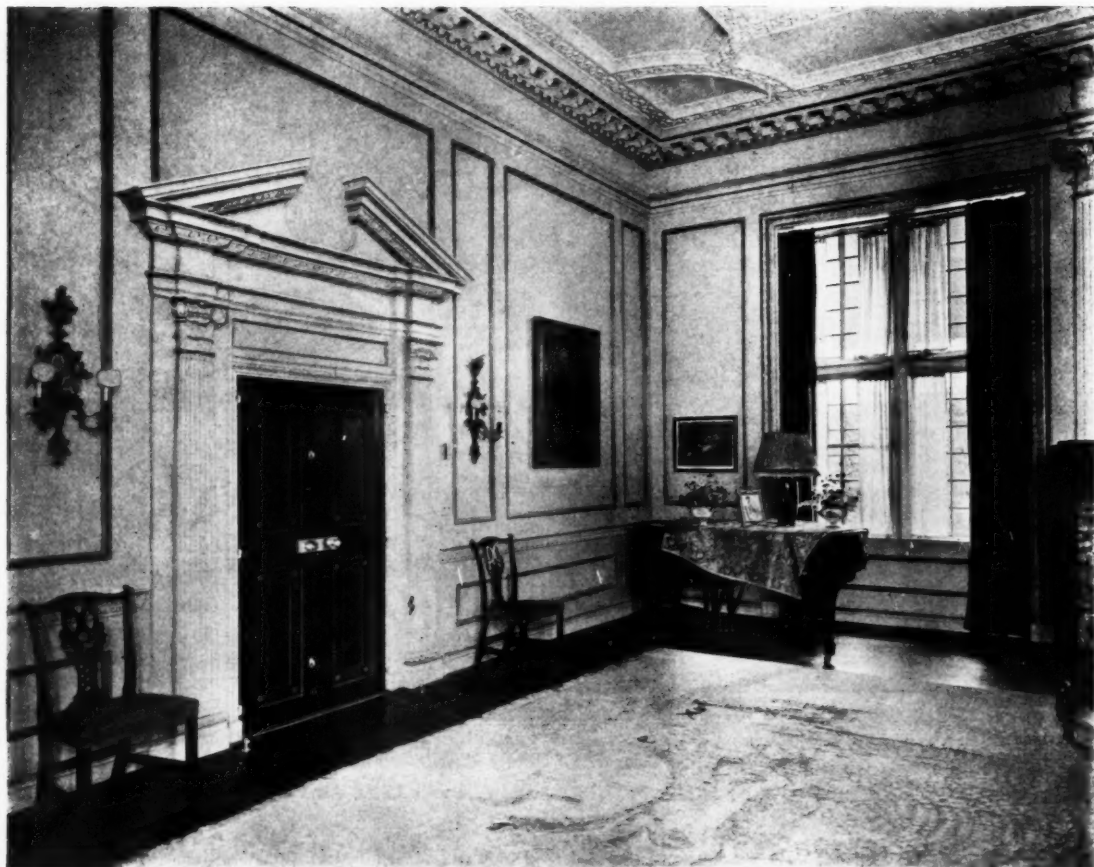
The main staircase, with an automatically controlled electric bed-lift, gives access to all floors.

All the rooms and corridors are heated by low-pressure hot-water circulators and radiators from duplicate boilers in the basement of the north-east tower, in which are also duplicate boilers for supplying hot water to all lavatories, baths, etc., and a steam boiler for the kitchen apparatus and sterilizers.

The general contractors were Messrs. Walker and Slater, of Derby; and the sub-contractors were as follows: Brightside Foundry and Engineering Co., Liverpool (heating and hot and cold water); David Burns, Whitehaven (electrical work); Falkirk Iron Co. (kitchen fittings); Martin van Straaten & Co. (tiling and terrazzo paving); Durato Flooring Co. (jointless flooring); Emanuel and Sons, and Wm. E. Farrer, Ltd. (sanitary fittings); Williams, Gamon & Co. (steel casements); Wm. Downs, Ltd. (sterilizers, etc.); Hichells, Congdon and Muir (electric lift); The Carron Co. (fire-escape staircases); Bratt Colbran & Co., and Wm. Whittle & Co. (Whitehaven) (fireplaces); James Gibbons and Sons, Ltd. (locks and furniture).

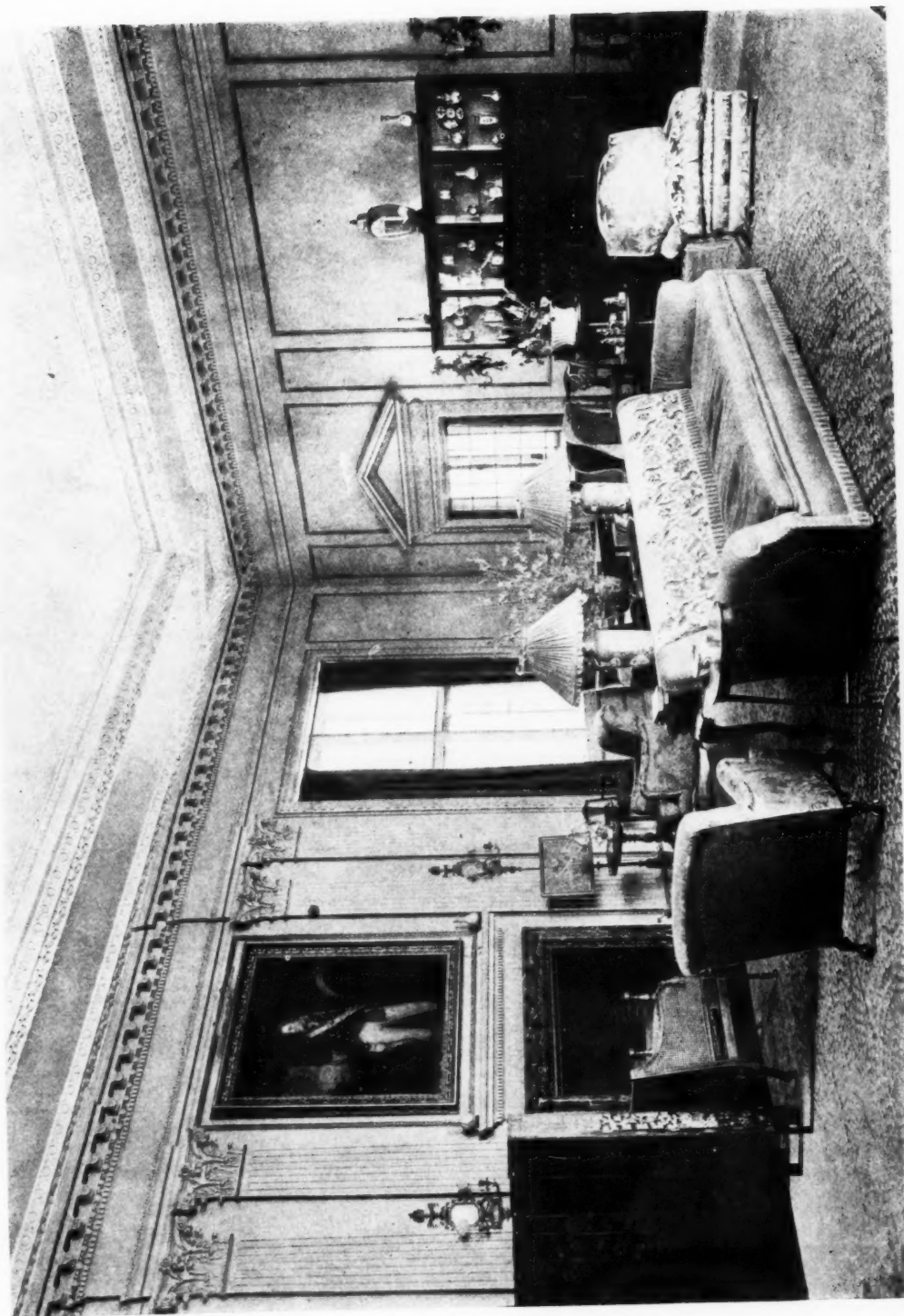
A House at Southampton, Long Island

CROSS and CROSS, Architects



THE MUSIC ROOM

Modern American Architecture. 45.—A House at Southampton, Long Island
Cross and Cross, Architects



This house, the drawing-room of which is shown above, was built for Mr. Charles H. Sabine.

Modern American Architecture. 46.—A House at Southampton, Long Island
Cross and Cross, Architects



The Dining-room.

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Housing in Scotland

By B. S. TOWNROE

MR. NEVILLE CHAMBERLAIN is looking forward to the time when the Rent Restriction Acts will disappear. The latest figures show that there has been a record in the building of small houses during the year ending last September, for no less than 159,476 houses have been built in England and Wales as compared with 127,000 for 1905, the record year before the war. However hopeful may be the outlook for housing in England and Wales—and there are many who consider that the Government is rather too optimistic—there can be no doubt as to the extreme gravity of the housing position in Scotland. A visit I paid last month to Glasgow, Edinburgh, Aberdeen, and the principal industrial centres in Scotland, revealed the fact that the position is becoming worse instead of better. The estimate of the shortage of houses made by the Royal Commission in 1917 for Scotland alone was 121,430. The estimate in 1919, made by local authorities, was 10,000 higher, or over 130,000. Progress in building has, unfortunately, been so slow since that date, and so inadequate to meet the ordinary increase of population and the wastage of existing houses, that by the end of 1924 the estimate of local authorities of the shortage had increased to no less than 180,000 houses.

On the average, during the last five years, between six and seven thousand houses have been completed both with State assistance and by private enterprise unaided in any way. But official estimates calculate that an output of 20,000 houses is necessary if, by the end of fifteen years, the building programme that was laid down by the 1924 Act is to be carried out, and an adequate number of houses provided so as to meet the standards set up by medical officers as necessary for the health of the population.

The view officially stated in Glasgow is that the need has practically doubled since the armistice. The official estimate for 1919 was that there was a shortage of 57,000 houses, and this has now been revised to 110,000. It is stated that the shortage of plasterers, who are being persuaded to migrate to England, is holding up many schemes, and that only one-tenth of the men needed can be found.

Glasgow built some 400 timber houses in 1920 in order to try to meet the need. These were supposed to have at least a ten years' life. In many respects they closely resemble the "Weir" houses, except that they are weather-boarded outside, and the "Weir" is, of course, mainly made of wood, with a steel covering. The best that can be said of these Glasgow wooden houses is that they are serving their purpose, and that they may last as long as twenty years. The Housing Committee is opposed to building any more.

An interesting step in slum clearances has been taken by Glasgow. Strongly constructed three-story tenements have been built in order to provide alternative accommodation for displaced slum-dwellers at rents about equivalent to those formerly paid. The new tenements on Hamilton Hill are solid, well-built structures, but a recent visit proved that many of the rooms occupied by very poor and sick people are already becoming slums for lack of proper estate management. The Glasgow City Council are missing their opportunity, in the opinion of many local ratepayers who have studied this subject, because they are not attempting to use trained women managers on the Hamilton Hill estate. These might work in Glasgow with the same success as those who for some years past have managed about 850 houses under the charge of the Commissioners of Crown Lands on the Octavia Hill system.

The need of Edinburgh is not so overwhelming as that of Glasgow, and another 10,000 houses would meet the immediate need, and would also make provision for slum clearances. At present about 650 houses are being built per year. Of the 6,000 existing slum dwellings about

1,000 are being dealt with, but, as in England, it is found in Scotland, that the majority of the slum-dwellers refuse to be transferred into alternative accommodation because they do not wish to be taken away from their old environment and friends.

A similar increasing need of houses is evident in such cities as Dundee, Aberdeen, and elsewhere, and, in fact, it may be taken for granted that Scotland needs an annual output of at least three times the volume of that existing at present. For that reason Mr. Baldwin recently, although badly advised in the opinion of many well qualified to judge, offered the increased premium of £40 for a maximum of 4,000 houses built by new methods of construction, by four firms who will be required to build at least 1,000 houses per year. The firms selected are manufacturers of the "Weir" house, "Corclite," a timber and steel house of Cowieson's, and a wooden house.

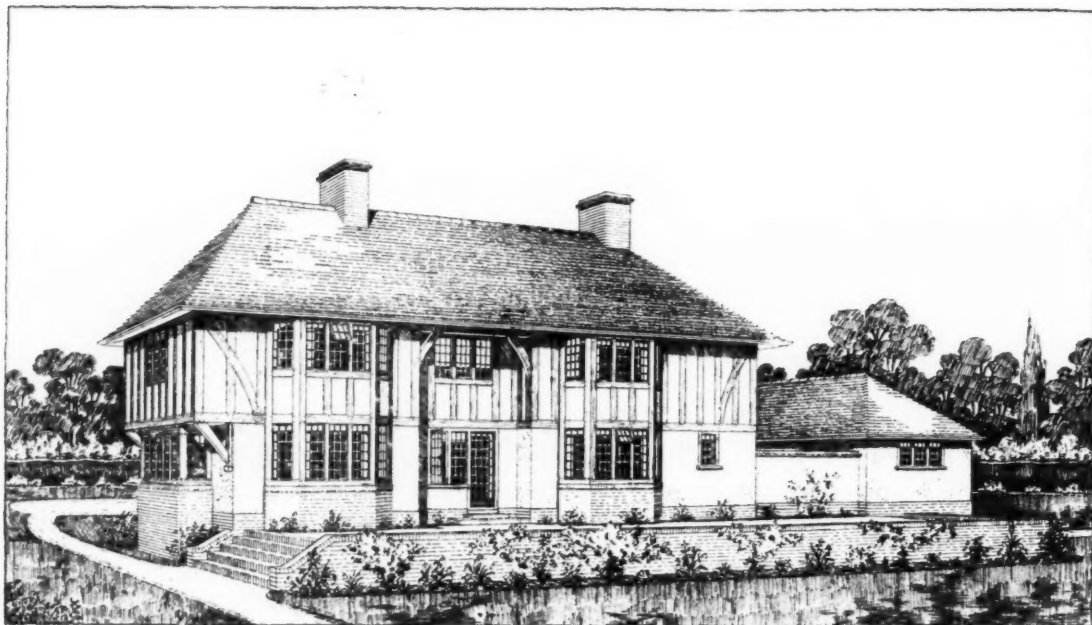
It is known that further action is also being considered on the recommendation of a sub-committee that was appointed by the Secretary for Scotland to inquire regarding the steps to be taken to expedite house building.

The crux of the situation is largely that of personnel. There has been some increase of apprenticeship, but in spite of the regulation that on all housing schemes on which public funds are being used the contractor must employ at least one apprentice to every three craftsmen: it is known that last year this proportion was not reached, and that Mr. Wheatley's scheme is working very slowly. The bottle-neck of the shortage of plasterers is especially damaging to progress of any kind.

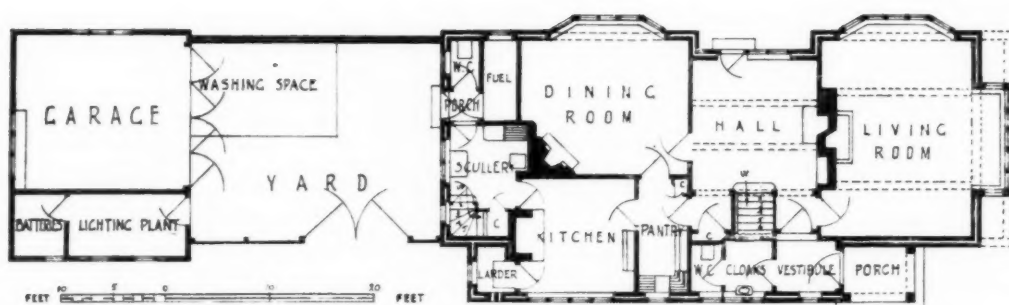
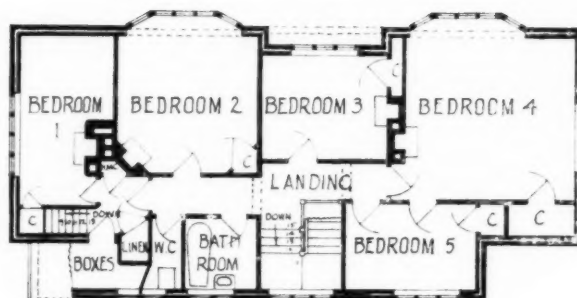
There would appear, therefore, to be good reason why the Government should come to the conclusion that any immediate appreciable increase in the production of houses must be achieved primarily by the building of houses by new methods of construction. But members of local authorities in Scotland and their architects are almost unanimous in condemning many of the new systems as being ugly, costly, and unsuitable for rough usage by slum-dwellers. They are ready for isolated steel houses to be built on the hills in the Highlands, but, for technical and aesthetic reasons, are showing a general disinclination to build Weir bungalows, however heavy the bribe offered by the Exchequer.

An entirely new factor is also coming into play. Many builders in Scotland declare that in the course of the next few months there will be a surplus of skilled labour instead of a shortage. This view is not confirmed at present, it must be confessed, by the official returns from employment exchanges, but official bodies are notoriously the last to have definite information on such questions. The builders assert that they are finding the number of contracts for large buildings rapidly falling off owing to the industrial slump. Businesses cannot afford to build new factories or offices or workshops, and ratepayers already overburdened are opposed to more money being spent on public buildings. Accordingly builders who have their ears close to the ground in Scotland say that already this month they notice a slight but perceptible tendency for skilled and reliable bricklayers and other skilled craftsmen to apply for employment. Should there be a surplus of skilled labour available next year the whole outlook, certainly in Scotland, and probably in England, too, will be changed. The case for the "Weir" house will be largely exploded, as brick houses will be built more quickly and probably more cheaply. If, on the top of an increased supply of labour, the Government find it possible to bring to an end the operation of the Rents Restriction Act, and at the same time reduce, or, indeed, to abolish, the present housing subsidies, private enterprise in house building may then begin to erect small dwellings on which an economic rent can be obtained.

Some Recent Domestic Work

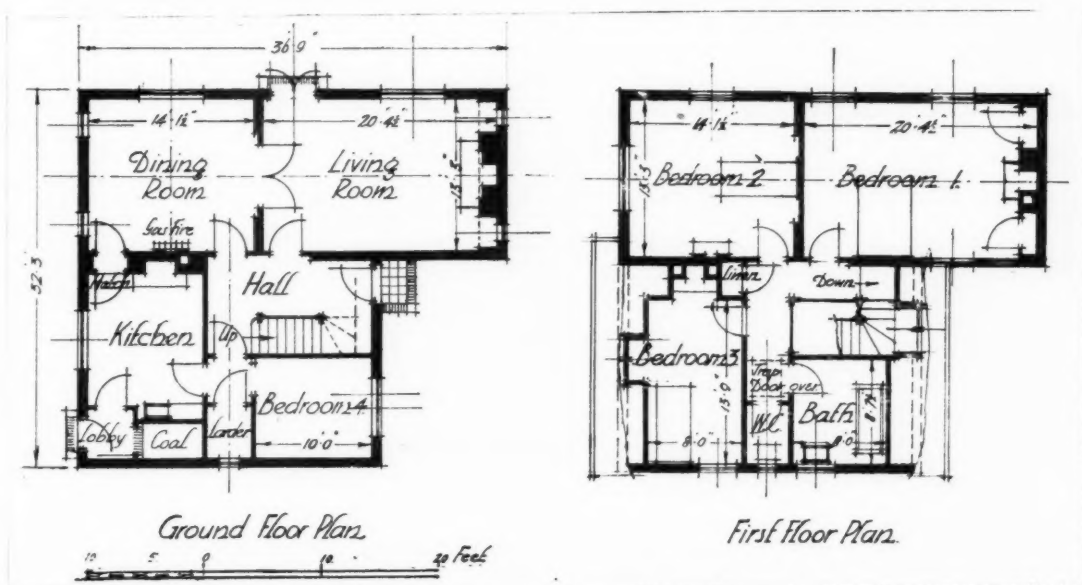


FIRST FLOOR PLAN



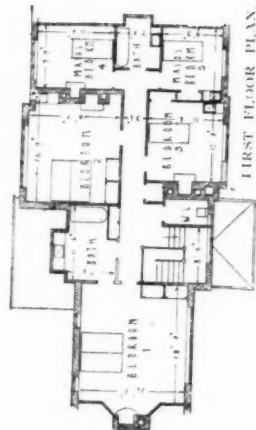
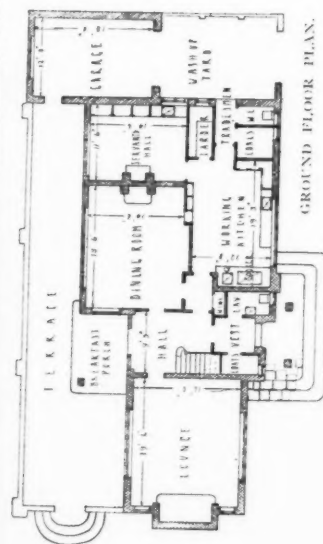
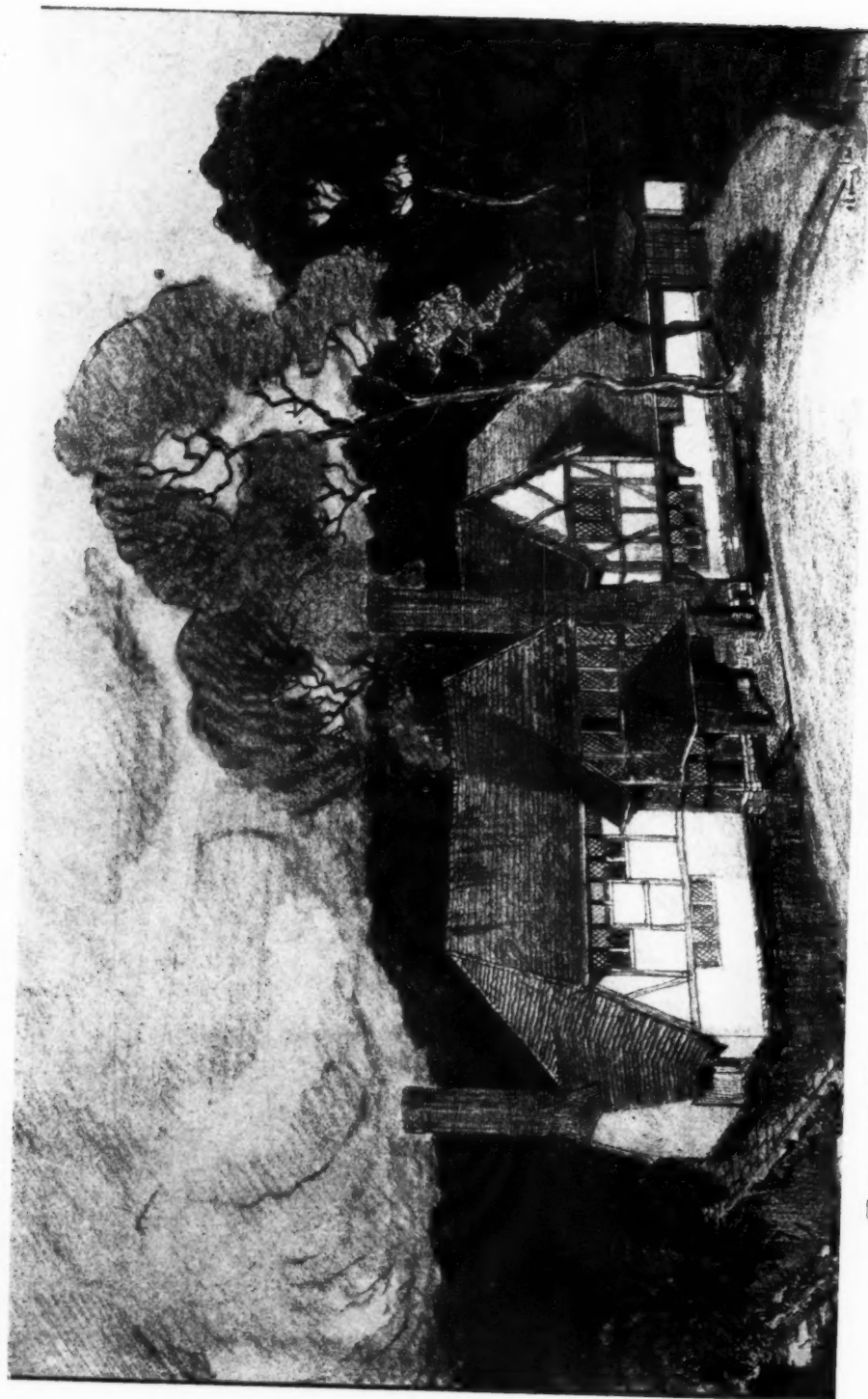
G R O U N D F L O O R P L A N

TIMBERS CROFT, NUFFIELD, OXFORDSHIRE. WILLCOCKS AND GREENAWAY, ARCHITECTS.



A HOUSE AT THAMES DITTON, SURREY

G. ALAN FORTESCUE, A.R.I.B.A., ARCHITECT.



1:100 1/4" = 1 foot

A HOUSE AT FRINTON-ON-SEA. TOMKINS HOMER LEY AND DOUGLAS ROBINSON, ARCHITECTS.

Book Reviews

Old English Life and Its Setting.

To write acceptably about objects of home or industrial use involves considerable sympathetic study of the men and women who designed, made, and used the tools, and whose circumstances and outlook moulded and modified the buildings in which they lived and worked. Two recent books show the results of much careful study and observation by expert exponents of their respective aspects of English life. With all the similarity of subject, there is a difference in the line of approach of the respective authors. Mr. Gotch, accustomed to view the English house from the technical and analytical standpoint, sets out to tell his story to a fresh audience, assumed to have little technical knowledge but a genuine interest. He takes his house and peoples it; warms it with great fires, or lets its walls echo to shouts and jests; fills it with movement, love and hate, eating and drinking, and the ordinary ups and downs of ordinary life, unconscious of "romance"—and, lo! his "Old English Houses" stand up as homes and not mere monuments of antiquity.

Miss Jekyll's line of approach is an inversion of Mr. Gotch's. She starts with her "rural working people of the country," and from them and their home life as a centre, her glance ranges in ever-widening circles. The extent of her view makes the title a trifle misleading in its suggestion of limitation to the interior of the small rural dwelling. One feels tempted to make a mental transposition of the words of the sub-title, and let it read: "Some Account of Cottage Folk and Country Objects." For although a patchwork quilt, a spinning-wheel, and, at a pinch, house ornaments may be called "cottage objects," it is a little difficult to fit into the same category a river bridge, a tree-lined lane, and a wagon. But the somewhat inapt title (with which, it seems, the author herself is not wholly satisfied) is counterbalanced by the appetizing chapter headings such as "Cottage Candlelight," "Some Old Country Mechanism," "Roadsides, Gates, and Fences." The information found under these headings receives excellent

treatment at the hands of an observant and sympathetic pen craftsman.

It is regrettable that for the vague expressions "old," "early," and even "very old," and "ancient," there is not substituted occasionally some clearer indication of the possible date, within a century or so, to which the particular furniture, hurdy-gurdy, church, or other object belongs. "Old" cannot always stand for obsolete or decrepit. But although the author is evidently enamoured of the "old" for the sake of its antiquity, or rather as a link with the people of the past, the practical usefulness of the various objects of which she writes has even greater weight with her. The beauty arising from simple functional perfection is what appeals to her most of all, and it is this that she invites her readers to admire and enjoy. This functional beauty may be found in tools, furniture, clothing, and even in the ducking-stool, which she describes as "a lesson in good form and fitness for purpose." The illustrations are well chosen and varied. They include reproductions from Pyne's early nineteenth-century "Microcosm" (showing many objects in use which now survive only as collectors' specimens), and a generous supply of excellent photographs. The expression "home counties" seems to be used a little too loosely sometimes in this book. The customs and industries of Hertfordshire and Kent, for instance, often differ from each other. Regarding names of tools, it may be pointed out that, although the whetstone may be called a "rubber" in some places, "rub" is the word used in rural Essex. The "bittle" described as in use in fence-making is simply a local pronunciation of *beetle*, a heavy mallet, which elsewhere becomes softened into *beedle*. Recent efforts to revive rural industries make the detailed description of processes, some of them already obsolete, of special interest at the present time. The author also makes a timely plea for maintaining simple beauty in bridges, gates, and fences. Although the field covered is so wide, this is no mere dictionary where "brand tongs," pewter, carts, or tombstones may be looked up in the index,



BODIAM CASTLE, SUSSEX. PROTECTION BY MEANS OF A MOAT.

(From "Old English Houses.")

and a string of bare facts found by the inquirer. The essence of the book is the close touch with life.

Mr. Gotch also is in close touch with life, but, as previously indicated, he brings it in from outside, as it were. In his case the centre is the "house," and "life" the circumference. His title declares this, just as Miss Jekyll's title declares her centre to be "household life." But while the latter takes the peasant and yeoman to move in her story, the former (because on the whole his "old" is older than hers), concentrates his chief attention upon the knights and ladies, the courtiers and rich merchants; for their homes alone, in the times of which he writes, were of sufficiently substantial materials and construction to supply this age with definite knowledge about them. Mr. Gotch breathes life into discussion of plans, gables, gateways, gardens, by the introduction of considerable passages

recording real or fictitious incidents from the period to which belongs the kind of dwelling described in each chapter. He draws upon historical facts, collections of contemporary letters, and other personal documents, besides quoting from the literature of the time. He also adds such illuminating imaginative touches as the conjecture that when Milton "went up or down stairs in his blindness, his hand must have sought support from a broad handrail that rested on heavy balusters." His book aims at relating the story of domestic architecture "in words that will be understood by readers unfamiliar with the subject." With this aim in view he supplies a slight background of knowledge about the primitive dwelling, and then begins his story proper at the period when "security began to be provided by law and custom instead of by the precautions of individuals." An interesting point is made, that until late Tudor times little appreciation was felt for landscapes and other natural beauties

or artificial out-of-door amenities. The contrast between the circumstances of the seventeenth-century baronet and the mediæval knight was expressed in the surroundings of their homes, as well as in the houses themselves. "Freedom from dread," he says, "gave more play for the graces of life; it gave scope for the civilizing influence of gardens. Hitherto the love of gardens had been stifled, yet odd spaces within the fortified enclosures had always been devoted to them. But now they were able to expand without limit." Henceforward the more or less formal laying-out of gardens and parks, and the introduction of vistas extending to the unenclosed country beyond the garden wall, became closely associated with the design of the house. This and other points are duly illustrated by plans and photographs.

These two books should help to stimulate, in architect and layman alike, a desire for revival and promotion, in modern days, of those traditions of hospitality and craftsmanship enshrined in the vague but captivating words, "Old English."

"Old English Houses" By J. Alfred Gotch, M.A. (Hon.) Oxon., F.S.A. Demy 8vo. Illustrated. London: Methuen & Co., Ltd. 16s.

"Old English Household Life: Some Account of Cottage Objects and Country Folk." By Gertrude Jekyll. Small 4to. Illustrated. Batsford, Ltd. 21s.

Architectural Practice and Procedure.

This book delivers a smashing blow at a popular fallacy. It invalidates the notion that training in the architectural schools is almost wholly confined to the æsthetic and technical aspect of the profession; for it has been produced by a chartered surveyor, who was specially invited to give at the Architectural Association Schools a series of lectures

on architectural practice and procedure, and who at once foresaw that these lectures might well form the nucleus of a useful book which would occupy a peculiar niche.

Mr. Hamilton Turner is certainly to be congratulated on his prescience and its outcome. His book compresses into a handy volume most of the "things that matter"—or the "things that an architect ought to know"—on the business or commercial side of the profession: "the more prosaic side," the author is modestly content to call it, but that is a debatable subject. Plain prose, like plain pudding, may serve as a very respectable augmentation of the bill of fare. And *certainly*, your poets and your artists are often, like Shakespeare and Leonardo, exceedingly keen men of business and, so to speak, "good all-round practitioners." Architects of the front rank have always, with surprisingly few exceptions, rejoiced in the complete mastery of detail and in giving close attention to minutiae; this characteristic, it would seem, depending on their

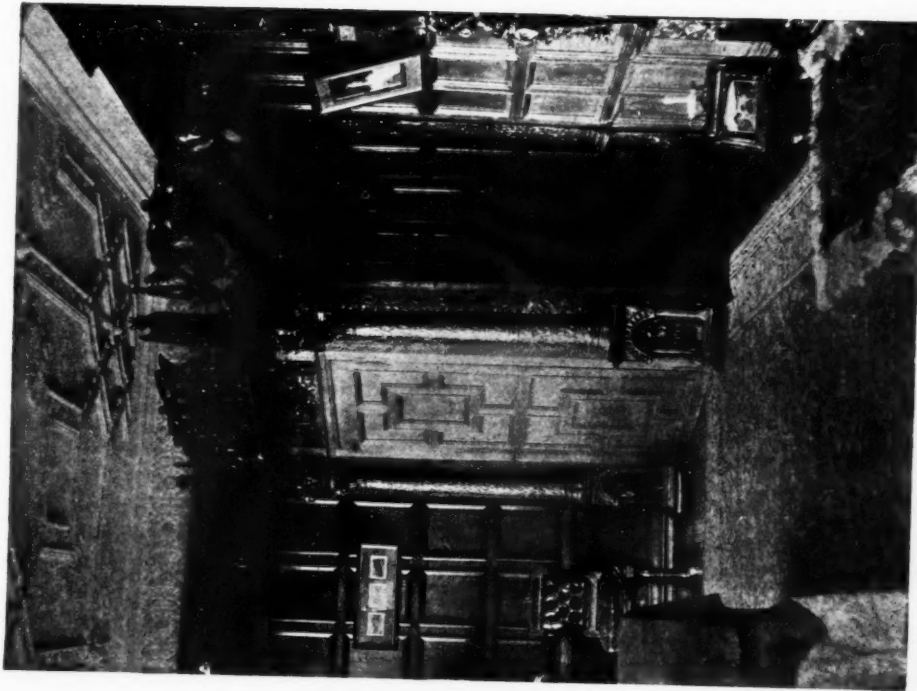
sheer love of having everything, down to the apparently most insignificant item, exactly as and where it ought to be. This passion for accuracy "makes drudgery divine." Those who have not this gift by nature should certainly cultivate the habit as a means of self-discipline. It is indispensable to "the complete architect."

Mr. Hamilton Turner's book provides the necessary apparatus for such healthy exercises, and in an appendix he recommends a short list of books in which the subjects of which he treats can be followed up intensively should necessity arise. Yet this volume will be found to meet most ordinary requirements of the kind. It outlines procedure from the preliminary survey of the site to arbitrations on the finished work. Nay, it even goes farther back than the preliminary survey: there is a chapter on "How



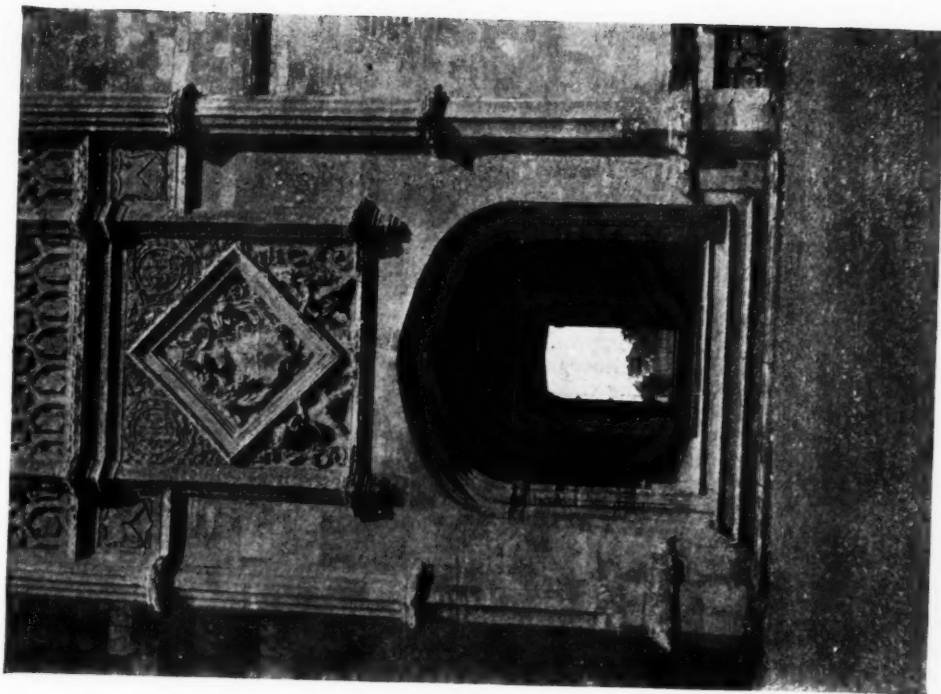
ARMADA HOUSE, WESTON, NORTHAMPTONSHIRE (1588).

(From "Old English Houses.")



DOORWAY, BRADNINCH MANOR HOUSE, DEVONSHIRE.

(From "Old English Houses.")



ENTRANCE DOORWAY, MONTACUTE HOUSE, SOMERSET.

Work is Obtained." Other chapters deal with the working and business routine in an architect's office; with the storing and classification of catalogues, drawings, and other documents; with estimating; preparing bills of quantities and schedules of prices; and there are observations on the choice of builders and the arrangement of contracts, and on cognate matters. Of course, the author does not overlook the all-important subject of fees, nor the moral and legal responsibilities of the practising architect. There is just sufficient citation of the law to keep one reasonably clear of its entanglements and pitfalls. Finally, the author provides a typical specification, with several forms for schedules, and other documents useful for guidance in practice and procedure. Altogether, in substance and in execution, this is a book that can be recommended without hesitation, not only to students, but as a really serviceable and up-to-date addition to the architect's working library.

"Architectural Practice and Procedure." A Handbook for Students. By Hamilton H. Turner, F.S.I. With a Foreword by Maurice E. Webb, D.S.O., M.C., F.R.I.B.A. Pages i-xiv, + 1-339, 8½ in. by 5½ in. Price 15s. net. London: B. T. Batsford, Ltd., 94 High Holborn.

Two Town-Planning Schemes.

The two publications named below afford an interesting comparison between a town scheme and a regional scheme, but both reveal the handicap under which local authorities labour because of their inability to deal with a district in a comprehensive manner, and through lack of powers to handle built-up areas. It is, indeed, to be hoped that the Minister of Health will deal with this detail in his new Bill.

The Report of the County Borough of Northampton follows the usual lines which we have now become accustomed to look for in documents of this kind. First there is the Civic Survey, and in connection with this the authors have here added considerable interest and instruction by going a little beyond their subject and including both illustrations and comments of matter relating to other cities; thus among the illustrations will be found Wren's plan for re-building London, the failure to adopt which is such a disaster that it is to be hoped it will act as a warning to-day. Then there is Part II, which deals with reconstruction and development proposals.

It appears that the business men of Northampton are as short-sighted as those of other towns, in that, despite the chaotic muddle in which they find themselves—due almost entirely to lack of a town-plan in the past—they question the usefulness of such an undertaking as the preparation of a town-planning scheme to-day. To the man *not* brought up in an "industrial" atmosphere, such matters as transport facilities, room for expansion, cheap power, housing of employees, health conditions, would seem of supreme importance, yet the one desire of the business man seems to be that he may be allowed to muddle along in his own chaotic way. The authors more than once give the impression of having been "up against" this dispiriting attitude, and so they wisely urge the importance of educating children "in civics, and particularly in the problem associated with the development of the town in which they live," in the hope that the next generation may adopt a more intelligent attitude. Still, we should not despair; reports such as these are, by their very existence, encouraging signs.

The fundamental difference between the two reports is, of course, that whereas the one is made to a local authority having powers to carry out or ignore the various recommendations, the other is made to a joint committee having absolutely no powers whatsoever; a committee, in fact, which owes its existence to the goodwill of the various local authorities who have called it into being. It is clear, therefore, that if any good is to come from the report, the committee should continue to exist as a co-ordinating and advisory body, at the disposal of the various authorities in the area, each of which will have to prepare its own individual town-planning scheme. The area dealt with is adjacent to the West Middlesex area, which has been dealt with in a recent report, and it is unfortunate, as the authors point out, that Kingston and Hampton are excluded,

for this precludes the preparation of a complete scheme for both sides of the river. Hampton's aloofness is particularly regrettable, "because it (Hampton) practically forms an island in the middle of an area of twenty-eight neighbouring authorities with whom it has failed to collaborate in the common interest of the region."

One of the difficulties which beset those engaged upon the preparation of a regional scheme is to strike a *via media* between proposals which are, on the one hand, too vague to give adequate guidance to local authorities, and proposals which are, on the other hand, so detailed as to encroach on the work which more properly belongs to the individual town-planning schemes. In this report the authors seem to have steered their difficult course with no little success, so that if the general lines laid down are adhered to, this area, like the adjacent West Middlesex area, will preserve its charm and amenities while yet developing in such a way as to benefit the community as a whole. We are glad to see in the reports references to unsightly advertisements. So long as these are uncontrolled, the preservation or establishment of amenities is quite impossible. They, together with excessive smoke emission, are certainly among the chief obstacles towards achieving the city healthy, the city beautiful, or, indeed, the city decent.

County Borough of Northampton: Proposals for Development and Reconstruction. Thomas H. Mawson & Sons in collaboration with Thomas Adams and Longstreth Thompson.

Thames Valley Joint Town-Planning Committee. Final Report upon the Regional Planning Scheme. Thomas Adams and Longstreth Thompson.

British Standard Specification for Portland Cement (No. 12—1925).

The British Engineering Standards Association has published a new issue of the British Standard Specification for Portland cement (No. 12—1925), which was last revised in 1920. Since that time it has been found desirable to make certain changes to bring the British Standard Specification more into line with present-day requirements, and to meet prevailing conditions of manufacture and testing in hot climates. In the course of the work of revision a more precise method was sought than that heretofore adopted for determining the consistency of the neat cement paste for the tensile and setting-time tests. Extensive investigations were carried out, but no method was found which could be considered unquestionably more reliable, and the directions of the previous editions of the British Standard Specification have therefore been retained. The investigations are being continued in the hope that some satisfactory means may be found which can be included in a future edition of this Specification.

Following are the principal alterations embodied in the 1925 edition of the Specification:—

1. A summary of the tests is given at the beginning of the Specification.

2. Provision has been made for testing in hot countries at temperatures up to 95 degrees Fahrenheit. In climates where the temperature runs above 95 degrees or below 58 degrees special arrangements have to be made between the vendor and the purchaser, unless the ranges given in the Specification can be artificially produced.

3. The cement is now required to be more finely ground, the permissible residue on a 180×180 sieve being 10 per cent. instead of 14 per cent. Tolerances are laid down for the number and size of wires and size of openings in sieves, both for cement and for sand. The minimum size of the sieving area is now specified to be 50 square inches, and the minimum depth of the sieves to be 2½ inches.

4. The maximum figure for the hydraulic modulus has been raised to 2.90, and the maximum limit for magnesia is now 4 per cent.

5. The minimum tensile breaking strength of neat cement after seven days has been increased to 600 lb. per square inch, and that of cement and sand after seven days to 325 lb. per square inch. The twenty-eight-day test on neat cement has been eliminated.

6. The amount of water for gauging cement and sand briquettes is now to be ascertained by means of a formula

based upon the amount needed to produce the plastic mixture required in the tensile test for neat cement.

7. The standard Leighton Buzzard sand is required to be of the white variety, and its loss of weight on extraction with hot hydrochloric acid is specified not to exceed 0.25 per cent.

8. The initial setting time of normal setting cement is to be not less than thirty minutes, and the initial setting time of quick-setting cement not less than five minutes. This is a useful specification.

British Standard Specification for Portland Cement (No. 12—1925). Price 1s. 2d. post free. British Engineering Standards Association Publications Department, 28 Victoria Street, London, S.W.

Shear Members in Reinforced Concrete—III

By PROFESSOR HENRY ADAMS, M.Inst.C.E., F.R.I.B.A., Etc.

TO make this series complete we will now consider where the main reinforcement may be turned up or down to act as shear members where no longer required for bending moment or longitudinal stress. If the beam be simply supported at the ends and non-continuous, a parabola, Fig. 5, should be drawn of any height on the given span and divided by horizontal lines into as many divisions as there are reinforcement rods required by calculation in the centre of span. Suppose there to be six rods in two layers as Fig. 6, then at A, where the first division cuts the parabola, one rod may be turned up, say, the middle upper rod as at A', Fig. 7. The second division terminates at B but objection may be raised to turning up a rod at B', as it would not be symmetrical with the section, we therefore go on to C, where we can dispense with two rods and then turn up the two outer upper rods as at C'. At D we can dispense with another rod and therefore turn up the lower middle rod at D'. It is then advisable to let the two outer lower rods run through.

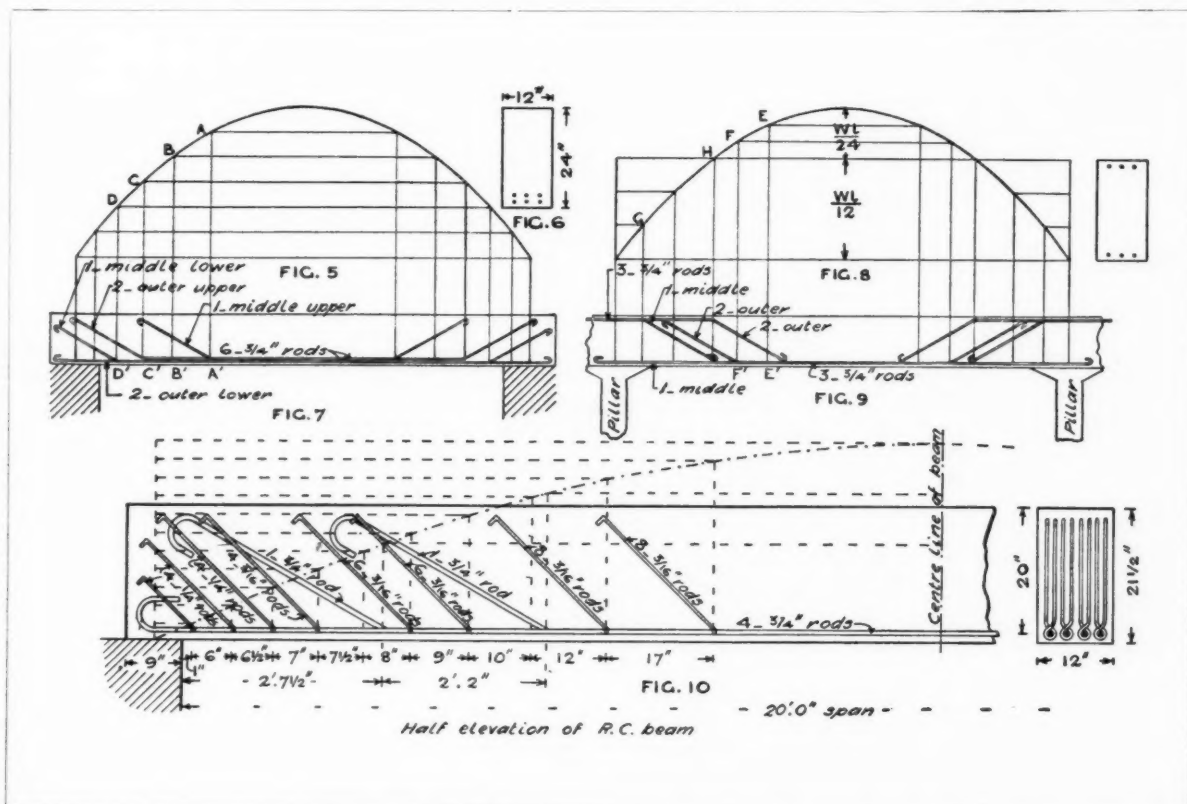
In the case of a continuous beam the parabola must first be divided on a vertical line into heights representing the maximum positive and negative bending moments respectively. Theoretically, this will give two-thirds for the negative and one-third for the positive, or by L.C.C. rules it

will be half for each. Taking the former it will give Fig. 8. Assuming three rods at centre of span, the middle one can be turned up at the first division E', Fig. 9, and the other two run through, or if preferred the two outer rods can be turned up at F' and the middle one run through. If there are three rods for the negative bending moment, the centre one can be turned down at G' and similarly on the other side of the support, and at H' the two outer rods may be turned down.

When the longitudinal reinforcement is turned up in this way some, if not all, of the shear stirrups can possibly be omitted, but on the other hand the absence of some of the rods from the straight line after being turned up may involve the provision of shear stirrups of greater diameter upon those rods that remain.

The same method can be followed in other cases where the reinforcement rods are in greater or lesser number, but it must be understood that sufficient provision is always to be left to carry the maximum longitudinal stresses at every part.

In Fig. 10 is shown the half-elevation of a reinforced concrete beam, supported at the ends, with the reinforcement rods turned up as described above and made up with shear members where the turning up of the rods does not provide fully for the shear stress.



Enquiries Answered

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

DAMP WALL.

"A. T." writes: "The accompanying drawing (not reproduced) shows a party wall between two buildings, and the part shaded is the old hollow wall of a house. When the shop 'A' was built, this 14-in. wall was extended over the forecourt of the building. The old building was two stories, with attics, but the new extension was simply one story (the shop), with flat roof over. Later on the shop 'B' was built, and this was carried up three stories. Soon after completion, and when the place was occupied as a tea-room, damp appeared along the base of the wall, extending up to about 3 ft. to 4 ft. above the floor. This was at first thought to be simply the moisture working out of the plaster, but it became particularly bad when the atmosphere was at all moist. It became so bad that customers refused to sit along that side of the tea-room. It was thought that probably the dampcourse in the old wall was defective, so the skirting from 'M' to 'N' was taken off, and a double slate course inserted on the 'B' side of the wall only, the owner on the 'A' side objecting to having his done, as he said his side of the wall was dry. Can any of your experts suggest the cause of the trouble and a cure?"

—If the roofs and surface drains are clear and in due order, I can only suggest that the additions to the original building have blocked up the air inlets to the hollow of the old wall, and that what is needed is a current of air through the cavity. If this cannot be managed, the only palliative of which I am aware is to line the tea-room wall with panelling. F. S. I.

DAMP-PROOF STONE WALLS FOR HOUSES.

A Mason writes: "In my district stone walls with a brick lining $4\frac{1}{2}$ in. thick have been built: (1) With a cavity and with bond stones, built the full thickness of the wall, and tilted outwards, or grooved on the top sides; (2) with iron ties instead of bond stones; and (3) solid 15 in. walls, which are not always successful. In another county a similar stone is (4) wall solid, and the bondstones do not go through the wall, but are built between 9 in. heading courses of brick in the $4\frac{1}{2}$ in. lining. They are said to be damp-proof and stable. Is (5) a 16 in. wall with a 9 in. brick lining, and the bondstones built into the inner $4\frac{1}{2}$ in. of the wall only, solid or cavity, so much better than No. 1 as to be worth the additional cost? Is not (6) stone, cavity, and iron ties and then 9 in. lining, the best method of all to adopt? As iron ties have not been in use long enough to have their durability reasonably tested, can you tell me whether bronze ties are obtainable? Are not the flush stone sills one sees so much used the cause of dampness in the wall below? In some cases precautions to avoid dampness appear to have been taken, by the use of lead under the sill."

—A solid wall is not damp-proof in this climate unless built with a continuous vertical sheet of really damp-resisting material, such as high-class asphalt applied by experienced workmen.

Confining attention, therefore, to hollow walls: a hollow wall with a 9 in. brick lining is eminently desirable wherever it can be provided.

A $4\frac{1}{2}$ in. brick lining should only be permitted where the foundation is solid rock or properly reinforced concrete, and the lintels over door and window openings are cast as continuous reinforced concrete beams surrounding the whole building and anchored back by means of reinforcement in the joints of all cross walls and partitions.

The extra cost of the additional $4\frac{1}{2}$ in. thickness of lining, or of adequate reinforcement, undoubtedly pays for itself in the longer life of the building before repairs are needed. Stone bonders carried across the cavity are not likely to be permanently satisfactory. They are liable to shear if any movement takes place due to unequal settlement of the inner and outer faces of the cavity wall, and they may conduct moisture by capillary attraction through their pores even though tilted down to the outside or grooved on their upper surfaces.

Galvanized iron ties have now been in use satisfactorily for well over twenty-four years. The Copper and Brass Extended Uses Council, Birmingham, would gladly reply to an enquiry for wall ties in copper or bronze.

Flush stone sills undoubtedly get wet and communicate moisture to the work immediately below, but if the detailing is carefully attended to the moisture may be confined to the wet outer layer of the cavity wall and will not show inside the building. Of course the wet stone sill should not bridge the cavity. Whether the stone will stand better the actual washing of the rain from a flush sill or the dampness and accumulation of soot beneath the throating of a projecting one depends upon the nature of the stone itself. Some stones stand the flow of water better than the action of the soot. Observation of the behaviour of examples in "Mason's" own district is the only way to settle the point. W. H.

THE LIFE AND COST OF SLATES AND TILES.

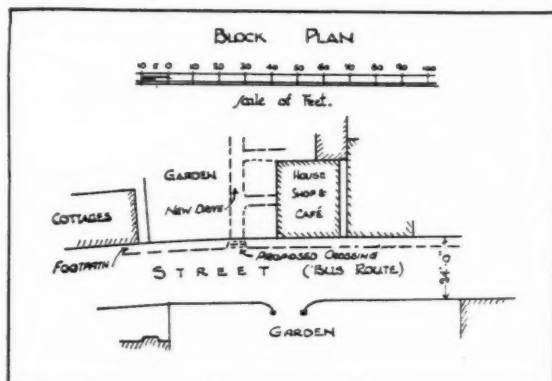
"Student" writes: "What are the advantages and disadvantages of asbestos-cement slates, compared with ordinary Welsh slates and Beauvais tiles when used for a housing scheme? What is the average 'life' of each? I have been under the impression that a Welsh slate will last twice or three times as long as an asbestos-cement slate, and that, although the Welsh slate is approximately 50 per cent. dearer, it is cheaper in the long run. Am I correct? How long have asbestos-cement slates been on the market?"

—No evidence is available to prove conclusively that an asbestos-cement tile will last as long as slate. A first-quality Welsh slate has a life of a hundred years approximately. Delabole and other Cornish slates have a much longer life, but are heavier, and the same remarks apply to Westmorland slates. Genuine slating is approximately 70 per cent. to 90 per cent. dearer in Welsh slates, according to the part of the country they are required at, than asbestos-cement tiles, and Cornish and Westmorland are about 150 per cent. dearer. Some makes of asbestos-cement tiles have been on the market about twenty-five years. When these are used it is advisable to obtain from a first-class manufacturer, and to insist upon them being thoroughly seasoned. E. H.

GARDEN DRIVE FOR SHOP.

"Provincial" writes: "A person has a café and shop in a narrow village street, as shown on the accompanying drawing. In order to obviate congestion of thoroughfare a 9-ft. drive has been constructed in his garden, where it is intended callers coming by road may leave a car. The local authority have refused permission for a crossing to be constructed over the footpath. During the summer months probably eight cars per week might be expected to be parked. At other times not half that number. (a) Has the Council authority to prevent the crossing being constructed? (b) May not an owner of land claim reasonable access to his land; if so, may not this case be so regarded?"

—(a) Yes; but they must use their powers reasonably. (b) Yes; the land to the centre of the road is his freehold, and his rights over it are only limited by statutes—in this matter the Public Health Acts. F. S. I.



"GARDEN DRIVE FOR SHOP."

The Fabric of the Houses of Parliament

Sir Frank Baines, K.B.E., in a lantern lecture delivered to Members of Parliament in one of the committee rooms of the House of Commons, on the decay of the stonework of the Houses of Parliament, said he wished it to be understood that the building was secure and was in no danger of collapse. The cost of the repairs which were urgent and imperative, he said, would approximately be 8 per cent. on the estimated cost of the building to-day, which was £12,000,000. If the repairs were spread over fifteen years, that would mean about $\frac{1}{2}$ per cent. He said that after reviewing all the evidence and the reports of the various Select Committees he could not honestly say that the problem arose from the original errors of construction. It was a normal problem. He illustrated by lantern slides the destruction that had been wrought in the last eighty years. On the west front, he said, some of the crowns were so fragile that they could be pulled away with one hand. The south-west cupola on the top of the Victoria Tower, 330 ft. from the street level, had decaying crockets weighing 12 lb. to 15 lb., the presence of which caused serious anxiety to those in charge of the building. On the river front decay had been discovered on the panels and mouldings, and that portion above the Terrace was in a particularly dangerous condition. In fact, the whole building was in a state of extreme mutilation. Portions of the building had been taken down, a pinnacle here, a banneret or a crown there; the process of hand-picking fragments could go on, but he could not guarantee the safety of the members. The problem should be tackled in a way that at least should secure that the building should be adequately repaired. He showed them a picture of the scaffolding that had been put up round the Central Tower, and asked, were they to go on putting up 10,000 poles, simply for hand-picking purposes, or should they not consider the problem in a more effective and final manner?

There had been difficulties from the first in regard to the stone. Peel, one of the "white men" at the time the building was erected, suggested that professional men should be instructed to examine the whole question, to find out the best stone, the best beds, and the most satisfactory method of quarrying it, but his advice was not followed. Barry expressed a curious universality of view about the stone to be used, and the Commissioners finally decided on the stone from Bolsover Moor—which simple laboratory tests would have shown to be unsuitable—but when the Bolsover quarries were opened there was practically no stone there. Anston stone was chosen, and the present condition of the building was the logical and inevitable outcome of that choice. The stone was subject to excessive decay in consequence of the atmosphere, and it contained primary geological defects, due to the general crumbling of the earth in cooling, and to minute fissures across the beds of stone itself. If there were only surface decay to deal with he would not be so anxious about the mutilation of the building, but crystallization set up in these minute fissures, and this in turn led to cleavage. A huge flower, weighing 56 lb., just above the place where the King's coach entered, had been found affected in this way, and also a lion's head, weighing 70 lb. on the North Tower, and heavy crowns on other parts of the building. In one instance a stone portcullis had come off at a touch. The problem facing them was really one of cleavage, as it affected great masses of the stonework of the Parliament building. Although the committee inquired into the matter there was no question of cleavage then, but only one of surface decay. The cleavage had affected the panels, the cusping, the statues, the crowns, and nearly every detail of decoration. Up to date no less than 40 tons of stone had been picked off by hand, and more than 100 tons had been taken down by other means. The process of decay in regard to some of the figures had gone so far that it was thought they would have to be recarved, but he hoped this would not become necessary. The use of iron rods supporting the bannerets had also had a destructive effect, for the iron had rusted and forced the stone apart. In one case a cupola weighing 5 tons had been lifted 14 in. by this process of oxidation, and the same destructive effect had been observed where cast-iron crowns had in some cases been fitted on to slender stone shafts. In regard to the larger crowns, some of which measured 2 or 3 ft. across, and were badly decayed, he suggested that, while preserving them with full regard to historic accuracy, they should be fitted with solid cushions supporting them from the inside. That would be true to masonic art, and reasonably true to the work of Barry and Pugin. If members insisted on the metal finials and

bannerets being preserved he thought they ought to be replaced in bronze, a form which would allow him to say that they would stay in position.

What he felt in regard to all the decoration on the Houses of Parliament, he continued, was to ask whether it was essential that we should reproduce it in exact replica in every case. Could we not be a little harsh in regard to certain details? When such large sums as would be required for the whole repair of the building were at stake, and the country was feeling the urgent need of economy, it might be expedient to consider a less costly alternative. For instance, it was not necessary that the back of the turrets should be carved.

Parliamentary Notes

BY OUR SPECIAL REPRESENTATIVE.

Mr. N. Chamberlain, the Minister of Health, informed Sir W. de Frece that he hoped to introduce a Smoke Abatement Bill next session.

In reply to Mr. A. Greenwood, Mr. N. Chamberlain said that the following table gave the number of houses, including those to be erected for demonstration purposes, of the Weir, Telford, Atholl, and Wild houses which had been approved, and the number of local authorities to which approval had been given in England and Wales:

Type.	No. of Houses.	No. of Local Authorities.
Dennis-Wild	1,356	21
Telford	266	33
Weir	21	12
Atholl	50	25

Mr. N. Chamberlain informed Mr. T. Thomson that on November 1 the number of houses in course of erection in schemes under the Housing Acts of 1923 and 1924 were:

By local authorities	40,526
By private enterprise	33,031

The total number of houses in schemes sanctioned under these Acts, including those completed or in course of erection, were:

By local authorities	140,781
By private enterprise	187,833

Sir A. Steel-Maitland, the Minister of Labour, informed Mr. T. Williams that at October 26 the number of insured work-people in the building trade of Great Britain recorded as unemployed was 69,392.

Mr. Basil Peto asked the Under-Secretary of State for the Home Department, as representing the First Commissioner of Works, whether his attention had been called to the protest against the retention in Hyde Park of the Epstein panel of the Hudson Memorial, signed by the President of the Royal Academy and many other distinguished artists and art lovers; and whether he intended to order its removal?

Sir W. Davison asked the Under-Secretary whether he had now satisfied himself as to the general demand from all classes of the public for the removal of the Epstein sculpture from the Hudson Memorial Bird Sanctuary in Hyde Park; whether he was aware that the subscribers to the Hudson Memorial were never consulted with regard to the Epstein panel, and were indignant that their subscriptions should have been used for the erection of this piece of sculpture as a memorial to Hudson; and what action the Office of Works proposed to take to secure the removal of the panel from its present position?

Sir H. Craik asked whether the First Commissioner was prepared to give the names of those who composed the committee of taste upon whose recommendation the First Commissioner then in office gave accommodation to the piece of sculpture which had given rise to controversy in connection with its position in the Bird Sanctuary in Hyde Park?

Mr. Locker-Lampson replied: "The First Commissioner is quite prepared to give the names of the committee on whose advice the First Commissioner of the day accepted the panel. The names of this committee, which comprised persons of distinction in the world of art, have already, I believe, appeared in the Press. The design was submitted to the Office of Works by the Hudson Memorial Committee, which, it was assumed, represented the views of the subscribers to the memorial. The First Commissioner's attention has been drawn to the recent protest against the retention in Hyde Park of the panel, and also to a strongly supported manifesto in favour of its retention. My right hon. friend is not satisfied that there is a general desire for the removal of the panel."

Law Reports

Architects' Successful Claim for Fees

Atkinson and Long v. Wellbrook Sanitary Laundry Co., Ltd.
King's Bench Division. Before Mr. Justice Branson.

This was an action brought by Mr. Thomas Dinham Atkinson and Mr. Charles Wm. Long, architects, carrying on business at Trumpington Street, Cambridge, against the Wellbrook Sanitary Laundry Co., Ltd., of Girton, Cambridge, to recover £398 13s. 10d. for professional fees. Defendants denied liability, and counter-claimed for £174 11s. paid to Messrs. Northcroft, Nicholson, and Neighbour by them under protest for quantity surveyors' fees.

Mr. Le Quesne, K.C., and Mr. Harold Simmons appeared for plaintiffs, and Mr. Joy, K.C., Mr. Fox Andrews, and Mr. Walter B. Frampton for defendants.

Mr. Le Quesne stated that plaintiffs were a well-known firm of architects carrying on business in Cambridge and London, and the defendants a laundry company, the directors, secretary, and manager being ladies. In March, 1923, the defendant company was minded to extend the premises of the laundry, and called in Mr. Long to prepare the plans. Defendants declined liability to pay any fees to the plaintiffs, pleading that as Mr. Long was to prepare plans for extensions which were to cost at the most £5,000, whereas the tenders sent in by contractors the lowest was £7,300, they were therefore not liable to pay the plaintiffs any remuneration at all. Plaintiffs, in their reply, contended that no such terms were imposed at all. Mr. Long did a large amount of work in preparing plans, etc., on a rough sketch and written report prepared by a Mr. Barry Neame, an expert on laundries and their equipment. In July, 1923, the defendants decided finally to give up the whole scheme of the extensions.

Evidence was given by Mr. Long, F.R.I.B.A., of Bloomsbury Square and Cambridge, and Mr. Nicholson the quantity surveyor. For the defendants Miss Campbell, the secretary of the company, and Lady Darwin, a director, were called.

His lordship entered judgment for the plaintiffs for the sum claimed and on the counter-claim.

Alleged Breach of Covenant—Appeal Allowed

Chaplin v. Smith.

Court of Appeal. Before Lords Justices Bankes, Warrington, and Scrutton.

This was an appeal by the defendant, the occupier of premises in the Finchley Road, against a decision of Mr. Justice Shearman, sitting in the King's Bench Division, in favour of the plaintiff, the landlord in a claim plaintiff made for possession on the ground of an alleged breach of covenant not to assign or part with possession or the premises without the landlord's consent, which was not to be unreasonably withheld.

Mr. Holman Gregory, K.C., for the appellant, said the dispute turned upon the terms of a lease dated November 24, 1920, by which the premises were demised to the defendant for fourteen years at a rental of £450 a year for the purpose of carrying on the business of a garage proprietor. After taking over the premises the tenant turned his business into a private company and asked the landlord for permission to give possession of the premises to the company. Permission was refused, but the tenant, reserving part of his private office, allowed the company to carry on the business on the premises, and he mentioned that he was still legally in possession. Subsequently the company was taken over by another company, of which the defendant was also a director, and the landlord brought the action on the ground that there had been a breach of the covenant providing that without the consent of the landlord, which was not to be unreasonably withheld, the lessee was not to assign, underlet, or part with the premises or part of the premises, or otherwise dispose of the property than by will or codicil. Proceeding, counsel said in his judgment, Mr. Justice Shearman said it appeared to him that the authorities went so far as to state that a lessee was saved from forfeiture if he took care to give a licence merely to the other person to use. The true inference from the facts of the case was that the second company was in exclusive possession of the premises; therefore the tenant had without licence parted with possession of the premises in the sense that he had given up possession and let to somebody else. He held, therefore, that the plaintiff was entitled to judgment for possession. Counsel argued that his client had now parted with possession, as he was in a position to turn

the key on the company or anybody else. He thought the learned judge had confused the point of possession with that of use and occupation, and for that reason had gone wrong in law.

After hearing Mr. MacNaughton, K.C., for the respondent, who argued that all the facts showed that the company were in possession, the Court allowed the appeal with costs.

Lord Justice Bankes, in his judgment, said he came to the conclusion from the authorities and facts of the case that there had been no breach of covenant on the part of the defendant. He remained tenant under the lease, and remained in a position to retain possession under the lease. Defendant never intended to part with possession and never effectually did so.

Lords Justice Warrington and Scrutton agreed.

List of Competitions Open

Date of Delivery.	COMPETITION.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.
Jan. 1, 1926	New buildings for Liverpool College on a site at Mossley Hill. Assessor, Sir Giles Gilbert Scott, R.A. Premiums, £500, £300, and £200. Conditions and plan of site can be obtained from Mr. J. H. Lintern, secretary, Liverpool College, Sefton Park Road, Liverpool, on payment of a deposit of £2 2s.
Jan. 14	By the generosity of Mr. Willard Reed Messenger, of New York, engineer, an International competition is to be inaugurated to promote and facilitate the construction of houses for the smaller middle classes and intellectual workers. Mr. Messenger is offering a first prize of 500 dollars, a second prize of 300 dollars, and a third prize of 200 dollars. The competition is to be held under the auspices of the International Federation of Building and Public Works (whose headquarters are in Paris), and which has recently held its International Congress, when forty-two countries were represented. Certain rules regulating the competition have been formulated, and the jury will be composed of eleven members, representing various nationalities. Competitors will be required to send in sketches, descriptive particulars of any new processes of construction proposed, and of schemes intended to reduce costs. Apply Director-General of the International Federation, 17 Avenue Carnot, Paris.
Jan. 16	Branch library at Gabalfa, for the Cardiff City Council. Limited to qualified architects within the City of Cardiff. Premiums £75, £50, and £30. Mr. Sidney K. Greenslade, F.R.I.B.A., assessor. Apply Librarian, Central Library, Cardiff. Deposit £2 2s.
Jan. 30	Erection of a new art gallery and museum within the borough of Birkenhead. Competitors must have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1923. Premiums £250, £175, and £100. Assessor, Sir Robert Limer, A.R.A., R.S.A., F.R.I.B.A. Conditions of competition, together with a copy of the site plan, particulars of the subsoil, etc., of the site, and photographs, can be obtained on application to Mr. E. W. Tame, Town Clerk, with deposit of £2 2s.
March 31	Australian War Memorial, Canberra. Open to Architects of Australian birth. Apply High Commissioner, Australia House, Strand, London.
July 12	The following architectural competitions have been organized in connection with the Royal National Eisteddfod of Wales, to be held at Swansea next year: Design for a National Parliament House for Wales, prize £100 (no age limit). Design for a street facade to a large stores; prize £25, given by the South Wales Institute of Architects, Western Branch (competitors not to be over 21 years of age on January 1, 1926). Set of Measured Drawings of Architecture; prize £25, given by Mr. Ernest E. Morgan, A.R.I.B.A., Borough Architect, Swansea (no age limit). Entry forms can be obtained from Mr. W. Talog Williams, the general secretary, 24 Goat Street, Swansea, to whom they are to be sent between May 1 and 10, 1926. Drawings to Mr. Ernest E. Morgan, A.R.I.B.A., 3 Prospect Place, Swansea, not earlier than July 5, 1926, and not later than 5 p.m. on July 12, 1926. Mr. Arthur Keen, F.R.I.B.A., is the assessor.
No date.	Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Apply R.I.B.A., 9 Conduit Street.

Correspondence

The New Shopfront for The Eagle Range and Grate Co., Ltd.

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—In our advertisement in your issue of the 25th inst., wherein we showed the new shopfront for the Eagle Range and Grate Co., Ltd., Regent Street, W., owing to erroneous information given to our Publicity Department, we inserted the name of Mr. Robert Atkinson as the architect.

Mr. Atkinson is, of course, the architect for the building, and not for the shopfront concerned. We wish to take this opportunity of offering, through your medium, our apologies for any annoyance which our error may have caused.

Yours faithfully,

GEORGE COULSON,
Managing Director, Fredk. Sage & Co., Ltd.

The Week's News

Forty-five Houses for Limerick.

The Limerick Corporation have resolved to build 45 houses.

Housing in North Ayrshire.

Three hundred and fifty-two houses are to be erected in seven parishes by the Ayrshire County Council.

Bethnal Green Paving Works.

Paving and repairing works are to be carried out at Bethnal Green at a cost of £17,300.

Forty Houses for Failsworth.

The erection of forty houses on the Lord Lane site has been approved by the Failsworth Urban District Council.

Whitstable Water Scheme.

The Whitstable Urban District Council propose to spend £15,500 on the extension of water-mains.

Pontefract Waterworks Scheme.

The Pontefract Corporation are to apply for Parliamentary power to carry out a £75,000 waterworks scheme.

Road Widening at Catford.

The London County Council are to spend £43,000 in widening Southend Lane, Catford.

Proposed New Public Hall for Liverpool.

The Liverpool City Council will shortly consider the question of reconstructing St. John's Market.

New Schools Proposed for Harwich and Westthroughton.

The Lancashire County Council propose to erect new schools at Harwich and Westthroughton.

Big Housing Scheme near Birmingham.

At Rednal, near Birmingham, 1,650 houses are to be built at a cost of over £1,000,000.

Barmouth Sea-defence Scheme.

Sea-defence works are to be carried out by the Barmouth Urban District Council at a cost of £10,000.

The Condition of Bath Abbey Roof.

Sir Charles Nicholson, in a report, says that the decay of the roof of Bath Abbey is due to the invasion of the death-watch beetle. The cost of restoration is estimated at £2,000.

A New Secondary School for Staffordshire.

A sum of £61,000 is to be spent by the Staffordshire County Council on the erection of a secondary school for boys at Wolstanton.

The Widening of Bromley Road.

Bromley Road is to be widened by the London County Council preparatory to the laying of a new tramway from Southend Village to Grove Park.

British Trees for Tokyo.

The London County Council are sending 100 British oak trees to Tokyo Municipality in return for cherry trees. In Tokyo cherry trees grow extensively in the streets.

New Houses for Aberdeen.

The Aberdeen City Council have passed plans for 153 buildings and alterations involving a cost of £96,000. These include 129 houses costing £71,994.

New Housing Scheme for Kennington.

The London County Council are considering the acquisition of a site in White Hart Lane, Kennington, upon which to build houses to accommodate 900 persons.

New Houses for the Stanley Urban District.

The Public Works Board have agreed to advance £62,500 for the erection of an additional 120 houses to be built at South Stanley.

Mansfield Housing.

The Mansfield Town Council are applying to the Ministry of Health for sanction for the borrowing of £51,500 for the erection of 108 houses on the Bull Farm estate, and for £12,500 for subsidy grants to private builders.

Newcastle and Gateshead Lift Schemes.

The Newcastle and Gateshead Corporations are seeking power to provide lifts from their respective quaysides to the new high-level bridge, and to build warehouses and offices on the ground beneath the approaches to the bridge.

New Deep-water Quay for Sunderland.

The River Wear Commissioners have passed a resolution agreeing to co-operate with the Sunderland Corporation in the carrying out of a scheme for the making of a deep-water quay at the west of the present Thornhill Quay, at an estimated cost of £200,000, the money to be found by the Corporation.

Scarborough Harbour Improvements.

A Board of Trade inquiry was held into the application of the Scarborough Harbour Commissioners for permission to construct an open piled wharf on the north side of the old harbour, which is one of the features of a £45,000 scheme of the harbour improvement.

Seventy More Houses for Keighley.

The Keighley Corporation Housing Committee recommend that application be made to the Minister of Health for sanction to borrow £37,000 for the erection of seventy houses on the Broomhill estate—£18,423 for thirty-eight scullery-houses, and £18,577 for thirty-two parlour houses.

A New Three-mile Tube for London.

A new London "Tube" three miles long, from Baker Street to Kilburn and Willesden Green, is planned by the Metropolitan Railway. Powers to construct it will be sought in the next session of Parliament. It will cost at least £2,000,000, and will probably include two new stations, one for Maida Vale and another for Kilburn.

The New Architecture.

Sir Lawrence Weaver presided at the annual dinner of the Design and Industries Association, held in London. Professor C. H. Reilly said that he was pleased to see that buildings were beginning to show more of their volume and less of their façades. That was a good thing. Architecture, he said, was suffering from the "exhibition spirit."

Manchester Improvements.

The Manchester City Council propose to borrow £62,876 for a secondary school for girls at Levenshulme; £14,000 for the extension of the Central School for boys in Oswald Road, Chorlton-cum-Hardy; and £100,000 for housing construction. The Housing Committee propose to spend £35,000 for subsidies to builders and others, and the Parks Committee £4,500 for the adaptation of Platt Hall for a branch art gallery and museum.

Subsidy Cottages that are to have Garages.

Although garages to subsidy cottages are prohibited under the Act, the Carlisle Rural District Council have discovered that attempts are being made to outwit the provisions of the Act by a clever ruse. The Council's architect has reported that garages are being erected on land not calculated in the area of the site of the subsidy cottages, but means of access to the garages is over land forming part of the area required by the regulations for subsidy houses. The Council are seeking the opinion of the Ministry of Health as to what action they should take.

"Winter Ease" Week.

The directors of the Davis Gas Stove Company invited over 5,000 gas consumers to attend their Oxford Street show-rooms during the week November 23 to 28. The occasion of this special invitation was "Winter Ease" week, an appropriate term as applied to the display of such labour-saving devices as "Injector-Ventilator" gas fires, automatic gas-cookers, and up-to-date coke appliances. A large number of visitors availed themselves of the invitation. Keen interest was evinced by the women visitors in the "Coquette" coke grate, from which the ash falls into a concealed ashpan under the fire. Tea was served to the numerous visitors each afternoon.

Rates of Wages in the Building Trades⁺

The following table shows the revised rate of wages for craftsmen (bricklayers, masons, carpenters and joiners, woodcutting machinists, slaters, plumbers, plasterers and painters) and labourers in the building trade. The labour rates for London are given in the Table of Current Prices published on pages xxvii, xxviii.

Grade.			Craftsmen.			Labourers.			Grade.			Craftsmen.			Labourers.		
			s.	d.		s.	d.					s.	d.		s.	d.	
A	..	..	1	8		1	3½		B	..	..	1	6		1	1½	
A1	..	..	1	7½		1	2½		B1	..	..	1	5½		1	1½	
A2	..	..	1	7		1	2		B2	..	..	1	5		1	1	
A3	..	..	1	6½		1	2		B3	..	..	1	4½		1	0½	

The towns in which the above Grade rates have been reported to apply are shown in the following table, divided into their main Area Groups. The principal exceptions are indicated in the notes appended to each group. In towns marked* the rate for painters is 1d. less than that paid to other craftsmen, and in those marked † it is 1d. less than the craftsmen's rate.

NORTH EAST COAST:—

Grade A.—Ainwick, Annfield Plain, Barnard Castle, Bishop Auckland, Blackhill, Blyth, Chester-le-Street, Consett, Crook, Darlington, Durham, Gateshead, Hartlepool, Hebburn, Hexham, Jarrow, Middlesbrough, Morpeth, Newcastle, North and South Shields, Seaham Harbour, Shildon, Stanley, Stockton-on-Tees, Sunderland, Thornaby, Walsend, Whitburn, Whitley Bay, Willington, and Woller. **Grade A2.**—Berwick-on-Tweed.

YORKSHIRE:—

Grade A.—Barnsley, Batley, Beverley, Bingley, Birstall, Bradford, Brighouse, Castleford, Cleethorpes, Colne Valley, Crosshills, Dewsbury, Doncaster, Grimsby, Guiseley, Halifax, Harrogate, Hebden Bridge, Holmfirth, Horbury, Huddersfield, Hull, Ilkley, Immingham, Keighley, Leeds, Mexborough, Mirfield, Morley, Noranton, Ossett, Pontefract, Pudsey, Rawdon, Rothwell, Scunthorpe, Selby, Sheffield, Shipley, Sowerby Bridge, Spennings Valley, Wakefield, Wombwell, Yeading, York. **Grade A1.**—Bridlington and Scarborough. **Grade A3.**—Barnoldswick, Driffield, Filey, Goole, Skipton, Whitby, and Worksop. **Grade B3.**—Kirby Moorside, Malton, Northallerton, and Pickering.

[NOTE.—Malton was up-graded on 1st July from B3 to A3 by the Yorkshire Joint Regional Wages Committee, but pending the result of an appeal against the regrading, B3 rates are being paid. Barnoldswick, Goole, Skipton, and Whitby, craftsmen, 1s. 7d.; labourers, 1s. 2½d.]

NORTH WESTERN COUNTIES:—

Grade A.—Accrington, Adlington, Alderley Edge, Altrincham, Ashton-in-Makerfield, Ashton-under-Lyne, Atherton, Bacup, Barrow, Birkdale, Bispham, Blackburn, Blackpool, Blackrod, Bolton, Broughton (Flints.), Burnley, Bury, Carlisle, Chorley, Clitheroe, Colne, Connaught Quay, Dalton-in-Furness, Darwen, Denham, Dryden, Dukinfield, Eccles, Farnworth, Fleetwood, Frodsham, Glossop, Great Harwood, Haslingden, Haworth, Helsby, Heywood, Higher Kinnerton, Horwich, Hyde, Kirkham, Leigh, Leyland, Littleborough, Longridge, Lymm, Lytham, Manchester, Middleton, Mossley, Nelson, Oldham, Ormskirk, Oswaldtwistle, Padiham, Pendlebury, Poulton, Preston, Prestwich, Queensferry, Radcliffe, Ramsbottom, Rawtenstall, Rishton, Rochdale, Runcorn, St. Anne-on-Sea, St. Helens, Saddleworth Sale, Salford, Shaw, Shotton, Southport, Stalybridge, Stockport, Swinton, Thornton, Todmorden, Tyldesley, Walkden, Warrington, Westhoughton, Whalley, Whitefield, Widnes, Wigan, and Wilmslow. **Grade A1.**—Lancaster, Macclesfield, Morecambe, and Wrexham. **Grade A3.**—Askam, Broughton-in-Furness, Buxton, Chapel-en-le-Frith, Cleator Moor, Congleton, Coniston, Crewe, Distington, Egremont, Grange-over-Sands, Harrington, Hayfield, Knutsford, Macclesfield, Maryport, Middlewich, Nantwich, New Mills, Northwich, Sandbach, Tarporley, Ulverston, Whitehaven, Winsford, and Workington. **Grade B1.**—Coburn Bay, Conway, Holywell, Llandudno, Llandudno Junction, Mostyn, Prestatyn, Rhos and Rhyl. **Grade B3.**—Ambleside, Bowness-on-Windermere, Cockermouth, Grasmere, Kendal, Keswick, Langdale, Penrith, and Windermere. **Grade B3.**—Bangor, Carnarvon, Holyhead, and Llanfairfechan.

[NOTE.—In the Liverpool and Birkenhead districts the rates are 1s. 8½d. for carpenters and joiners, woodcutting machinists, and painters, 1s. 6d. for other craftsmen, and 1s. 3½d. for labourers. The rate for plumbers at Warrington is reported as 1s. 9d.; New Mills and Whaley Bridge, craftsmen, 1s. 7½d.; labourers, 1s. 2½d. Bangor, Beaumaris, Carnarvon, Holyhead and Llanfairfechan, craftsmen, 1s. 5½d.; labourers, 1s. 1½d. Buxton, craftsmen, 1s. 7½d.; labourers, 1s. 2½d.]

MIDLAND COUNTIES:—

Grade A.—Alfreton, Belper, Bilston, Birmingham, Blackheath, Chesterfield, Coalville, Coventry, Derby, Heanor, Hinckley, Ilkeston, Kenilworth, Langley Mill, Leek, Leicester, Lincoln, Long Eaton, Loughborough, Mansfield, North Staffordshire (Stoke-on-Trent, Burslem, Hanley and Newcastle-under-Lyme), Nottingham, Nuneaton, Oldbury, Ripley, Sutton Coldfield, Sutton-in-Ashfield, Swanwick, West Bromwich, Willenhall, and Wolverhampton. **Grade A2.**—Brierley Hill, Burton-on-Trent, Coaley, Cradley Heath, Darlaston, Dudley, Gornal, Halesowen, Knowle, Melton Mowbray, Northampton, Old Hill, Rugby, Sedgely, Solihull, Stafford, Stourbridge, Swadlincote, Walsall, and Wednesbury. **Grade A3.**—Atherstone, Bewdley, Boston, Bromsgrove, Cannock, Droitwich, Gainsborough, Grantham, Hedenesford, Kidderminster, Leamington, Lichfield, Louth, Malvern, Matlock, Newark, Oakengates, Peterborough, Redditch, Retford, Rugeley, Shifnal, Shrewsbury, Skegness, Sleaford, Southwell, Stourport, Stratford-on-Avon, Tamworth, Warwick, Wellington, and Worcester. **Grade B.**—Kettering, Market Harborough, and Nellingborough. **Grade B1.**—Oakham, Oundle, Raunds, Rushden, Thrapston, and Uttoxeter. **Grade B2.**—Bridgnorth, Church Stretton, Horncastle, Ludlow, Newport, Spalding, and Winkworth.

[NOTE.—The rate for plumbers at Chesterfield is reported as 1s. 9d. and at Stafford as 1s. 8d., and for labourers at Ludlow, 1s. 0½d. Rugby, craftsmen, 1s. 8d.; labourers, 1s. 3½d.]

EASTERN COUNTIES:—

Grade A2.—Brentwood, St. Albans, and Welwyn Garden City. **Grade B.**—Bedford, Cambridge, Felixstowe, Ipswich, Luton, and Norwich. **Grade B1.**—Baldock, Biggleswade, Brimstree, Chelmsford, Clacton, Colchester, Frinton, Halstead, Harpenden, Hatfield, Hertford, Hitchin, Hoddesdon, Ingatstone, Letchworth, Lowestoft, Southend-on-Sea, Stevenage, Stotfold, Walton-on-the-Naze, and Yarmouth. **Grade B2.**—Dovercourt, Gorleston, Harwich, King's Lynn, Newmarket. **Grade B3.**—Amphill, Attleborough, Aylsham, Bishop's Stortford, Braughing, Cromer, Dunstable, Ely, Fakenham, Leighton Buzzard, March, Much Hadham, Puckeridge, Southwold, Standon, Stowmarket, Tring, and Woodbridge. **Grade C1.**—Aldeburgh, Halesworth, Leiston, Saxmundham, Wickham Market, and Wymondham. **Grade C2.**—Coltishall and Saffron Walden.

SOUTHERN COUNTIES:—

Grade A2.—Gravesend and Northfleet. **Grade A3.**—Addlestone, Ashford (Middlesex), Ashted,† Cobham, and Leatherhead.† **Grade B.**—Abingdon, Ascot, Didcot, Henley, Maidenhead, Oxford, Portsmouth, and Reading. **Grade B1.**—Amersham, Bournemouth, Bournemouth, Bracknell, Byfleet, Chatham, Chalfonts, Chesham, Churchchurch, Dorking, Eastbourne, Eastleigh, Egham, Eton, Gerrard's Cross, Gillingham, Gosport, Guildford, Hove, Maidstone, Marlow, Poole, Redhill, Reigate, Rochester, Sevenoaks, Slough, Southampton, Staines, Sunningdale, Sunninghill, Tilehurst, Tonbridge, Tunbridge Wells, Windsor, Woking, Wokingham, and Wycombe. **Grade B2.**—Bexhill, Bramley, Cranleigh, Farnham, Godalming, Haslemere, Horsham, Littlehampton, New Forest (Brockenhurst, Lymington, Lyndhurst, Milford, New Milton and Ringwood), Oxted, Winchester, Witely and Worting. **Grade B3.**—Arundel, Ashford (Kent), Aylesbury, Bagshot, Banbury, Basingstoke, Bicester, Blechley, Bognor, Bournemouth, Burgess Hill, Camberley, Canterbury, Chichester, Chislehurst, Deal, Dover, East Grinstead, Faringdon, Faversham, Fenny Stratford, Folkestone, Hastings, Havant, Herne Bay, Hythe, Lingfield, Margate, Midhurst, Milton Regis, Newbury, Newport Pagnell, Pangbourne, Petworth, Ramsgate, Sandgate, Sittingbourne, Stony Stratford, Thame, Walmer, Wexham, Westgate, Whitstable, Witney, Woburn, and Woodstock. **Grade C.**—Andover. **Grade C1.**—Hayward's Heath, Isle of Wight, and Tidworth. **Grade C2.**—Alton,† Hartley Wintney,† Hawkhurst, Petersfield, Rye, and Staplehurst.

[NOTE.—Amersham, Bournemouth, Brighton, Chalfonts, Churchchurch, Eastbourne, Eastleigh, Egham, Englefield Green, Eton, Gerrards Cross, Gosport, Hove, Poole, Slough, Southampton, Staines, Windsor, Wokingham, and Wycombe, craftsmen, 1s. 6d.; labourers, 1s. 1½d.]

SOUTH WESTERN COUNTIES:—

Grade A.—Bristol. **Grade A1.**—Devonport* and Plymouth.* **Grade A2.**—Newton Abbot, Paignton, and Torquay. **Grade B.**—Bath, Cheltenham, Exeter,* Gloucester,* Hereford,* Swindon,* and Ross-on-Wye.* **Grade B1.**—Barnstaple, Princetown, Stroud,† Taunton, and Weston-super-Mare. **Grade B2.**—Bridgwater, Burnham-on-Sea, Cirencester,* Coleford,* Exmouth, Ledbury,* Lydney,* Totnes,† Weymouth,* and Yeovil.* **Grade B3.**—Bovey Tracey, Box,* Bradford-on-Avon,* Brixham, Cheddar Valley,* Melksham,* Midsomer Norton, Radstock,* Trowbridge,* Wellington,* and Westbury.* **Grade C1.**—Calne,* Chippenham,* Crediton,* Cullampton,* Dawlish, Dorchester,* Ffige,* Glastonbury, Minehead,* Shepton Mallet, and Street.

[NOTE.—Exeter, painters, 1s. 6d.; other craftsmen, 1s. 7d.; labourers, 1s. 2½d. Plymouth, Devonport and district, painters, 1s. 7d.; other craftsmen, 1s. 8d.; labourers, 1s. 3½d. Weston-super-Mare, craftsmen, 1s. 6d.; labourers, 1s. 1½d. Frome, painters, 1s. 3½d.; other craftsmen, 1s. 4½d.; labourers, 1s. 0½d.]

SOUTH WALES AND MONMOUTHSHIRE:—

Grade A.—Aberdare, Ammanford, Barry, Bridgend, Burry Port, Cardiff, Ebbw Vale, East Glamorganshire and Monmouthshire Valleys, Garw Valley, Gorseinon, Llanelly, Maesteg, Merthyr, Neath, Newport, Ogmore Vale, Pontardawe, Pontypridd, Port Talbot, Rhondda and Rhymnydd Valleys, Sirhowy Valley, Swansea Valley. **Grade A1.**—Aberavenny. **Grade A2.**—Chepstow. **Grade B.**—Brecon, Builth, Carmarthen, Llandilo, Llandrindod Wells, and Milford Haven. **Grade B2.**—Monmouth. **Grade C.**—Pembroke and Pembroke Dock.

[NOTE.—The rate for labourers at Milford Haven is reported as 1s. 1½d.]

SCOTLAND:—

Grade A.—Airdrie, Alloa, Alva, Ayr, Barrhead, Bellshill, Bridge of Weir, Burntisland, Clydebank, Coatbridge, Dumbarton, Dundee, Dunfermline, Dunoon, Edinburg, Falkirk, Glasgow, Gourcock, Grangemouth, Greenock, Haddington, Hamilton, Helensburgh, Irvine, Johnstone, Kilmarnock, Kirkcaldy, Lanark, Larbert, Largs, Leith, Leslie, Markinch, Motherwell, Musselburgh, Neilston, North Berwick, Paisley, Pencaitland, Perth, Port Glasgow, Renfrew, Rothesay, Stirling, and Wishaw. **Grade A2.**—Airth, Brechin, Montrose, and Peebles. **Grade B.**—Dumfries, Galashiels, Hawick, Maxwellton, and Selkirk.

[NOTE.—The rates quoted do not apply to plasterers and painters in Scotland, who are not affiliated to the National Wages and Conditions Council. The rate for labourers at Perth and Irvine is reported as 1s. 3d., and at Airth, Brechin, and Montrose, 1s. 1½d. In the case of plasterers a rate of 1s. 0d. per hour after the increase of ½d. in August is payable at the following towns:—Airdrie, Alloa, Alva, Ayr, Clydebank, Coatbridge, Dumbarton, Dundee, Dunfermline, Edinburg, Falkirk, Glasgow, Greenock, Hamilton, Irvine, Kilmarnock, Kirkcaldy, Leith, Motherwell, Paisley, Perth, and Stirling. **Grade A.**—Airdrie, Alexandria, Alloa, Alva, Ardrossan, Ayr, Barrhead, Bellshill, Beith, Bridge of Allan, Broxburn, Broughty Ferry, Buchhaven, Burntisland, Carnoustie, Clydebank, Coatbridge, Coudebeath, Dumbarton, Dundee, Dunfermline, Dunoon, Edinburg, Falkirk, Glasgow, Govan, Grangemouth, Greenock, Gullane, Haddington, Hamilton, Helensburgh, Irvine, Johnstone, Kennoway, Kilmarnock, Kirkcaldy, Larbert, Largs, Larkhall, Leith, Leslie, Leven, Markinch, Methil, Motherwell, Neilston, North Berwick, Paisley, Perth, Port Glasgow, Renfrew, Rothesay, Salmons, Stenhousemuir, Stirling, Uddingston, Vale of Leven, Wemyss, and Windygates, painters, 1s. 8d. **Grade B.**—Aberdeen, Arbroath, Biggar, Callander, Carlisle, Cupar, Galashiels, Girvan, Hawick, Kelso, Kirkcubright, Lanark, Peebles, Selkirk, and St. Andrews, 1s. 7d. **Grade C.**—Peterhead, 1s. 6d. Brechin, Forfar, and Montrose, painters, 1s. 5½d.; Dumfries and Maxwellton, craftsmen, 1s. 7d.; labourers, 1s. 2½d. Galashiels, Hawick, Jedburgh, Kelso, and Selkirk, craftsmen, 1s. 7d.; labourers, 1s. 2½d. Inverness, joiners, 1s. 5d.]

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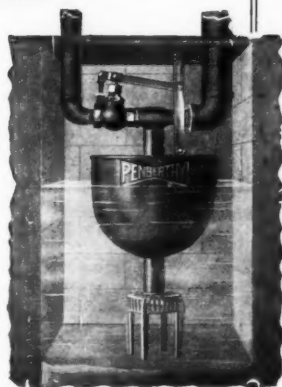
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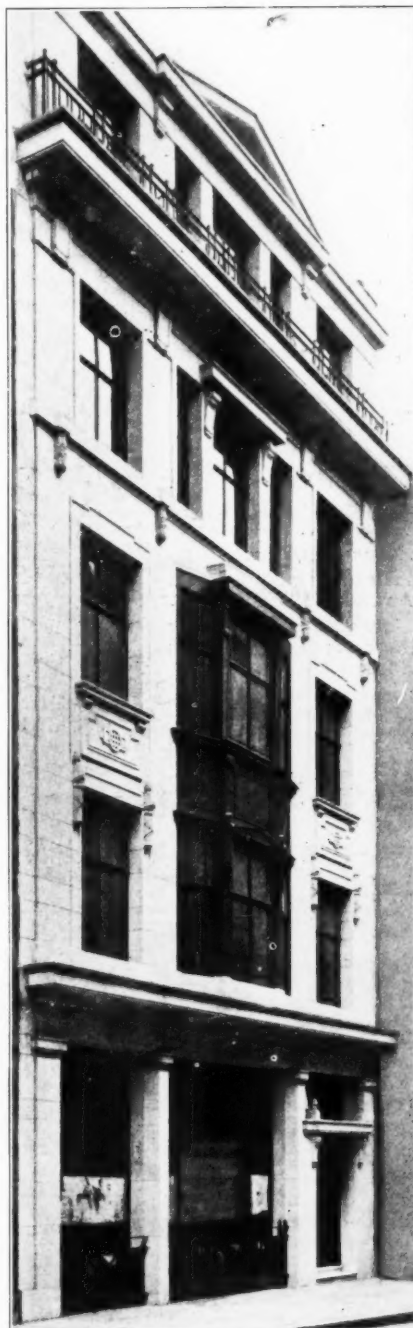
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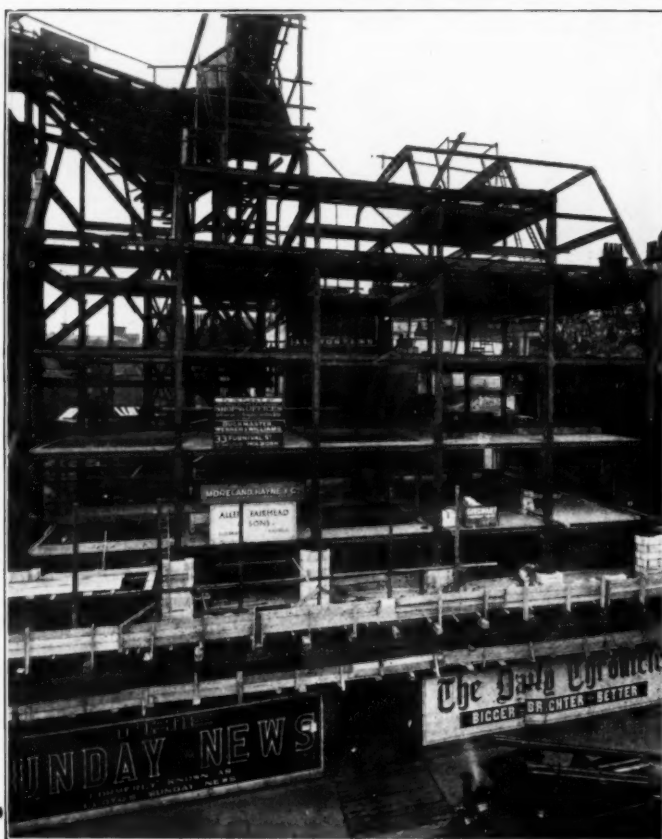
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