



Wednesday, September 26, 1928

## THE FATE OF CHISWICK HOUSE

IN these strenuous architectural days, the structures of a past age are in perpetual peril. No sooner is one threatened and saved or lost, as the case may be, than another claims the exertions of those who recognize its intrinsic interest or its wealth of historic associations; and those who care for the preservation of such landmarks and realize their importance as national landmarks or as landmarks in the long line of architectural expression, pass laborious days in seeking the means to save them. Sometimes, as in the case of Kenwood, a large-minded and long-pursed benefactor steps forward and hands over to the nation some relic of bygone times; sometimes the act of grace is performed by the combination of generosity; not infrequently, alas! altruism is powerless to save, before the insistent and apparently insatiable appetite for communal dwellings. Unlike a neighbouring nation we have no official body which can bring the weight of its authority to the work of preservation; unlike the Government of that nation, ours appears to have no care or money wherewith to land some historic or beautiful structure within the safe haven of national monuments.

And so it happens that, when an occasion arises, those who interest themselves in such things are found going round hat in hand in a pathetic attempt to preserve what it is the duty of the Government to preserve. Our pictures and our rarer books are daily being snatched from us; where practicable even some of our old buildings have been taken down stone by stone and duly carted away to another hemisphere; and when Canning spoke of the new world redressing the balance of the old, he little thought that that balance would be a mere monetary one. The name of Canning conveniently brings me to the immediate "subject of my story"—Chiswick House—for it was within its classic shelter that he died; and today the fate of Chiswick House hangs in the balance. A large sum has already been promised to secure it from demolition, but a considerable amount, about as much as is given for a quite ordinary "old master," is still required. Will it be forthcoming? One sincerely hopes that it may be, so that this interesting and historic mansion shall still remain with us. We have lost so much in the last few years that we shall not be too greedy if we seek to retain something from the architectural wreckage which the turbulent waves of necessity and indifference are casting on the shores of time. Those who urged the retention of old Devonshire House did so largely because it was an object lesson in Kent's characteristic methods of house planning and decoration. In the case of Chiswick House the same plea can be advanced, because its interior is due to that architect's decorative industry, while its exterior owes its special character to the classic

taste of his contemporary, Colin Campbell, both men working for that great patron, the Earl of Burlington, himself an amateur in the art, although it would seem that the houses with which his name is connected were chiefly the outcome of those he employed. But besides the architectural interest of Chiswick House, its lovely gardens, studded with the statues beloved of a period classically inclined, and, incidentally, containing the famous gateway which, designed by Inigo Jones, was presented by Sir Hans Sloane to Lord Burlington and evoked from Pope some well-known lines, the mansion possesses historic memories. Charles James Fox died in it, and so, as I have said, did Canning. The beautiful Georgiana, Duchess of Devonshire, has here played with her children, as Reynolds shows her to us in a famous picture; and, indeed, Wyatt added wings to the house to form ducal nurseries. Royalty has much affected the place from the days of George, Prince of Wales, to those of Edward, Prince of Wales. Czars have been amused, as have humbler folk, at the giraffes which once stretched their necks in its grounds, and its elephant has become immortal because the one and only Sir Walter once casually mentioned it.

Hampstead, in the north, has now its art gallery in stately Kenwood. Dulwich in the south has long owned its pictorial treasure-house; even the farther east has its Whitechapel Gallery; surely, then, this is the moment to preserve as a permanent "picture palace" this beautiful relic of a period when they built with a taste and restraint which it would be well that we, in a more flamboyant age, should keep before our eyes as both a memento and an example. For Chiswick House is both. It is not merely a supremely characteristic expression of the special architectural taste of the eighteenth century, in those classic lines which the Society of Dilettanti did so much to inaugurate and foster, but it hangs on to the skirts of a history more ample and significant than the merely social side of it connotes. Here one of the supremely great parliamentary figures of George III's day came to visit, and finally, in 1806, to die; here one of George IV's outstanding ministers, in spite of Lady Holland's superstitious fears (fears only too well grounded), expired just twenty-one years later. Merely as a cenotaph of Fox and Canning, Chiswick House claims preservation. That "model of Grecian architecture," as Walpole called it, concerning which Lord Hervey made his oft-repeated *mot* that it was "too small to live in and too large to hang on one's watch chain," and Lord Bath perpetuated in equally well-known verse, is today appealing to our sense of what is due to an architectural masterpiece and still more, in view of its associations, a national monument.

## NEWS AND TOPICS

Now that the Royal Commission on National Museums and Galleries has issued a report which is bound to receive general approval, the hope may be cherished that even Whitehall may at long last be awakened to the unassessable value of the collections. Hitherto it has been a case of pride and poverty; now it should be changed to a state of pride and its adequate appurtenances. Taken as a whole Great Britain's museum treasures excel all others; they are worth taking care of. At the same time, there appears the announcement that the nation is not to lose its promised new sculpture gallery at the Tate. I regard this as in the highest degree satisfactory, for if there is one department in which the British art collections is weak, it is in modern sculpture. Every capital city of the Continent and America possesses an adequate representation of sculptural art, from Rodin to today. Our lack of such (excepting the Rodin collection) is to some extent responsible for the dullness of the sculpture shows at the Royal Academy and elsewhere. Sir Joseph Duveen's modern international sculpture gallery will create a new standard of appreciation in England and lead to a greatly enlivened production. The fact that Sir Joseph is also providing new galleries for the damaged and undamaged Turner drawings should be a great incentive to other rich men to repair some of the loss to our national collections, from which they have hitherto suffered.

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The little picture here given shows us the house, in Plough Court, Lombard Street, in which Alexander Pope is said to have been born on May 21, 1688. As is known, his father was a linen-draper, and he probably carried on his business on the ground floor, himself and his family occupying, as was then the custom of tradesmen, the upper part of the house. Strype, who calls the alley Plough Yard, merely mentions the fact that it possessed a freestone pavement and that its houses were good and well inhabited. Topographers in those days were blissfully indifferent to sentiment, and, after all, had probably never heard of Pope, although his *Rape of the Lock* had been published in 1712, and his version of the *Iliad* appeared in the same year as Strype's edition



Pope's house in Plough Court.

of *Stow's London*. It is said that the house belonged at the time of Pope's birth to William Allen, but that one Sylvanus Bevan, who lived here in 1735, first associated the place with the drug trade, with which it was to become more closely identified when, on the house being demolished in November 1872, its site was occupied by Messrs. Allen and Hanbury's premises.

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The awards in two recent competitions raise an interesting problem on which, as far as we know, no definite policy for the guidance of assessors has ever been laid down. The problem is the method of awarding the second and third premiums. At present there seem to be two alternatives: one, to select the two designs which most nearly follow the general scheme of the winning set, while the other is to award the second and third premiums to the best alternative schemes. This latter was evidently the method adopted by the assessor at Lewisham, while at Southampton the second and third premiums were awarded to the two competitors whose plans were most similar to the winning set. We suggest this is a question which might be considered by the R.I.B.A. competitions committee. The remarks we overheard at Southampton from members of the general public are perhaps worth recording. One of the city fathers, accompanied by his wife and family, inquired of the attendant on duty if No. 40 was really the design placed first. Having been assured it was really so he said: "Why, it hasn't a tower, even a dome! I think it looks more like a barracks!" Another visitor—a lady—said she couldn't think how such a plain building could cost all that amount of money. The police sergeant in charge to a friend: "These plans is awful! I wakes up in the night dreaming they're all round me."

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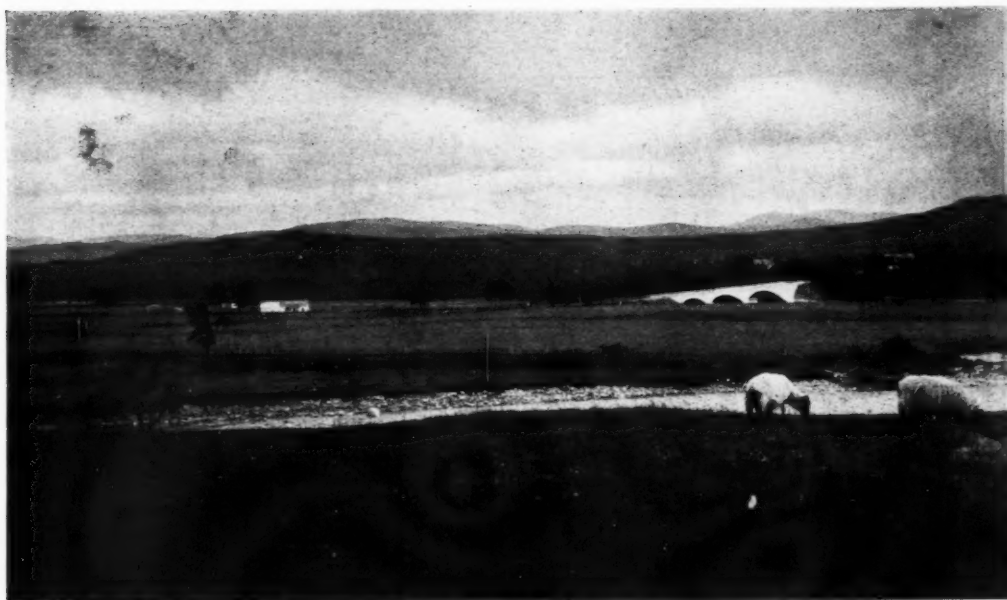
The Archbishop of Canterbury, although eighty years of age, is keenly alive to new developments in architecture and decoration. His new home in Cheyne Walk, to which he hopes to retire in November, is being specially fitted with light reflectors, so that it may be cheerful and well lit, even on dark winter days. The Archbishop is intending to spend a good deal of time, when weather permits, in his roof garden, for he will no doubt miss the spacious grounds of Lambeth. In the decoration also, an attempt has been made to give the impression of sunshine. Several of the walls are covered in pale green, and sunshine yellow.

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A Virginia tavern, remarkable for its architectural face and unspoiled furniture, has just been moved piece by piece from its former site to a highway outside Charlottesville. The tavern was originally built in 1735, and was completed a dozen years before the Declaration of Independence. Much of the furniture dates from that period. It was felt that the whole house and its contents were so interesting that it was worth while moving them from their unfrequented site to a place where they could be more easily visited. Well, Well!

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The amount of architectural etching that has been called into existence by the all-pervading print-collecting boom is encouraging. At one time landscape was the rage; at no time has figure-etching been greatly in demand, but this perhaps will come soon. It is the picturesque architectural etching that holds the imagination of the collector



*The new bridge over the Spey at Newtonmore.  
By Sir Owen Williams and Mr. Maxwell Ayrton.*

and fills the pockets of the publishers for the moment. Fortunately, the right men have appeared at the right moment. Perhaps I ought to say the right men have conjured up the right moment: William Walcot with his imaginative reconstructions; F. L. Griggs with his more realistic reconstructions; Henry Rushbury with his engaging flair for the beautiful old building; Sidney Tushingham, his pencil ever ready for an exquisite bit of detail. These men go up and down the land, especially the land of Spain, France, and Italy, seeking that they may devour in their insatiate hunger for the beautiful in architecture. With a heavier tread C. R. W. Nevinson follows, pouncing on intimations of drama and rendering them in terms of acid or of drypoint. Unfortunately, none of his etchings will be seen at his forthcoming one-man show at the Leicester Galleries, but among the eighty oil paintings and watercolour drawings that will be gathered together there will be a number which have formed the subjects of several etched plates.

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In some schools efforts are being made to introduce architecture to children. In one case, I am told, a class of children were taken to an old farm-house nearly a thousand years old, and two boys were asked the following question: "The length of an ox's yoke is 4 ft. If a farmer wished to tether a team of four oxen in a row, how many yards long would the pole have to be?" It was eventually discovered that four oxen would just fit along the back of the barn with a long slant of the roof protecting it, and that the origin of the mysterious "rod, pole or perch" in the mathematical table was the length of the pole for the oxen,  $5\frac{1}{2}$  yds. long. In studying the framework of the house the children discovered that the roof-tree was really a tree, and that the original builders in the woods made a house by lashing the main branches of two pairs of trees together, and placing the trunk of another between them. On another day the children were taken to Little Pedmore Manor in the Chilterns. This is built round three sides of a square,

and here they learned to recognize small hand-made bricks and the use of English oak. It was found that the study of the evolution of architecture was a good way of teaching the children both history and a practical understanding of the way a building is adapted to its purpose.

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Mr. G. Topham Forrest, the superintending architect of the London County Council, over a year ago was asked by Colonel Levita, who at that time was chairman of the Housing Committee, to design an extremely simple and economical type of tenement that could be let at the lowest possible rent. A number of these flats have already been erected, and are proving to be very popular. Two blocks may be found in White Hart Street, Kennington; five blocks in Ware Street, Bethnal Green; one block in Poplar; and two blocks in Prusom Street, Wapping. Further blocks are also being built in Wells Street, Hackney, and in Wapping, where there is a demand for accommodation close to the docks. These blocks are arranged in groups of two or three flats, with the bedrooms opening out from the single living-room. They are good as examples of compact planning, provided with all the essential accommodation and good ventilation. A flat with two rooms may be leased for as little as 5s. a week—a remarkably low rent in the industrial parts of London.

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On this page last week I asked the reader to judge for himself whether or no the reinforced concrete bridge at Newtonmore fitted into the landscape. A correspondent, who agrees with me that the bridge perfectly fulfils this condition, sends me a view of the bridge taken a few hundred yards away. This view, which I now publish, incidentally shows how the bridge is placed on a steep gradient in the road, and so has to have three arches built with diminishing spans.

ASTRAGAL





## A BAROQUE SCULPTOR

[ BY GRACE E. ROGERS ]

IT is now generally accepted that there is a law implicit in the nature of sculptural or architectural art of any kind, viz. that the artist expresses a formal experience by definite structures organized to effect a homogeneous unity of abstract relations. The achievement of this purpose is the basis of æsthetic criteria on which the merit of the work, as sculpture, is judged. But at the same time the occasion may demand some concession to ideas more obvious and understandable to the lay mind unversed in æsthetic problems and which apprehends merely some commonly felt visual experience in popular terms of representation. Moreover, where the artist is faced with the necessity to conform to a given architectural environment providing an established precedent, his method and means will be limited through a given channel of expression.

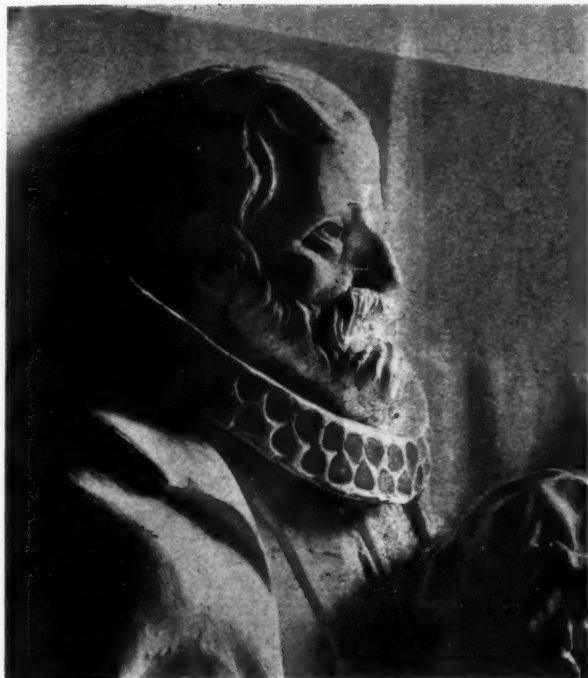
The first permits of purely arbitrary and individualistic conception, and the work exists more or less for its own sake; with the latter it is taken into the realm of function and consideration of social or religious service and has a secondary purpose to perform. Such problems we find satisfactorily and successfully overcome in the first of the series of bas-reliefs being executed by Mr. Laurence Bradshaw for the Brompton Oratory, to be placed in rectangular niches arranged around the transepts. The series is illustrative of episodes in the life of St. Philip of Neri, the founder and patron saint of the order. The one in consideration represents,

as subject matter, the miraculous resuscitation of a child who died of the plague inadvertently before the administration of the last sacramental rites. Here the question of emotional content provides a subsidiary motive, and Mr. Bradshaw has admirably portrayed the expression of tense anxiety dissolving into that of wonder and hope upon the faces and in the gestures of the various relatives, while the focus given to the figures of St. Philip performing his act of benediction, and the child itself, in no wise detracts from the homogeneity and balance of the composition. I would like to suggest that the unequal density of the two sides of the negative produces an illusion of comparative inequality in the depth of the relief, somewhat marring the sense of compositional balance in the photographic reproduction of the entire group, which is not the case with the actual work itself. The other proposition Mr. Bradshaw has had to face is the architectural setting and the keying of the style adopted for the achievement of consistency in the relations between building and decoration, which as an architectural feature must take its place harmoniously in the general scheme.

The Oratory is an example of English Baroque, a flowing, vital, and amenable style permitting free play in the assumption of national and personal characteristics. Its varieties, therefore, tend easily towards extravaganza and opulence, and in many instances we may find the decorations treated as

*The miraculous resuscitation of Paolo, son of Sabrizio. An incident in the life of St. Philip of Neri. One of a series of bas-relief sculptures for the Brompton Oratory. By Laurence Bradshaw.*





fantastic additions, the building, as it were, being inhabited with motifs—such as cherubs perched on cornices—rather than, as in the case of Gothic architecture, where such motifs act as structural and integral components of the building itself.

In accordance with its accepted principles, Baroque, in its most blatant form, is opposed to the laws of stability, the impression being given that the elements of the building are on the wing. Mr. Laurence Bradshaw has expressed this boldness and flamboyance adequately in the relief without unduly emphasizing the sensation of having disturbed the structural and permanent values of the design or, indeed, the walls of the building itself. Vigorous movement is sustained in a pleasing rhythm which suggests accomplishment and stability rather than suspense, while the treatment of the form is essentially modern, at the same time retaining all the essentials of Baroque. This is effected by the adequate solution in balance of masses and disposition of abstract relations which, whether it be realized consciously or felt unconsciously by us as spectators, constitute equivalent symbols of counterpoise and balance—the very essence of well-being and stability—

in our lives. Thus we react to architecture, or may be disturbed by a confusion of design signifying nothing; while the religious and so-called higher emotions are exhilarated and amplified by work which provides a significant appeal.

The problem of foreshortening has been skilfully treated by the projection of the heads of the figures 6 in. higher than the base of the relief.

Regarded from beneath the forward tilt of the figures is found an appropriate pose without necessity to provide any unpleasant distortion or impression of falling away from the back. Such difficulties have to be overcome when the work is, as is the case in question, to be placed on the wall at the height of 20 ft.



*The miraculous resuscitation of Paolo, son of Sabrizio. An incident in the life of St. Philip of Neri. Details of the bas-relief sculpture, for the Brompton Oratory, shown on the facing page. By Laurence Bradshaw.*

# THE SOUTHAMPTON TOWN HALL COMPETITION

[ BY H. P. CART DE LAFONTAINE ]

THIS competition for a town hall, municipal buildings, and art gallery should mark a turning point in the chequered history of open competitions for public buildings. The conditions were well drafted and arranged to leave the greatest latitude to competitors with regard to the method of presenting their schemes. No detail drawings were asked for, and only  $\frac{1}{16}$  in. scale plans and elevations were required.

The points of importance were that the main entrance to the council chamber and municipal block should be on the south; that the town hall, to accommodate 2,000, should have no side galleries, and that the main floor should be free from obstructions, with two large refreshment-rooms adjoining; that the acoustics of the council chamber and town hall should be considered; and that there must be internal communication between the various parts of the building. Competitors were also asked to so plan their scheme that each of the following blocks could be built in separate contracts: *a*: municipal offices; *b*: art gallery and school of art; *c*: courts and police offices; *d*: town hall. The external elevations were to be in Portland stone, and the cost of the whole building (excluding layout of site and furnishing) was not to exceed £385,000, of which £85,000 was earmarked for the art gallery, etc. The site provided ample room for open planning and presented no special difficulties—in fact, it was a competition which might be taken as a test case to gauge the pros and cons of this method of securing the best scheme for an important block of public buildings.

The result, I think, is a vindication of the much-criticized competition system, and the winning design is fine architecture, with no tricks or adventitious aids in the way of "rendering," ornamental borders or titles—in fact, the two sheets of sections and elevations have no title at all. One can say that the whole problem was really settled on the  $\frac{1}{16}$  scale block plan, for both the first and second premiated designs for the essential factor consisted in the way in which the four main blocks were placed on the site and their relation to each other.

Mr. E. Berry Webber's scheme shows the town hall occupying a central position on the east side of the site, with a direct entrance from West Marlands Road. The municipal offices occupy the southern part of the site, with the council chamber and mayoral suite in the centre. The courts and police offices form a separate block on the western part of the site and are excellent in plan, while the art gallery occupies the centre part of the northern section of the site, with the administrative rooms and exhibition hall of the school of art under, and studios, etc., in two wings right and left.

A feature of the plan is the excellent through communication between each part and the two access roads which run from east to west on each side of the town hall, giving easy access to the large garage under, and to the police offices and various storeyards, etc., in the lower and ground floors. Another feature is the arrangement of the two large refreshment-rooms, which caused most competitors no small difficulty. These are placed on the central north-south axis, and open direct into the town hall itself, as required in the conditions.

The elevations are remarkable because, although composed of small elements, these are so grouped as to give a monumental character to each of the four elevations, each of which has a distinct character and nice balance. There is no tower or dome; the main feature in each front being the entrance. The sections show evidence of haste, and I think in execution the height of the town hall will very probably be reduced by 20 ft. or so, which would certainly improve the acoustic properties, which would not be good as at present schemed.

The "rendering" is quiet and straightforward. The plans have the walls, etc., outlined in Indian ink, details being in pencil, and the distinctive washes have only just enough hint of colour to comply with the conditions. The elevations and sections are in pencil, with a thin ink line emphasizing the outer lines of each block. No colour—a plain wash of Indian ink as a background or the merest trace of shadows where these are wanted.

When one comes to consider the merits and errors of the other sets it seems kinder to limit oneself to general conclusions. A word or two about those awarded second and third premiums before doing so will be sufficient.

Messrs. Crouch, Butler and Savage are awarded second place for a good, compact plan, which has many of the features of the winning set. Their refreshment rooms, placed on the lower ground floor, are good, but the access to them is inadequate and difficult to discover. The municipal block is compact and well planned. The elevations have a curious modernist flavour, which hardly strikes me as being right for the site.

Messrs. Lyons and North, who get the third premium, are, I think, lucky. Their scheme also has the main points of the winning design, but the several blocks of which it is composed (although well planned) lack cohesion and unity of effect. The elevations are weak and the side elevations, especially, lack balance and appear confused.

As to the others, many seem to have got into difficulties with the entrances to the various blocks, with the side elevations, and with the courts and police block. Some have risked large towers, and so been excluded for overstepping the limit of cost. But one or two appear to be equal in merit to the design which received third place, though based on a different solution of the problem.

This brings me to an interesting final point. Should an assessor, in making his award, be strictly logical and place as second and third the two designs which most nearly resemble (in essentials) the winning set? or should he say: "Well, there is probably more than one possible solution to the problem," and select the two best alternative schemes for the second and third premiums? Here there is no doubt that Mr. Austen Hall was logical. I will not attempt to say whether he was right or wrong, but he is to be congratulated on having devised a competition which has produced at least one notable addition to monumental architecture.

[The winning design, by Mr. E. Berry Webber, was illustrated in our last issue. The designs placed second and third, by Messrs. Crouch, Butler and Savage, and Messrs. Lyons and North, respectively, are reproduced this week in our Competition Supplement.]



## THE MIDLAND AGRICULTURAL COLLEGE

[ BY ANTHONY HURD ]

SOME buildings impress with their beauty and suitability at first sight. Others need knowing before their merits become apparent. The Midland College at Sutton Bonington is one of the more happy, spontaneous achievements. The group of college buildings, Georgian in style, stands out nobly in the even, green fields, neatly divided by thorn hedges that are typical of Nottinghamshire and Leicestershire. The way to the college from Leicester, by way of Loughborough and some rather mean small towns, is depressing, and so it is the greater relief to find that the college rises above the commercial instincts of the district. With its sunny aspect and lofty windows the college seems to aim at letting light and air into the student's mind as well as affording him material training in agriculture, horticulture, dairying, or such other course as he may choose to take.

It would, indeed, be interesting to trace out the effects of the college training in the homes of the local farmers. Most of the 110 students, boys and girls, are drawn from the five contributing counties, Derbyshire, Leicestershire, Lindsey (Lincs), Nottinghamshire, and Rutlandshire. Some of them are pretty rough in their ways when they come, but they are made to behave themselves at the college. Inevitably their sojourn in such pleasant surroundings must add something to their appreciation of the good things in life as well as affording them a sound training in the farming principles expounded by the able principal, Dr. Thomas Milburn, and his assistants.

I am no architect, but the layout of the buildings struck me as excellent. Nothing is cramped, and there is plenty of room for expansion. The central block, of three stories, contains the administrative offices, dining-rooms, and kitchens on the ground floor, with concert hall, lecture-rooms, and laboratories on the upper floors. Going the round of the rooms one's chief impression is of light and air. It has been my fortune to go over many agricultural colleges at one time or another, and I can recall none that can compare with the Midland College in the spaciousness of its rooms. Lofty sash windows, and on the third floor skylights,

the architect has provided generously to give the full benefit of the daylight. The importance of light is not always considered as carefully as it should be in planning colleges and schools. It is an essential factor in the comfort of the worker in laboratory and classroom. The walls throughout the college are washed a pale orange-buff, which gives a pleasant sunny effect, and the passages and staircases are wide and airy. If surroundings make any difference the students at Sutton Bonington ought to be extraordinarily bright and quick in the uptake.

On the north flank is the men's hostel, a two-story building containing fifty-five bedrooms, with recreation rooms and bathrooms. The main block and the men's hostel were built in 1915, and the bricks came from Chesterfield. For the new women's hostel, which was only completed this spring, it was found necessary to buy bricks locally, as the Chesterfield works had closed down. The two varieties match up quite well; both are mottled red in colour, and, being wire cut on the face, they give the buildings a rough effect that breaks up any tendency to baldness and monotony. The slates are of the pleasant greenish kind that come from Cumberland. These two original blocks are interesting historically, although they only date back thirteen years. In 1916 the college was taken over as a prisoner-of-war camp for officers, and it was from here that twenty-two Germans, among them Captain von Muller of the "Emden," managed to escape. To make their tunnel out of the grounds they had to dig away fifteen tons of earth, which they cleared in pillow-cases. Looking back on those days it is amazing that their excavations, which must have been carried on for several months, should have escaped the notice of the guards until they had got away. All but one of the prisoners were captured eventually.

The two hostels, one for men and one for women, stand on either side of the main block. In front there are tennis-courts and flower-beds. Perhaps the sense of collegiate association might have been strengthened if the quadrangle form of grouping had been followed, but this was considered impracticable because it would have meant that the men's

*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. Above, men's hostel, central administration block, and women's hostel.*





quarters and the women's would be overlooking. Other agricultural colleges do not cater so fully for women—except, of course, the women's colleges like Swanley—and the Midland College has had rather peculiar problems to meet in arranging accommodation for the students. In one way the women have an advantage over the men. Their block is planned on the same scale as the men's, but experience during and after the war suggested one or

two improvements that it has been possible to incorporate in the new hostel, which was only opened in April by the Duke of Portland. As in the men's block each student has her own little bedroom; there are fifty-three of them, but there is one significant difference. The men are allowed ordinary chests of drawers, wardrobes, and washstands; the women have their furniture built into the walls. In the principal's words: "Girls are such terrors for moving



*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. Above, men's hostel and central administration block. Below, main entrance to central administration block.*



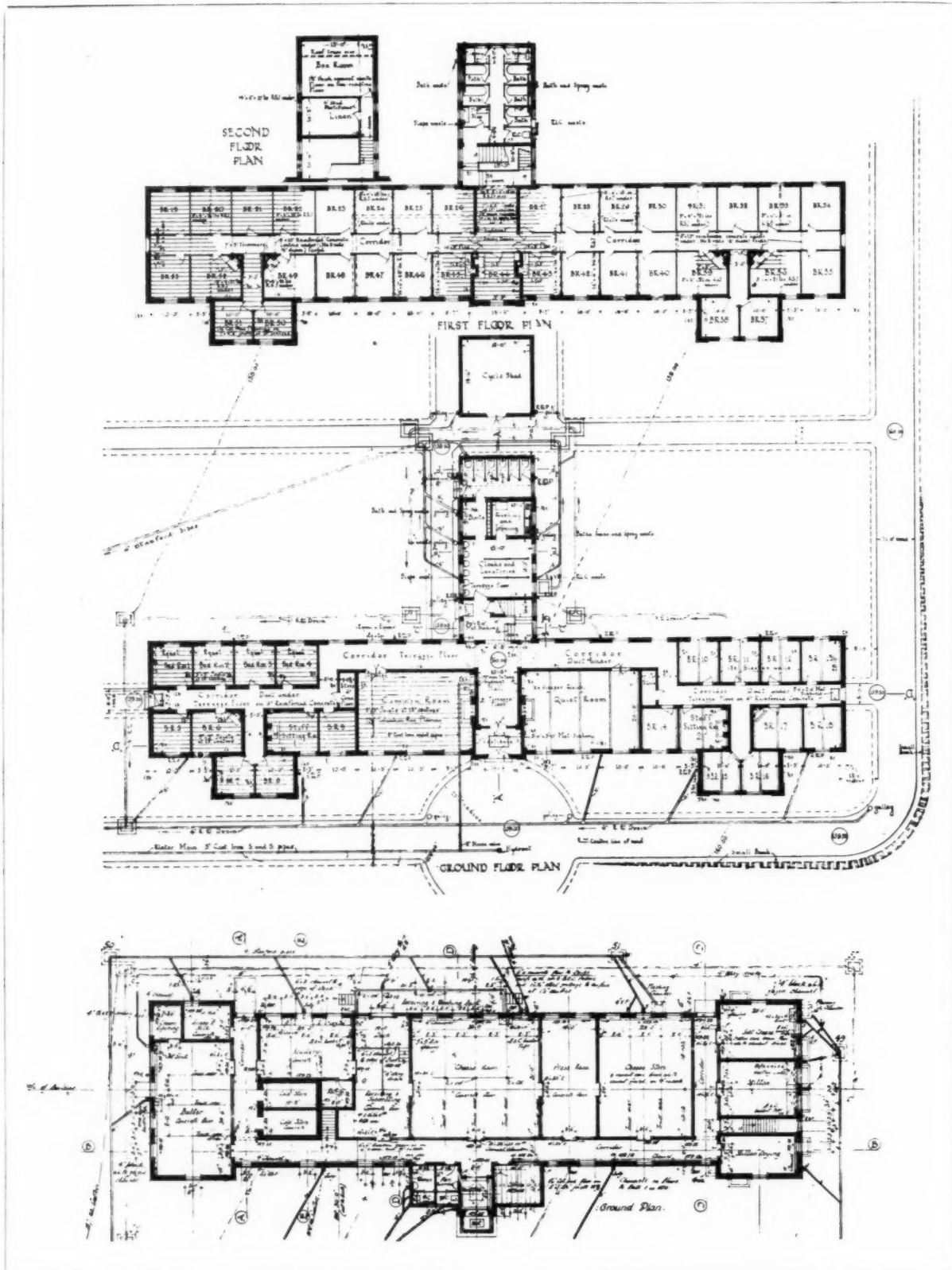
furniture about." Their propensity is effectively checked here. Most of the girls stay at the college for a year or more, and so they have plenty of time to titivate up their rooms in their own individual taste. All the rooms have hot-water radiators—the men have this luxury too. The women unquestionably score in the beautifully finished bathrooms in their hostel. The floors are white tiled and the partitions are opal glass in a framework of teak, the whole effect being very clean and light. Good use is made of the

hot-water heating system. In the women's cloakroom hot pipes carry the line of clothes pegs, and even the box-room in the roof has hot pipes running round the walls. Mention must be made of the excellent terrazzo mosaic floors in the corridors. This makes a pleasantly decorative floor, and with the corners rounded to the walls, one that is easily kept clean where there are dirty boots bringing in mud from the fields.

The college has its own electric light plant and water is



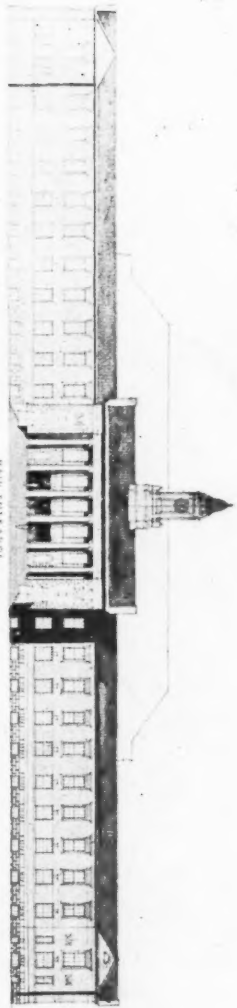
*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. Above, the instructional dairy. Below, main entrance to dairy.*



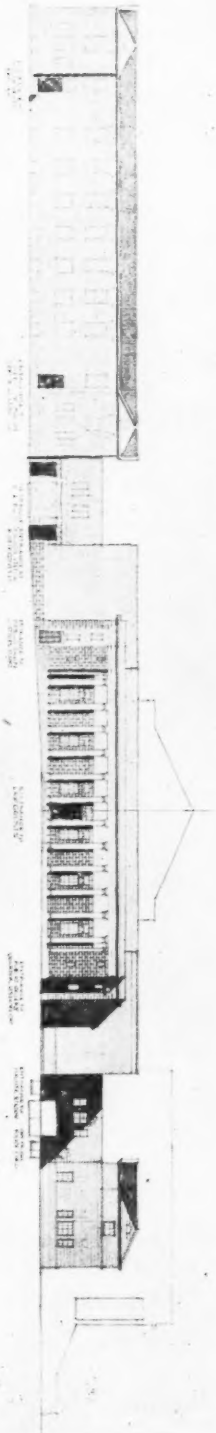
*The Midland Agricultural and Dairy College, Sutton Bonington.  
By Pick, Everard, Keay and Gimson. Above and centre, plans  
of women's hostel. Below, ground-floor plan of dairy.*



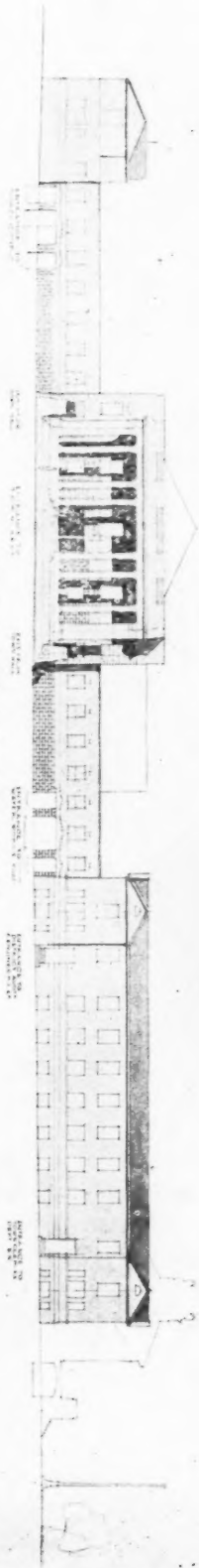
SOUTH ELEVATION



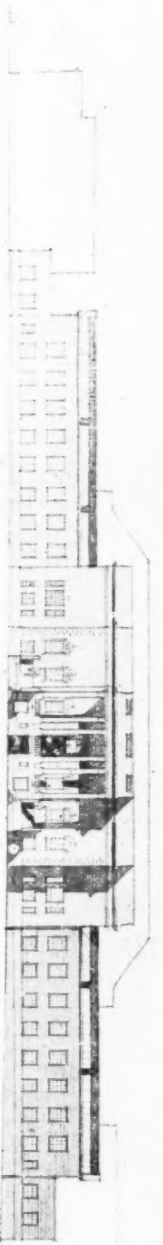
EAST ELEVATION

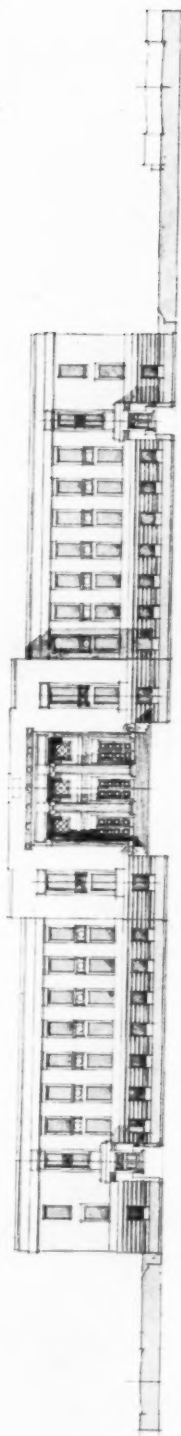


WEST ELEVATION

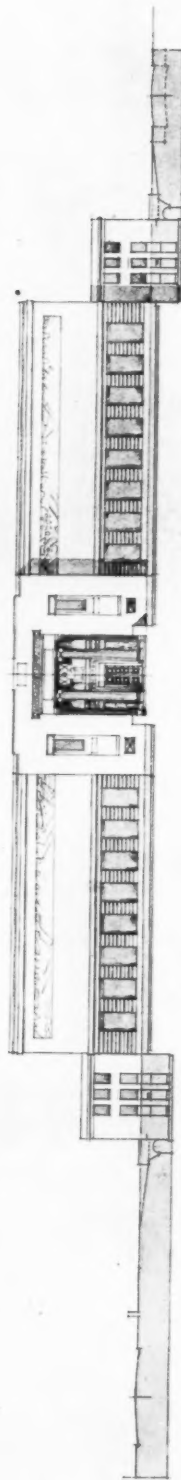


NORTH ELEVATION





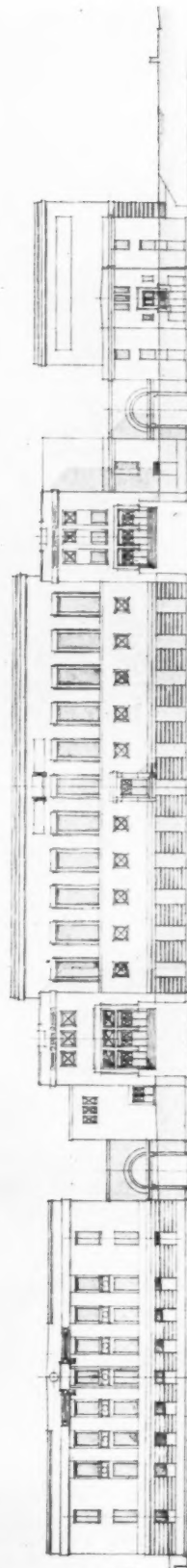
ELEVATION OF MUNICIPAL OFFICES  
SOUTH



ELEVATION OF ART GALLERY AND ART SCHOOL  
NORTH



ELEVATION OF COURTS AND POLICE OFFICES  
WEST



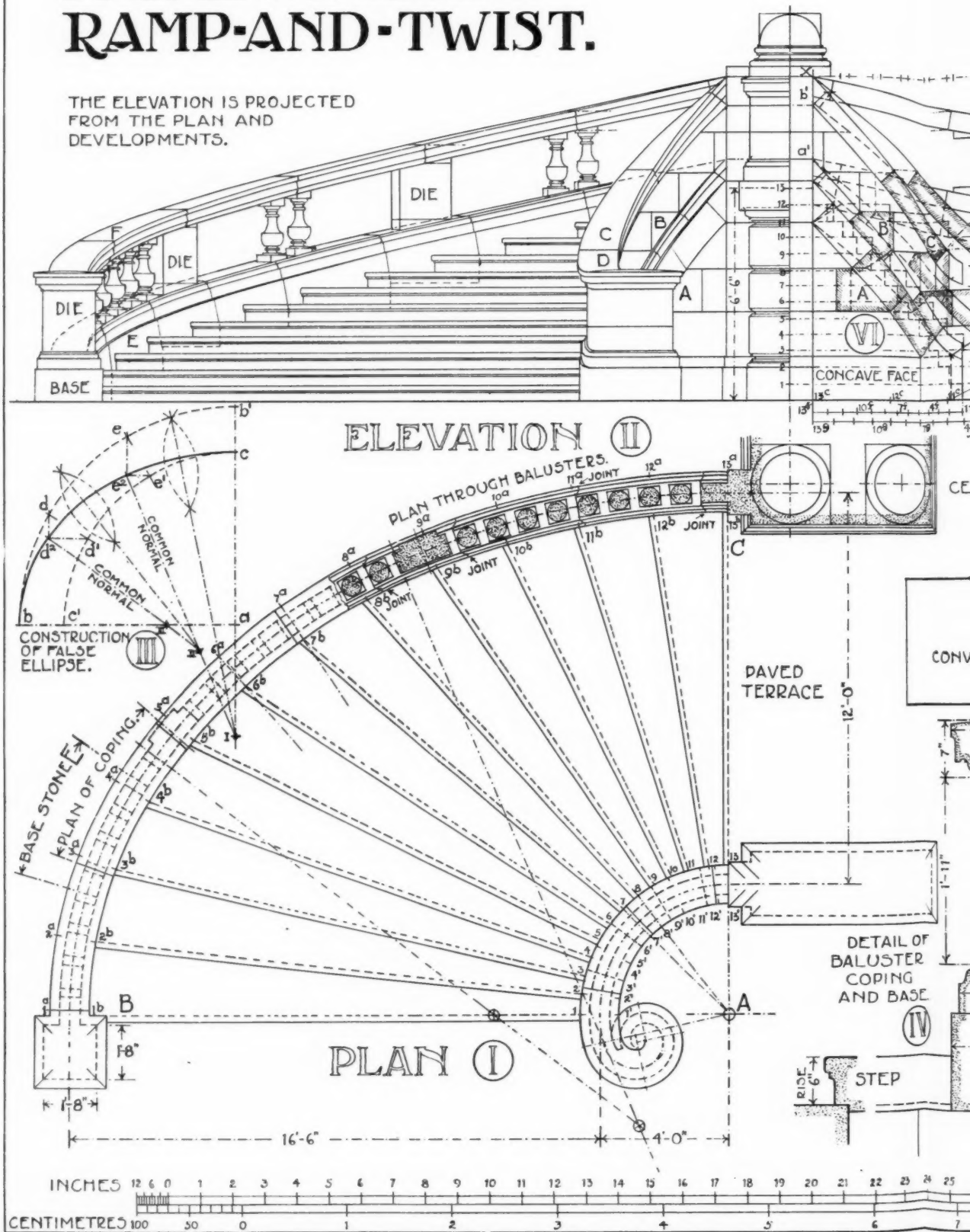
ELEVATION OF TOWN HALL  
EAST



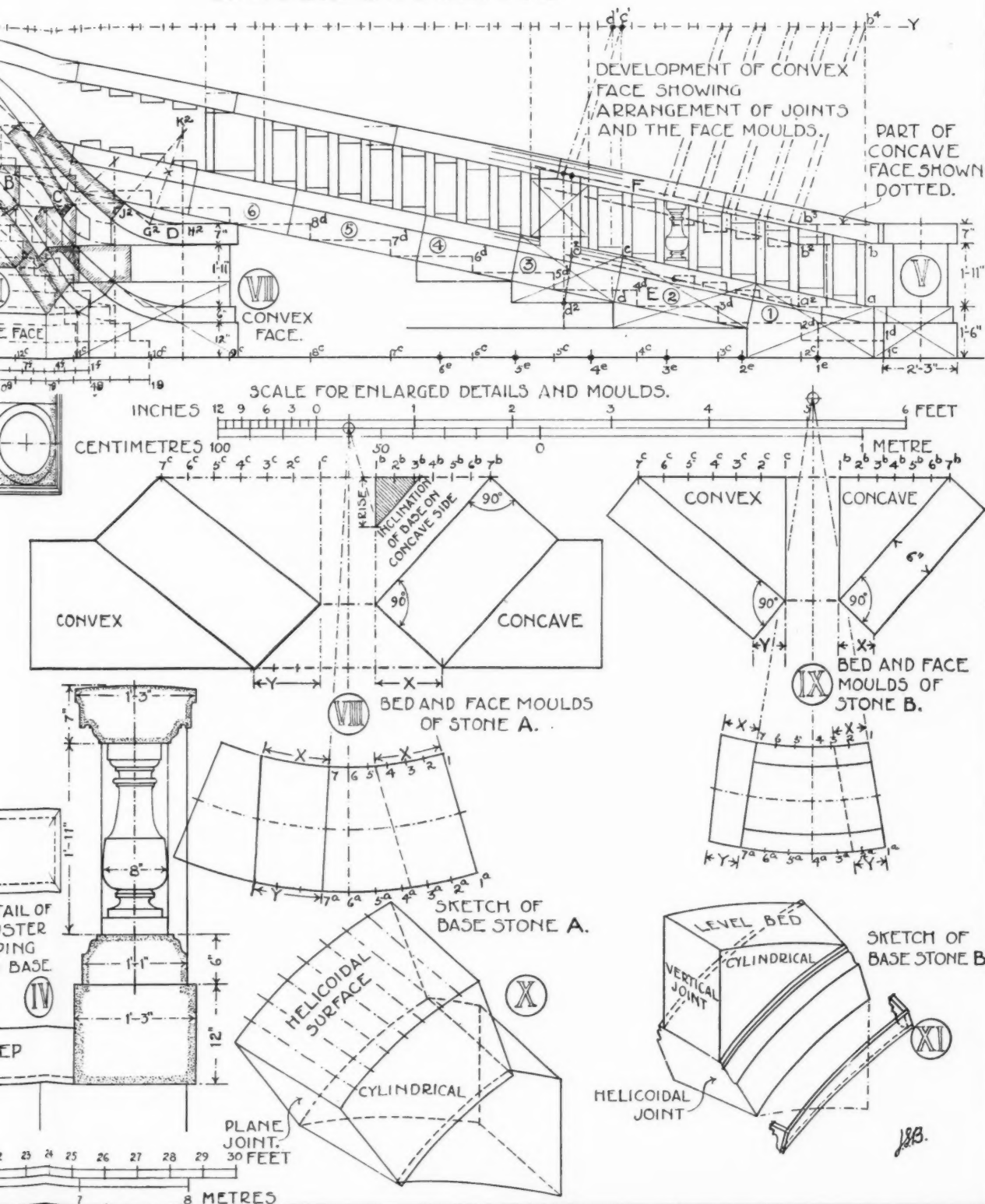


# A BALUSTRADE RAMP-AND-TWIST.

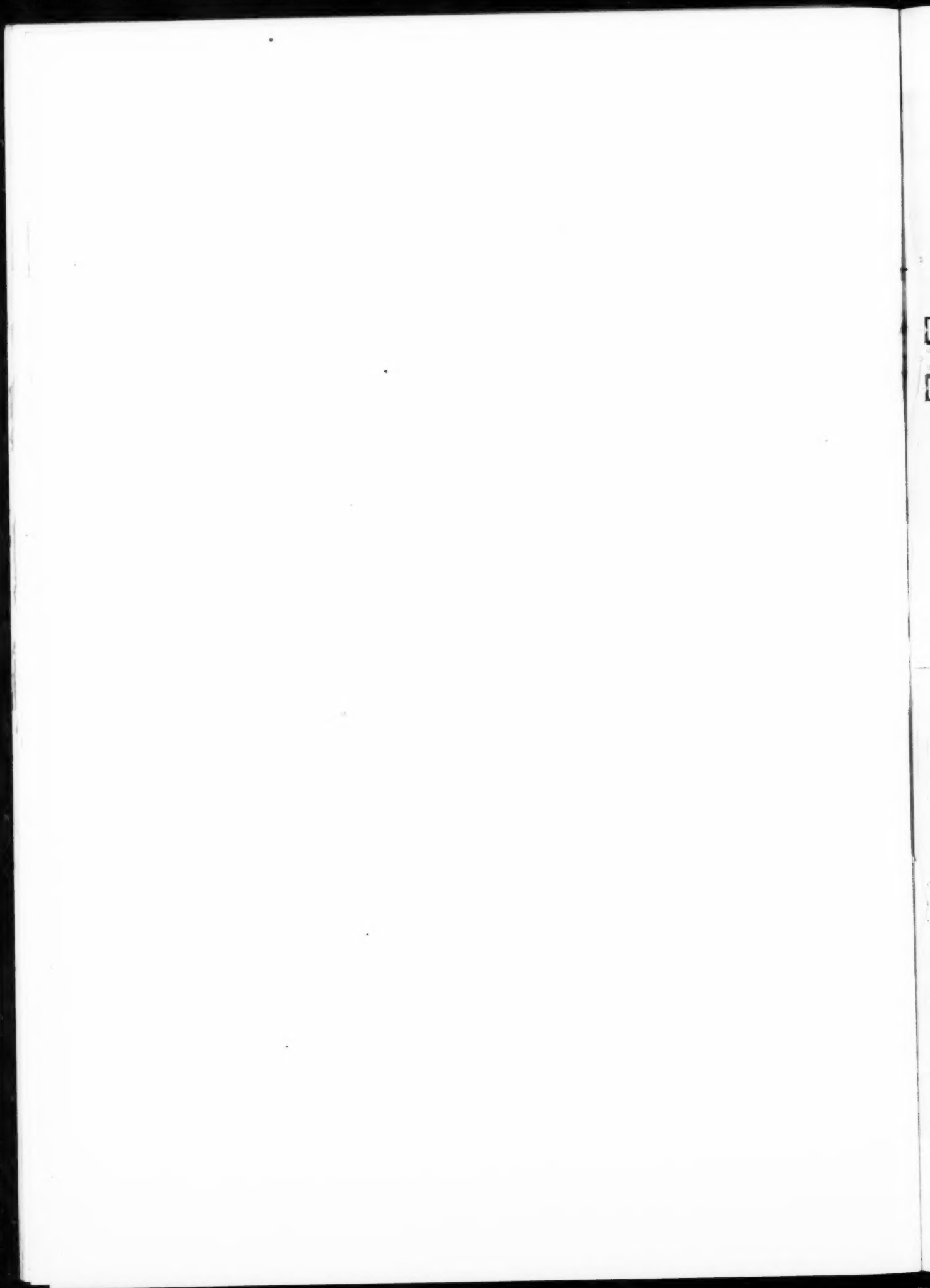
THE ELEVATION IS PROJECTED FROM THE PLAN AND DEVELOPMENTS.



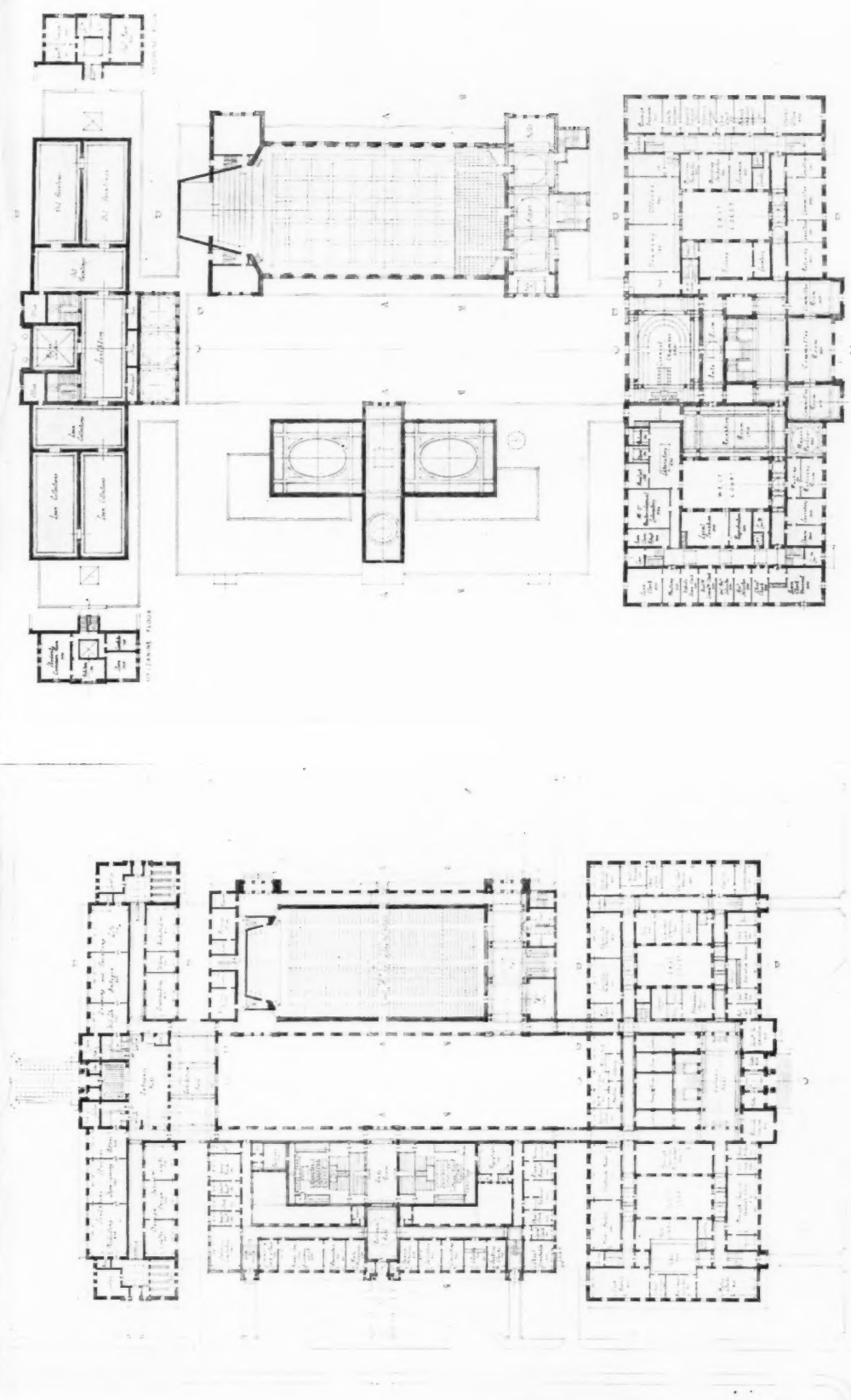
# DEVELOPMENTS



A RAMP-AND-TWIST BALUSTRADE, FIGURE ONE.  
BY J. STIRLING BOYD. [SEE ARTICLE ON PAGE 447.]

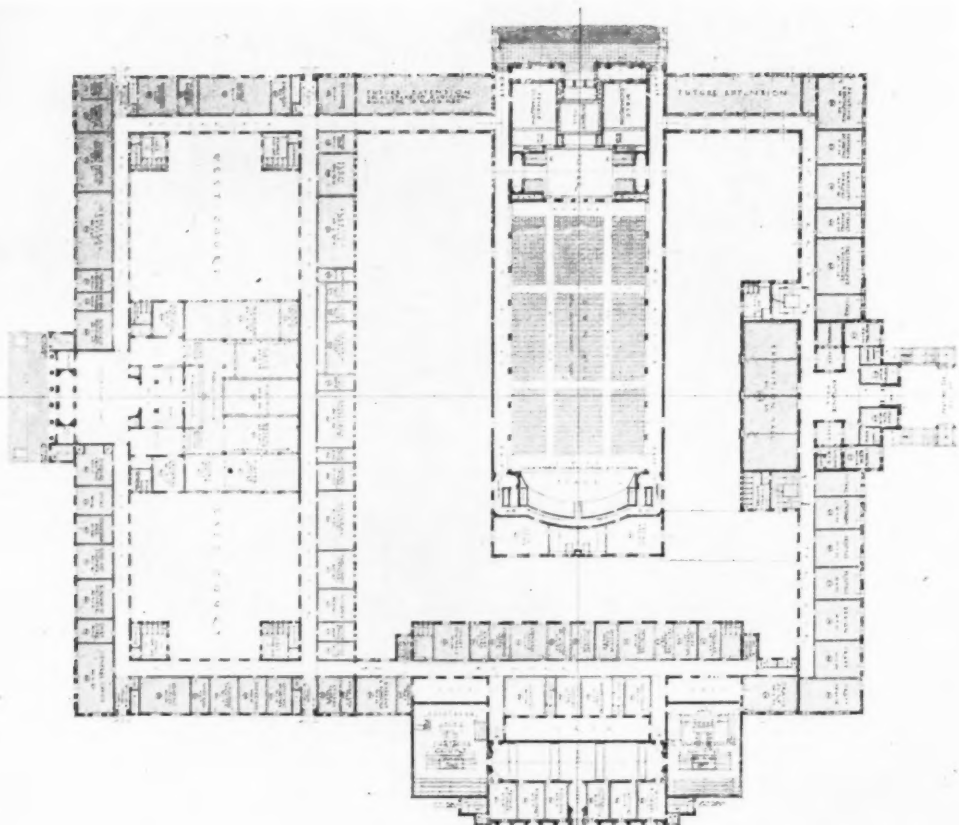




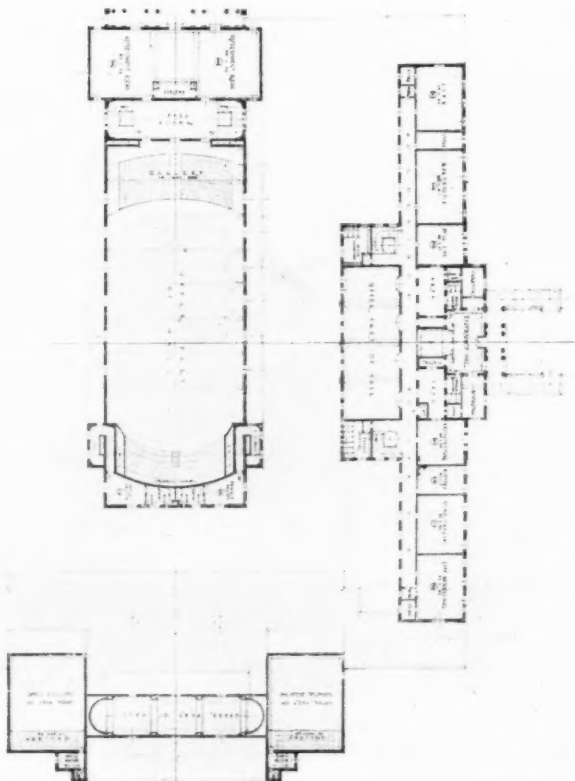


FIRST FLOOR PLAN

*Town Hall, Municipal Buildings, and Art Gallery Competition, Southampton: the second premiated design. By Crouch, Butler and Savage. The winning design, by Mr. E. Berry Webber, was reproduced in our last issue. A critique of the competition appears on page 436*



GROUND FLOOR PLAN



FIRST FLOOR PLAN

*Town Hall, Municipal Buildings, and Art Gallery Competition, Southampton: the third permitted design. By E. D. Lyons and T. E. North.*

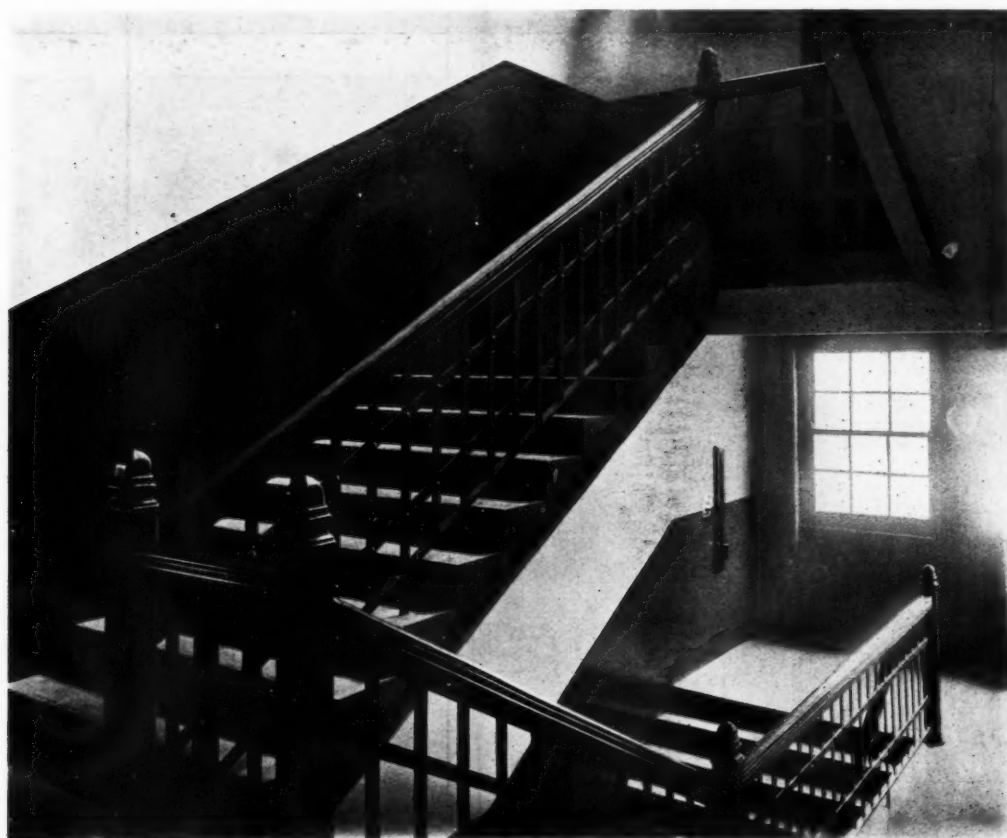
drawn from the Leicester city mains. In the kitchens, which are in the main block, money has not been spared in equipment. Even the visitor who knows nothing about cooking, like myself, is most impressed by the white tiled walls and the gleaming array of cooking implements. The store-rooms and larders are ample and airy. Indeed, the commissariat arrangements appear to be thoroughly up-to-date and excellent. It was good to hear that the students are given home produce practically right through the menu. "Grade A" milk, eggs, mutton, and pork the college farm supplies, and, for the rest, the sound principle of buying home produce first and foreign produce last is in force.

Standing apart from the residential blocks, some 100 yards to the rear, is the dairy. From the practical point of view this is the most important building, for the Midland College originated as a dairy institute at Kingston-on-Soar in 1895. Ever since, amid other developments, the dairy has remained the heart of the college. The late Lord Belper did as much as any man to start the college on the line of providing systematic courses in dairying for young farmers, and this practical policy has been thoroughly justified by the successes which past students have achieved in the world of business and science. It is fitting that the present Lord Belper should be chairman of the governing body of the college at a time when further developments are afoot. The dairy, which is only now getting into running order after the move from Kingston in the spring, is thoroughly equipped in the light of modern experience.

There is every facility for teaching the production of clean milk under the grade licence system of the Ministry of Health, and for teaching butter-making and cheese-making. Sutton Bonington happens to be in the centre of four districts famous for local cheeses, the Stilton, Derby, Leicester, and Colwick, and apart from learning all about these the student is taught how to make Cheddar, Cheshire, and a variety of soft cheeses. There is no lack of space, light, and air about the dairy. The whole is tiled in white and the floors are cement. The flooring is finished to give a smooth, durable surface that is not too slippery. The architects, Messrs. Pick, Everard, Keay and Gimson, of Leicester, are, indeed, to be congratulated on the practical features of the dairy no less than on the general layout and appearance of the main buildings.

There is nothing particularly notable about the range of farm buildings. They are the old buildings converted to accommodate thirty-four milk cows and some 200 pigs.

The five counties and the Ministry of Agriculture which contribute towards the upkeep of the Midland Agricultural and Dairy College can well be proud of their institution. The college is pleasing to the eye and evidently well constructed. Plenty of room has been allowed for expansion to meet the needs of future generations. As the college grows it is becoming a powerful influence for progress and development in the agriculture of the Midlands. With the completion of the women's hostel and the new dairy a big step forward has been taken this year.



*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. Staircase in central administration block.*

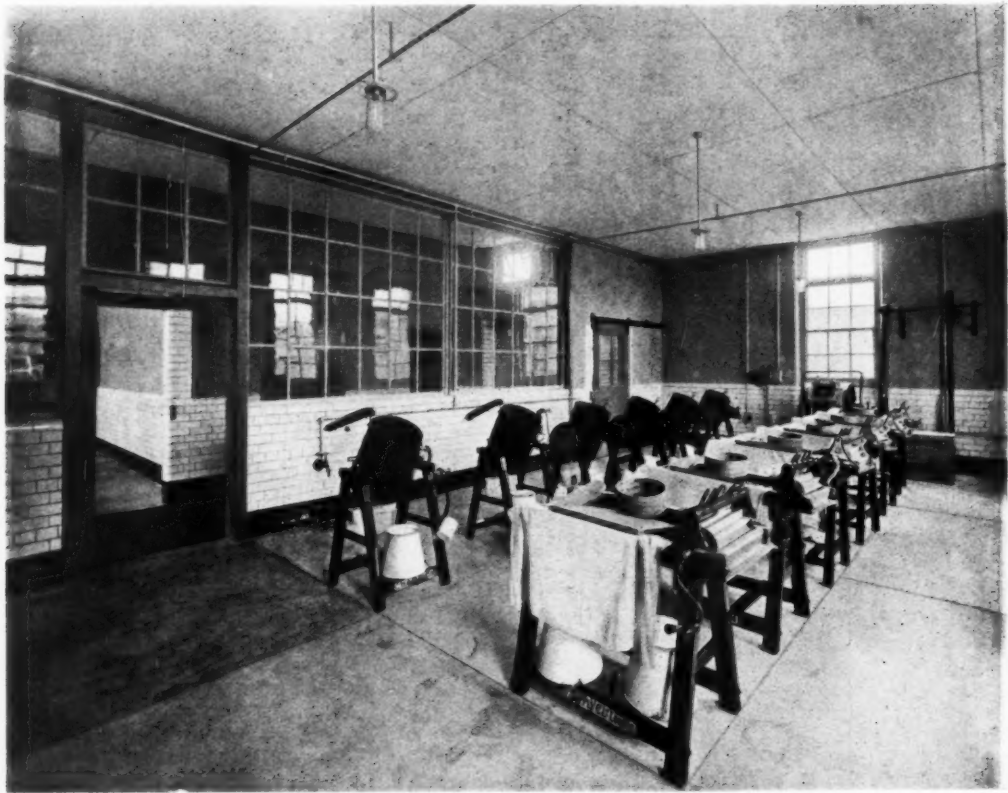


*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. Above, the library. Below, the recreation hall.*





*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Everard, Keay and Gimson. The women's hostel. Above, a typical bedroom. Below, the quiet room.*

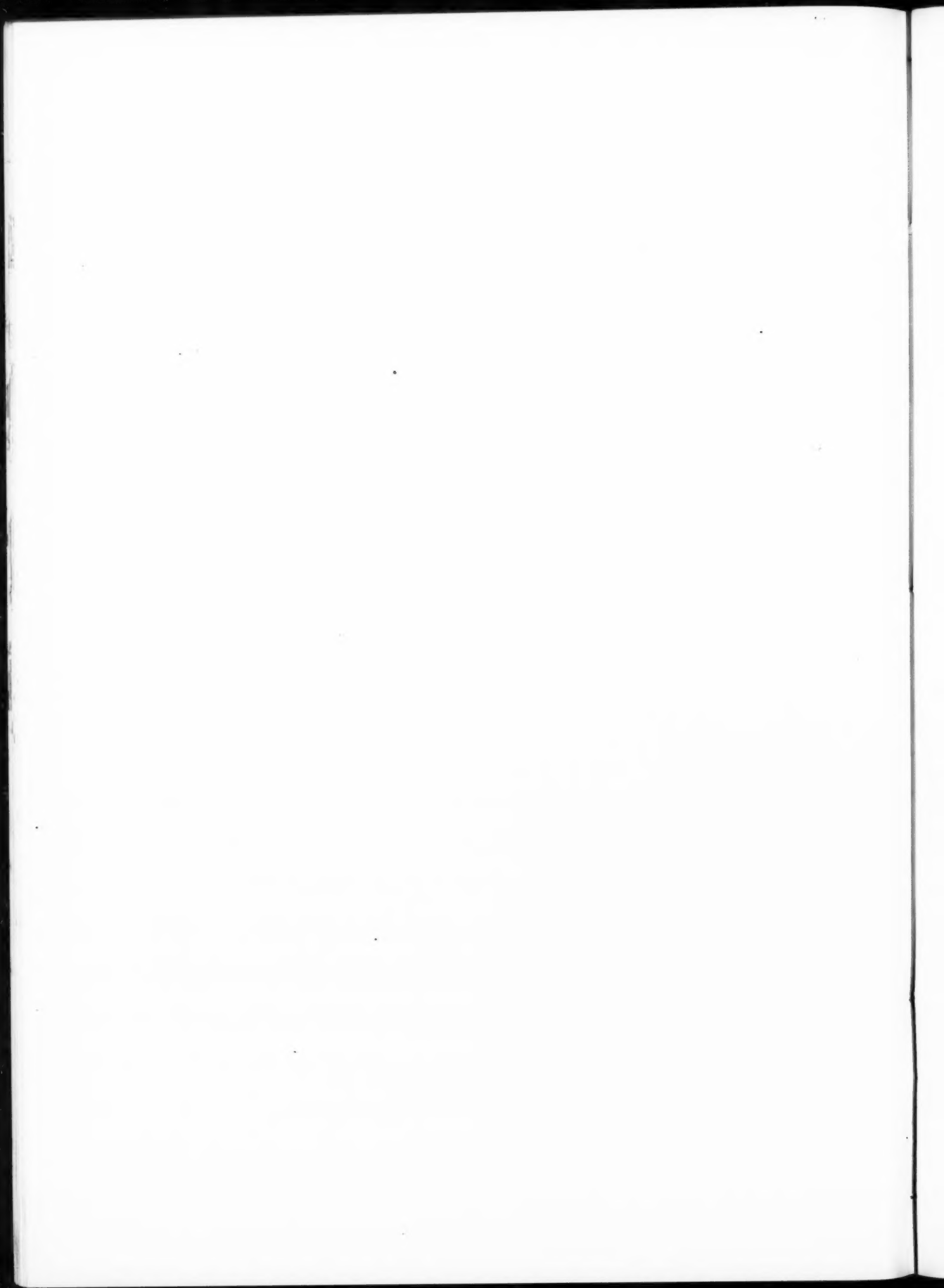


*The Midland Agricultural and Dairy College, Sutton Bonington. By Pick, Ewerard, Keay and Gimson. Above, the butter-room. Below, the chemical laboratory.*



## ENGLISH PRECEDENT

**32** *Sir John Soane's gate at Tyingham Beeches. The house itself was building from 1793 to 1797, and there are drawings extant of the bridge and gates dated 1801. These outworks are among the most completely successful of Soane's mature works. They have none of the "forced" quality of many of his more ambitious designs and his real instinct for the essential qualities of three-dimensional design is fully apparent. The inside face where Soane dispensed with a columnar treatment is a most interesting and distinguished piece of work. A model of the gate is preserved at the Soane Museum.—[GEOFFREY WEBB.]*





## A RAMP-AND-TWIST BALUSTRADE: i

[ BY J. STIRLING BOYD ]

A BALUSTRADE, such as that illustrated in this article, is usually termed "ramp-and-twist" work, which means literally that, in following the inclination of the winding stair, it rises and winds at the same time. Many of the failures to produce good work of this description appear to be due to lack of sufficient geometrical knowledge either on the part of the designer or of the craftsman who executes the work.

There are, however, several good examples to be found, such as the balustrade to the terrace stair at the main front of Drumlanrig Castle, Dumfries, which is shown in the accompanying photographs. This type of structure affords a good exercise in solid geometry as applied to masonry, while at the same time providing abundant scope for scientific stonecutting.

The full-size drawings required for the production of the moulds are 1: a plan, and 2: developments of the concave and convex faces. An elevation (although not necessary for the production of the moulds) is required in the preparation of the design, and its projection from the plan and developments will be described later. The example illustrated in the drawing, figure one (see supplement), forms the approach to a terrace, the pavement of which is 6 ft. 6 in. above the ground level.

Draw in plan, the riser line—AC—of the landing, and at right angles thereto the riser line—AB—of the first step. From the point A set out the centre lines of the quadrantal wing wall and the balustrade—4 ft. and 20 ft. 6 in. respectively. The curve of the former is a quarter circle, and of the latter, a quarter of a false ellipse, the construction of which is shown in diagram III. To draw this false elliptical curve, diagram III, draw lines to contain the half major and half minor axes. Set out  $ab$ , half the major axis, and  $ac$ , half the minor axis, which in the full-size drawing of the plan, diagram I, will be 20 ft. 6 in. and 16 ft. respectively.

With  $a$  as centre, describe the arcs  $bb^1$  and  $cc^1$ . Divide both arcs into equal parts—three in this diagram. Determine the points  $d^2$  and  $e^2$  by drawing vertical and horizontal lines from  $d$  and  $d^1$ , and from  $e$  and  $e^1$  respectively. Bisect the space  $e^2c$ , producing the bisector to cut the centre line at I, which will be the centre for describing the arc  $e^2c$ . Now draw a line from I to  $e^2$ . This line is a common normal to the arc  $e^2c$  and the adjacent arc. Now bisect the next space  $d^2$  and  $e^2$ , producing the bisector to intersect the first common normal in the point II, which will be the centre for describing the arc  $d^2e^2$ . A common normal drawn from II to  $d^2$  intersects the major axis in the point III, which will be the centre for describing the arc  $bd^2$ . When the three arcs have been described from their respective centres, the resulting curve closely resembles a quarter ellipse. This method is convenient when a number of normal joints have to be drawn as in this example, the joints occurring in each segment being drawn towards their respective centres, whereas, with a true elliptical curve, each normal joint would require to be determined separately.

The base and the spacing of the balusters should now be set out, the dimensions being obtained from diagram IV. On either side of the centre line in plan set out half the width of the baluster and half the width of the base. In this example the coping and base are purposely made the same width to avoid confusion of lines.

Now draw the pedestal forming the solid termination at the lower end of the balustrade at B, and arrange also the abutment at the upper end C. The inner side of the pedestal base coincides with the riser of step number one, and the abutment at the upper end, having neither moulded base nor coping, is arranged so that its inner side coincides with riser number thirteen.

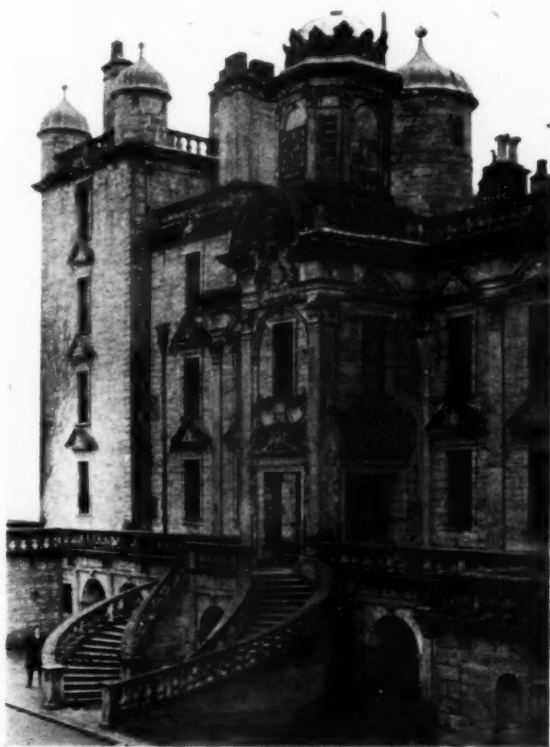
Some architects arrange for a half-round engaged baluster to form part of the solid pedestal at the ends of the balustrade, but as this provides an insecure support for the joint of the coping, and is at the same time illogical from the design point of view, a square-edged projection—not less than the size of a baluster, and in this example about 10 in. in width—is formed on the solid. To increase the strength of the balustrade, and to relieve the monotony caused by the long sweep of balusters, two intermediate solid "dies" are introduced. The balusters should be spaced equally throughout, the distance centre to centre being about half the height of the baluster. The intermediate dies are each equal to two balusters and one space, 19½ in. in width, measured on the centre line of the balustrade.

With the dividers set to the width of one baluster and one space, 11½ in., step over the entire length of the centre line of the base in plan, between the solid square projection already drawn at the upper and lower ends. Number off eight balusters and nine spaces from each end, thus determining the exact position of the intermediate dies which can now be drawn.

The balustrade may be further strengthened by increasing the intermediate dies an additional 2½ in. in thickness on the convex side. The position of the joints of the base can now be arranged if desired, but they cannot be drawn completely in plan until a development is made.

It being much easier first to arrange the position of the joints on the development, and then to transfer them to the plan, the development of the convex face will now be described.

Development of convex face, diagram V, figure one: As the inclination of the balustrade is dependent on the "pitch" of the stair, the steps should first be drawn in plan. The total height to be gained is 78 in., which with a 6 in. "rise" divides exactly into thirteen steps, including the landing. Divide the concave side of the balustrade base in plan, between the first and last riser, into twelve equal parts, 1b to 13b, and in like manner the convex side of the base of the quadrantal wall into the same number of equal divisions, one to thirteen. Draw the riser lines (shown dotted), and add also the edges of the steps. Across the



Drumlanrig Castle, Dumfries. The main front.



plan of the balustrade base draw lines  $1a-1b$ ,  $2a-2b$ , etc., normal to each arc which forms the false ellipse. The divisions indicated by  $1a$  to  $13a$  on the convex side will not all be equal owing to the variation in curvature. From any convenient point such as  $13c$ ,

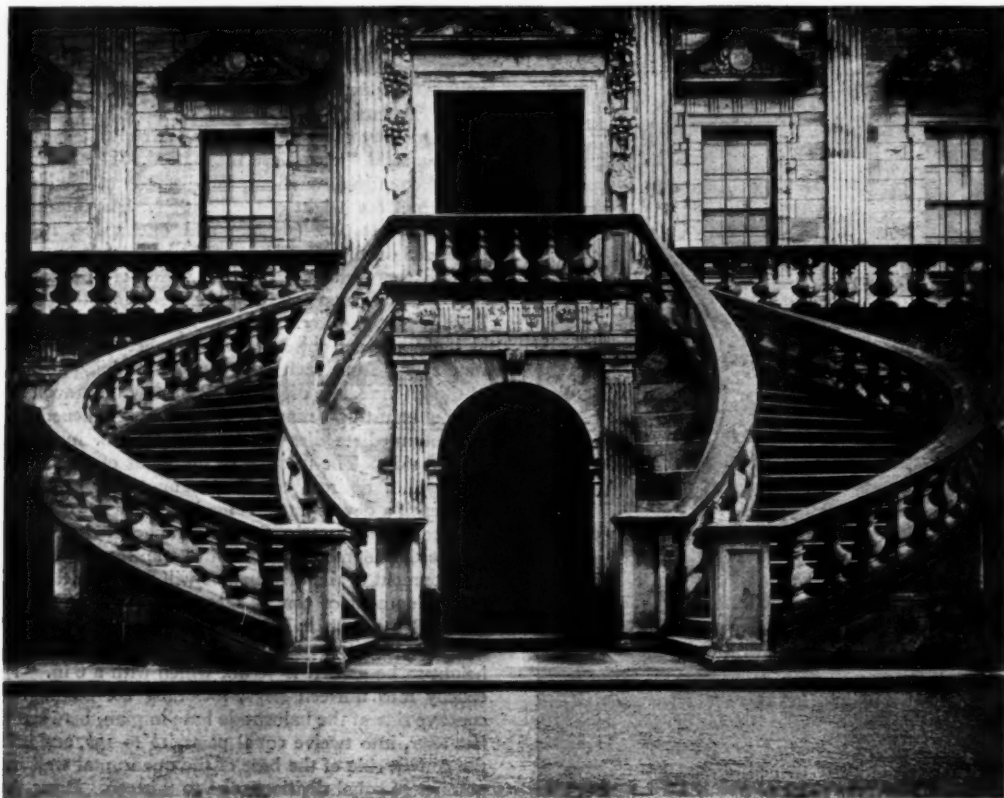
diagram V, make a "stretch-out" of the convex face of the base by transferring the divisions  $1a$  to  $13a$  from the plan to the development. Next set up the height 6 ft. 6 in., dividing it into thirteen equal parts, and project vertically from each division on the stretch-out to intersect a horizontal projector drawn from the divisions on the vertical line giving the points  $1d$ ,  $2d$ , etc.

Now proceed to fill in the details of the development, commencing with the pedestal, the dimensions of which are shown. From the points  $a$  and  $b$ , diagram V, draw respectively the top of the base and the underside of the coping parallel to the pitch of the steps as developed, adding also the depth of the base and thickness of the coping.

In plan, the radial sides of the baluster seats and dies should be marked through on the convex side. These divisions are then transferred to the line  $XY$  in the development, and the balusters and dies filled in by projecting downward. The jointing should now be arranged. Base-stone No. 1 has a vertical joint under the square projection attached to the die of the pedestal, while the other joint is drawn from the lower edge of the fourth baluster and at right angles to the slope. Base-stone No. 2 carries the horizontal seats of four balusters, and base-stone No. 3 carries the seat of one baluster and the horizontal bed of the first intermediate die.

Coping-stone No. 1 has the lower joint vertical and its upper joint at right angles to the slope. Horizontal seatings for four balusters are arranged on each length of coping. Coping-stone F, and all the others, have their joints normal to the slope. The lower part of each base-stone is formed with a level bed to bond with the ashlar wall below. By measurements transferred from the development, the joints of the base and coping may be drawn complete in plan if desired.

Development of concave face, diagram V, figure one: Only a small portion—in broken lines—of this development is shown, its production being similar to that for the convex face. From the point  $13c$  make a stretch-out of the divisions  $1b$  to  $13b$ , shown on the plan. On the concave development, a few only of these divisions are indicated— $1e$  to  $6e$ . At  $1e$  set up an outline of the



*Drumlanrig Castle, Dumfries. The staircase on the main front.*

inner edge of the pedestal, including the square-edged projection attached thereto, the height of the base and coping being projected from the pedestal already drawn. This determines the points  $a^2$  and  $b^2$ , corresponding to  $a$  and  $b$  on the convex development. From  $a^2$  and  $b^2$  draw the upper surface of the base and under surface of the coping to the points  $a^1$  and  $b^1$  respectively, adding also the upper surface of the coping. To obtain the position of the balusters and joints produce the vertical edge  $a^2 b^2$  to intersect the upper surface of the coping at  $b^3$ , and from that point draw a line to  $b^4$  on the line  $XY$ . From each division of the balusters on the convex stretch-out  $XY$ , draw lines parallel to  $b^3 b^4$ , and from the intersection of these lines with the top of the coping on the concave development, the sides of the balusters are drawn vertically downward.

To determine the joints of the base on the concave development, take the joint between stones No. 2 and No. 3 as an example. From the points  $c$  and  $d$  at the upper and lower edges of this joint on the convex development, project to  $c^1$  and  $d^1$  on  $XY$ , and from these points draw lines parallel to  $b^3 b^4$  intersecting the upper surface of the coping. From there project down to meet horizontal projectors drawn from the points  $c$  and  $d$ . A line drawn between  $c^2$  and  $d^2$  will be the joint required.

It will be observed that the angle which this joint makes with the top surface of the base on the concave development is not a right angle. The divergence from a right angle is, however, so slight as to be almost unnoticeable on the cut stone, but this form of joint has the advantage of being a plane surface with its upper and lower arrises horizontal. All the other joints, both in the base and the coping, are determined in a similar manner.

From these developments, all the flexible face moulds required can be obtained; but as complete developments of the entire balustrade require a very large drawing floor, developments for each stone can, if desired, be produced separately.

[To be continued]

## LAW REPORTS

### DENTIST'S COMPLAINT OF NUISANCE FROM NOISE AND VIBRATION

*Wallace v. Letts & Co. Chancery Division. Before Mr. Justice Astbury*

The plaintiff in this case, Mr. F. H. Wallace, a dental surgeon, of High Street, Grantham, sought an injunction against Messrs. Letts & Co., Ltd., poultry food manufacturers, occupying premises adjoining the plaintiff's, to restrain them from using their machinery in such a way as to create a nuisance.

Mr. Archer, K.C., for the plaintiff, said his client complained that the noise and vibration made it impossible for him properly to conduct his business. It had also seriously affected the health of his wife.

Evidence for the plaintiff was to the effect that the defendant's machinery made a droning sound.

Mr. Preston, K.C., for the defendants, pointed out that the plaintiff's premises were extremely susceptible to noise and vibration owing to the extensive cellars they had. Defendants had taken every possible means to reduce any noise or vibration.

His lordship, after hearing the evidence, granted plaintiff an injunction, with costs, holding that a legal nuisance existed.

### QUESTION OF WATER SUPPLY

*Brown & Co. (Chester), Ltd. v. Chester Waterworks Co. King's Bench Division. Before Mr. Justice McCardie*

This case raised a question whether the defendants were bound to supply the plaintiffs with water at their premises in Eastgate Street and St. Michael's Street, Chester, occupied partly as a dwelling-house and partly for trade and business purposes, by meter.

Mr. Montgomery, K.C., for the plaintiffs, said his clients carried on a multiple shop, including that of tailors, drapers, furnisiers, etc. For some years up to 1926 plaintiffs were supplied with water by meter, and in August 1926 defendants wrote saying that they

would no longer supply by meter, and finally on June 8, 1927, they wrote that the only terms on which the supply would be granted were: for domestic purposes, at a scale equal to a rate based on the annual value of the plaintiffs' premises; for non-domestic purposes, other than trade purposes, at the defendant company's published scale according to the actual requirements of the plaintiff company; for trade purposes, at meter rate in accordance with the defendant company's published scale of meter charges. The contention of the plaintiffs was that they were entitled to water at meter charges.

Mr. Greene, K.C., for the defendants, said in a case like this it was for the company to say on what terms they would supply the water. If the defendants were bound to supply by meter, then the rate at which they were to supply it to plaintiffs was for the defendants to decide, as there was no statutory scale of meter charges. The system of water rating in respect to domestic purposes in a dwelling-house was based on annual value and a water company could not differentiate, and all dwelling-houses must be treated alike. What the defendant company fought was the suggestion that, because in a dwelling-house a person carried on a trade, that person should be put in a better position than those in dwelling-houses where no trades were carried on. The defendant company being at the mercy of anyone who used the domestic tap for trade purposes got inserted in the Chester Waterworks Act, 1874, section 22, which gave the company an option, in the case of what he called a hybrid establishment, to charge on annual value or by meter.

His lordship held that the action failed and must be dismissed. In the course of his judgment, he said the question was whether plaintiffs could say the defendants must supply water by meter. Section 23 of the Act of 1874 proceeded: "No person should be entitled to require, nor shall the company be bound to supply any dwelling-house with water (otherwise than by meter or by special agreement) where any part of such dwelling-house is used for any trade or business purposes for which water is required." Apart from the words "otherwise than by meter or special agreement," the defendants were not bound to supply at all. For the plaintiffs it was said that the words, "otherwise than by meter or by special agreement," put on the defendants statutory obligations to supply by meter or by special agreement. There was no statutory scale of meter charges, and the result was that a supply must be by agreement between the parties. There was no obligation on the defendants to supply by meter or by special agreement.

His lordship expressed the opinion that the practical way of dealing with any difficulty created by the section was that if a dispute arose as to what were fair terms of supply, the matter should be left to the local justices and not to the unfettered discretion of the Water Company.

## SOCIETIES AND SCHOOLS

### Town Planning Institute: Edinburgh Meeting

Following is the programme of the tenth annual provincial meeting at Edinburgh. Meetings will be held in the Council Chamber, City Chambers, by kind permission of the Lord Provost and members of the City Council.

Thursday, October 4. Arrive at Edinburgh. Members travelling by rail are reminded that a saving can be effected by taking a tourist ticket. Train from London (King's Cross), 1.15 p.m., arriving Edinburgh 9.40 p.m.

Friday, October 5. Morning, at 10. Meeting at City Chambers. Welcome by the Lord Provost, the Rt. Hon. Sir Alex. Stevenson. Reply by the president, Mr. Edward Willis, M.INST.C.E., F.S.I. Lantern lecture on the "Growth of Edinburgh," by Mr. Frank C. Mears, F.R.I.B.A., M.T.P.I. Discussion to be opened by a representative of the Edinburgh City Council. Afternoon, at 2. Motor charabancs will call at North British Station Hotel to convey party on visit to Old Edinburgh. Price of tickets for charabanc, 2s. each. Evening, at 8. Civic reception at the City Chambers by kind invitation of the Lord Provost and members of the City Corporation (evening dress).



Saturday, October 6. Morning, at 10. Meeting at City Chambers. "Regional Planning and Rural Preservation," by Mr. G. D. Macniven, F.R.I.B.A., principal architect, Scottish Board of Health. Discussion to be opened by ex-Bailie T. B. Whitson. Afternoon, at 2 (sharp). Motor charabancs will call at North British Station Hotel to convey party on visit to the "New Town" of Edinburgh, finishing with an inspection of the Forth Bridge, etc. Tea at South Queensferry. Returning to Edinburgh about 6 p.m. Price of tickets for charabanc, 3s. each. Evening, 7.15 for 7.30. Institute dinner at the North British Station Hotel. Tickets 10s. 6d. each, exclusive of wines (evening dress).

Sunday, October 7. Delegates are free to make their own arrangements. Visits can be organized, if desired. For those who must return to London there is a train leaving Edinburgh at 11.15 a.m., arriving King's Cross 8.15 p.m.

Those proposing to attend the meeting should notify the secretary, Mr. Alfred R. Potter, 11 Arundel Street, Strand, London, W.C.2, at the earliest possible moment.

#### *British Art for Jugo-Slavia*

Sir Robert Witt, vice-chairman of the "British Artists' Exhibitions," has completed the arrangements with the Jugo-Slav Society of Great Britain for an exhibition of British art in Jugo-Slavia this winter. A selection from those works of art which are at present in the British Pavilion at the Venice International Exhibition will be made by Mr. Philip Connard, R.A., Mr. Gerald Brockhurst, A.R.A., and Mr. Reid Dick, A.R.A. They will be transferred in November to Jugo-Slavia, and will be shown at Belgrade, Zagreb, and Ljubljana, with the co-operation of local committees in those places. This exhibition is an addition to the original programme planned by Sir Joseph Duveen.

#### *Swedish Surveyors' Institute's Three-hundredth Anniversary*

The surveyors of Sweden have celebrated the three-hundredth anniversary of their institution, which was founded in 1628 by King Gustavus Adolphus, from whose reign not only the land survey of today, but also the Royal Ordnance Survey, the Marine Ordnance Survey, and the Government Hydrographical Office originate. The central department of the land surveyance has resided in the same fine old building since 1689, and its archives are a gold mine with regard to documents illustrating the history of the Swedish soil from medieval times.

#### *Sir Banister Fletcher on Architecture*

Twenty-four weekly lectures on "The History of Architecture (Part III—Renaissance)" are to be given by Sir Banister Fletcher, F.S.A., F.R.I.B.A., at the L.C.C. Central School of Arts and Crafts, Southampton Row, W.C.1. Admission to the first lecture, on October 3, will be free. The lectures will also deal with the Renaissance (and modern) architecture of Italy, France, Germany, Belgium, Holland, Spain, and England; and will be fully illustrated by special lantern slides and by photographs, diagrams, and models.

## ANNOUNCEMENTS

Mr. W. Harold Jones, A.R.I.B.A., has entered into partnership with Mr. W. M. Weir, F.R.I.B.A., sole partner of Messrs. Weir, Burrows and Weir, chartered architects, of 17 Victoria Street, Westminster, S.W.1. Telephone: 0777 Victoria.

Mr. Herbert Wigglesworth (Messrs. Niven and Wigglesworth) and Mr. A. G. R. Mackenzie (Messrs. A. Marshall Mackenzie and Son) have entered into partnership and will continue to practise as architects. The firm will be known as Messrs. Wigglesworth and Marshall Mackenzie, and the address will be No. 7 John Street, Bedford Row, London, W.C.1. Telephones: Museum 3943 and 3944.

## TRADE NOTES

We are informed that a company is now being formed with a substantial backing to take over the business of J. H. Holmes & Co., electrical engineers, Newcastle-upon-Tyne, and that arrangements have been made whereby in the meantime manufacture will be continued and all customers' requirements dealt with.

Messrs. Gibbons and Dean, Ltd., specialists in leaded lights, memorial windows, glass signs, glass fascias, illuminated signs, and wood letters, have carried out a big extension at their works at High Road, Ilford, E. This extension became necessary owing to the rapid growth of business. With the larger workshops and studios, together with the additional new plant, the firm are now in a splendid position to carry out expeditiously all work entrusted to them. The same personal attention will be given to architects' designs as hitherto.

What is thought to be the largest jaw crusher yet made in England is now passing through the workshops of Messrs. Vickers-Armstrong, Ltd., of Barrow-in-Furness. This crusher weighs 133 tons and has an opening of 6 ft. by 4 ft. for the reception of blocks of stone which may be up to as much as 5 tons in weight. The machine is designed to crush down to small pieces of about 6 in. in size, and it is in course of manufacture for Messrs. G. and T. Earle (1925), Ltd., the cement manufacturers of Hull; and is required in connection with the limestone quarry now being opened out to supply raw material for their new cement works at Hope in Derbyshire. Another interesting item of plant in connection with Messrs. Earle's quarry at Hope will be a newly-designed and electrically-operated shovel.

Sir Arthur Marshall, K.B.E., Chairman of the Sussex Brick Company, Ltd., writing in *The Briquette* on the building industry, says: "Trade unions, once anathema, have now become a necessary and valuable part of our industrial machinery, and I for one hope and believe that the present conferences approved by many leaders of both employed and employers will lead to a better understanding, which in turn will establish good will. In that spirit the present difficulties of our people can be overcome, the depressions in trade will be lessened, and prosperity will return. We aim at making a happier England—with happier, healthier and more prosperous workers—with homes in which the new generation can grow up stronger and fitter than the past generations. If such ideal conditions can be stabilized the brick-makers will be busy, and they will be one of the trades who will play a fine part in the great business of home building for a happy people, and I will add that the Sussex Brick Co. will, so far as the management is concerned, continue the policy that has been in the past productive of good will and has achieved a considerable measure of success."

*The Briquette* is a works magazine, compiled, printed, and published for the employees of the Sussex Brick Company, Ltd., Horsham, under the editorship of Mr. J. Wells. Other articles include "Thirty-two Years at Warnham," by Mr. J. Burtenshaw, many reports of social activities, and a contribution from Mr. John North.

The architect, when planning a system of ventilation or central heating for, say, an hotel, a large block of offices or flats, is often confronted with a difficult problem. The question is, how can the sheer utilitarianism of the radiator or ventilator opening be brought into harmony with the general decorative scheme? This problem may be happily solved by "Harvey" ornamental metal-work, which offers the architect an almost endless range of artistic designs for radiator guards, ventilator panels, grilles, and screens in perforated and embossed metal. The decorative effect in no way impedes the proper functioning of any kind of radiator or ventilating system. Produced by the engineering firm of G. A. Harvey & Co. (London), Ltd., London, S.E.7, this artistic metal-work has the charm and distinction of the best hammered work, and combines good design with the durability of solid metal. This result has been achieved by the wide experience of the firm in metal-work of all kinds, and by the excellence of the materials and craftsmanship. "Harvey" perforated metal is produced from the solid sheet, and is thus strong and serviceable when used



for covering radiators and heating pipes, grilles, lift enclosures, etc. This solidity of construction is still further increased by the front and sides of the radiator guard being pressed to shape after perforation, thus avoiding the danger of awkward joints and corners. "Harvey" metal-work is produced in a large variety of finishes, such as oxidized silver, antique brass, and so on, all of which lend themselves to the general character of any decorative scheme.

Many useful hints on the selection of electric fires are given in *A Little Book About Fires*. It is stated that there are many points to look for: Brilliance of glow; degree of heat given out; artistic appearance; well-designed elements that won't give trouble; solid construction. All these points are claimed to be embodied in the range of Met-Vick fires. The Metropolitan-Vickers Electrical Company, by whom the book is issued, state that at first their fires undergo a laboratory process, where everything is tried and tested again and again till the best is attained and the model can be confidently released for production. Then great care and skill are given to manufacture, supervision, and inspection. The same care and skill necessitated in designing and manufacturing huge and complicated electrical machinery is employed in the electric fires, irons, kettles, and all other home helps that carry the Met-Vick mark. In the pages of the book are fires of every kind to suit every requirement. There are fires for the drawing-room, dining-room, bedroom, and the study, portable fires, big fires, and little ones, but all, no matter how the prices may differ, claimed to be doing the work they were designed for, giving the heat, giving the pleasure, and giving the economy. This year, in addition to the more decorative models, the firm have a complete range of flat bar type fires finished in oxidized copper, or stove black enamel. These are primarily designed to meet the requirements of supply authorities who need a robust type of fire at a reasonable price for their hiring out schemes. This model can also be obtained in a white enamel chromium plated finish, which should be very attractive for certain situations.

## LECTURES ON ARCHITECTURAL PRACTICE

Suggestions have been received from time to time that a series of lectures on modern methods of practice should be arranged for the benefit of members of the R.I.B.A. who are practising architects, and the Council, on the recommendation of the Science Standing Committee, have now agreed to hold a series of three lectures at the R.I.B.A. to test the position and ascertain if there is a real demand for them. The subject selected is "Party Walls, Contracts and Specifications," and the lectures will be given by Mr. W. E. Watson, F.R.I.B.A., barrister-at-law. The first is arranged for Thursday, November 8, and the remaining ones will be held on Thursday, November 22, and Thursday, December 6, each commencing at 6.30 p.m. No charge will be made for admission, and members are cordially invited to attend. If the first series is successful and well-attended, the R.I.B.A. hope to arrange a further series early in 1929 on "The Strength of Materials."

## COMPETITION CALENDAR

*The conditions of the following competitions have been received by the R.I.B.A.:*

**September 29.** The British Portland Cement Association, Ltd., is offering awards for the best concrete houses erected during the current year. These awards are offered for work that has been actually designed and constructed. The prize awards will be as follows: To architects, 1st prize, £100; 2nd prize, £50; to builders, to the builder of the house awarded the 1st prize, £50; 2nd prize, £25. Assessor: Mr. E. Guy Dawber, A.R.A. Any concrete house or bungalow, the contract price of which is from £500 to £2,000, designed and erected in Great Britain under the supervision of an architect, is eligible. Houses must conform to the following requirements: 1: Only cement of British manufacture shall have been specified and used, with the exception of white cement which may be used only for obtaining special effects:

2: Concrete must be used for the roof of houses where a flat roof is called for. The covering for other types of roof must be pre-cast concrete tiles except where extra expense is entailed by the employment of this latter form of covering. The actual construction must be completed by the end of 1928 in order that the prizes may be awarded early in 1929. Further particulars from The British Portland Cement Association, Ltd., 20 Dartmouth Street, London, S.W.1

**February 13.** Art gallery to be erected in Christchurch, New Zealand, under the R. E. McDougall gift. Amount to be expended, £25,000. Competition in two stages. 1st stage: Pencil sketches from which will be selected by the assessor three designs, each of the authors to receive £100 honorarium; 2nd stage: the authors of the three selected designs to compete, and the one adjudged the winner by the jury of award will be employed as architect. Open to all architects on the register of the R.I.B.A. and all affiliated institutions. Assessor: Mr. S. Hurst Seager, C.B.E., F.R.I.B.A. Jury of Award: The donor; the Rev. J. K. Archer (who is at present the Mayor of Christchurch); Mr. R. Wallwork, director of the Canterbury College School of Art, Christchurch (and at present the president of the Canterbury Society of Arts); and the assessor. Date for questions: October 12, 1928. Delivery of plans: February 13, 1929. Particulars from the office of the High Commissioner for New Zealand, The Strand, London, or from Mr. J. S. Neville, Town Clerk, Christchurch, New Zealand.

## THE MIDLAND AGRICULTURAL COLLEGE

Following are the names of the general contractors and sub-contractors for the Midland Agricultural and Dairy College, Sutton Bonington, illustrated on pages 437 to 444: general contractors for first portion of the building, Thos. Barlow & Co., Nottingham; general contractors for the women's hostel and dairy, Wm. Moss and Sons, Ltd., Loughborough; Henry Hope and Sons, Birmingham, heating and hot water supply; W. J. Furse & Co., Ltd., Nottingham, and T. H. Wathes & Co., Leicester, electrical installation; John Ellis and Sons, Leicester, terrazzo to dairy floors.

## NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, London, W.C.2. The price is 1s. each.]

### LATEST PATENT APPLICATIONS

- 24966. Gilbert, C. H. E. Glazing-bars. August 30.
- 24582. Paine, H. J. Instrument for determining, &c., angles of roofs. August 27.
- 24912. Sutherland, R. A. Construction of reinforced concrete water-towers. August 30.
- 25139. Collins, A. D., and Johnston, E. R. Concrete-mixing &c., apparatus. September 1.
- 25123. Frewen, E. J. Building-units, &c. September 1.
- 25439. Atkinson, J. B., and Smith, J. W. Windows. September 5.
- 25789. Cook, W. Wall structures, &c. September 7.
- 25397. Hadfield, G. H., and Sand and Shingle, Ltd. Coloured building-material. September 4.
- 25472. Kidston, R. Domestic fireplaces. September 5.

### SPECIFICATIONS PUBLISHED

- 296262. Aycock, F. M. Scaffold jacks.
- 296111. Carpineti, A. Kitchen stoves operated by petroleum.
- 296332. Iwanowski, W., and Turski, J. Preservation of wood.
- 296500. Brader, G. B. Moulds for casting concrete pipes.
- 296617. Dutfield, A. E. Glazing-channels for windows, and the like.
- 296625. Groom, G. W. Double-action-check floor door spring.

### ABSTRACT PUBLISHED

- 294024. Braithwaite & Co., Engineers, Ltd., and Freeman, R., Broadway Buildings, Westminster. Piles.

## THE WEEK'S BUILDING NEWS

Plans passed by the PRESTWICH U.D.C.: Shop, Polefield estate, for Miss Whitaker; two houses, Park Road, for Mr. E. C. Young; thirty-four houses, Bury New Road, etc., for Messrs. J. and W. Leach and Sons, Ltd.; three houses, Heywood Road, for U.D.C.; service garages and offices, Bury New Road, for Messrs. Sykes and Stocker; four houses, Polefield Way, for Mr. W. Way; alterations, laundry, Heywood Road, South, for Overbrook Laundry, Ltd.; four houses, Duckworth Road, for Messrs. G. Benson and Son; layout of housing scheme at Mere Clough, for Waterdale Dyeing and Finishing Co., Ltd.; house, Danesway, for Messrs. Ambler and Waite.

The managers of the Church of England Schools, Church Street, SOUTH HINKSEY, Oxford, have prepared plans for alterations and extensions.

Plans passed by the OXFORD Corporation: Additions to classrooms and new dormitory, Rothesay Boarding School, Woodstock Road, for Mrs. Hickling; additions to dining hall, masters' room, and servery, St. Edward's School, Woodstock Road, for governors; reconstruction, hostel, St. Mary's Road, for St. John's House trustees; chapel, Cowley Place, for Magdalen College Council.

Plans passed by the BERMUNDSEY B.C.: Alterations, "Green Dragon" public-house, Bermundsey Street, for Mr. Wm. Ingram, architect; alterations, "New Concord" public-house, Keetons Road, for Mr. F. M. Kirby, surveyor to Messrs. Courage & Co., Ltd.

Plans passed by the STOKE NEWINGTON B.C.: Factory, for Ever Ready Co., Ltd., Carysfort Road, for Messrs. H. Seymour Couchman and Sons; workshop and garages, 172 Albion Road, for Messrs. Boxall and Boxall; swimming bath, Clissold Park, for Messrs. Hobden and Porri, architects, for the B.C.; building at St. Olave's Church, Seven Sisters Road, for Mr. G. T. Hellicar, on behalf of the Rev. D. G. B. Macrae and churchwardens.

The PRESTWICH U.D.C. is suggesting to the county architect a site near the Picture-drome as suitable for the erection of a branch library.

Nos. 68-70 Lombard Street and Change Alley, and 36-8 Old Change, LONDON, are to be reconstructed.

Messrs. Ellis and Son, 1 Princess Street, Manchester, have a scheme for the erection of shops and flats on land in Bury New Road, PRESTWICH, the cost being estimated at £60,000, and are asking the U.D.C. for a municipal mortgage in connection with the proposal.

Plans passed by the FULHAM B.C.: Building, corner of Hammersmith Road and Addison Bridge Place, for Mr. W. E. Sanders, of 118 Camden Road, N.W.1; extensions, Salvation Army Hall, Wandsworth Bridge Road, for Messrs. Coy and Wainwright; building, Townmead Road, for Macfarlane Lang's biscuit works, for Messrs. J. M. Monro and Sons; building, Rosebank Wharf, for Mr. W. A. Allen; alterations, Auto-Service Station, High Street, for Messrs. C. Hannaford and Sons.

The BRADFORD Corporation has sold land in Leach Square to the Office of Works for the erection of a telephone exchange.

Plans passed by the PENRITH U.D.C.: Alterations, Mitre Hotel, for Glassons Breweries, Ltd.; garage, Brunswick Road, for Armstrong and Siddle Motor Services, Ltd.

The OXFORD Corporation is seeking sanction for a loan of £25,000 for further housing advances.

Plans submitted to the WILLESDEN U.D.C.: Fifteen flats, Sidmouth Road, for Messrs. George Ball (Willesden), Ltd.; alterations, 127 Broadway, Cricklewood, for Messrs. Freeman, Hardy and Willis, Ltd.; ninety-seven houses, Newcombe estate, for Mr. W. Beck.

Plans passed by the WEYMOUTH Corporation: Alterations, Liberal Association premises, Lower Bond Street, for Messrs. Andrews and Andrews; two houses, Westbourne Road, for Mr. K. Openshaw; flats, Carlton Road South, for Messrs. Jeffs and Son; house, Abbotsbury Road, for Mr. J. Green; two houses, Radipole Spa building estate, for Mr. G. Taylor; bungalow, Radipole Spa, for Mr. K. F. Perrett; veranda, Royal Hotel, for Messrs. Crickmay and Sons.

Plans passed by the SWANSEA Corporation: Grand stand, Vetch Field, for Swansea A.F.C., Ltd.; layout of Garnlas estate, for Sir T. R. A. Morris; two houses, off Boarspit Lane, for Mr. W. S. Davie; two houses, Pentregethin Road, for Mr. H. E. Thomas; alterations and additions, 11 and 12 Wind Street, for National Provincial and Union Bank of England Ltd.; two houses, Eden Avenue, for Messrs. Henry Billings and Son; twelve houses, Graiglwyd Road, for Messrs. T. and G. Spragg; four houses, Townhill Road, for Messrs. Rogers and Davies; five houses, Pennard Street, for Messrs. Weaver Bros.; two houses, Grenfell Park estate, for Messrs. Jones Bros.; fourteen houses, Grenfell Park estate, for Messrs. J. R. Banfield and Son; seven houses, Norton Road, for Mr. George Symons.

The DORSET County Council is taking steps to form a joint committee for the provision of smallpox hospital accommodation.

The SEAFORD U.D.C. is to consider the provision of swimming baths for the town.

The SWANSEA Corporation has instructed the borough architect to prepare plans for two further groups of 100 houses each on the Townhill estate.

The SWANSEA Electricity Committee expects to be able at the October meeting of the Corporation to present its scheme for extensions at the electricity station.

The SWANSEA Corporation Electricity Committee has obtained a site on the Gwernllynwyth estate, Llansamlet, for the erection of a sub-station.

Plans passed by the BEDFORD Corporation: Additions to offices of Messrs. J. E. Page, Ltd., St. Mary's Street, for Messrs. Usher and Anthony; warehouse, for Ammonia Fertiliser Co., Duck Mill Lane, for Messrs. J. T. Hobson & Co.; alterations, Dolphin public-house, The Broadway, for Messrs. C. Wells, Ltd.; extensions, St. Cuthbert's Hall, for Mr. E. H. C. Inskip; two houses, Dudley Street, for Mr. E. H. C. Inskip; two shops, Broham Road, for Mr. A. Garrity; shop and house, Broham Road, for Mr. I. Daughtry; two houses, West Grove, for Mr. F. Corby; alterations, New Inn, Tavistock Street, for Messrs. Usher and Anthony; alterations, the Bear Hotel, High Street, for Messrs. Newland and Nash, Ltd.; two houses, Broham Road, for Mr. A. R. Prier.

The BLYTH Corporation has asked the education director to report the requirements in connection with the proposed central school, the site for which is now available.

Plans passed by the BLYTH Corporation: Two houses, Back Bath Terrace, for Messrs. Hill and Honeyman; four shops, Coomassie Road, for Messrs. T. S. Hedley and Son; two houses, Plessey Road, for Mr. Andrew Best; layout of estate, Thomson Street, Cowpen Bay, for Mr. R. Baxter.

Plans passed by the NORTHFLEET U.D.C.: Three houses, Stanbrook Road, for Mr. J. Gould; house, Springhead Road, for Mr. J. B. Lingham; alterations, 57 High Street, for Messrs. Bridgland and Clay; alterations, factory hall, for Associated Portland Cement Manufacturers, Ltd.; house, Longfield Avenue, for Mr. Dagliesh; garage and stores, The Hill, for Mr. J. B. Lingham.

The PENRITH U.D.C. has asked the Housing Committee to consider the possibility of erecting further houses.

★

Plans have been prepared for the reconstruction of the Wheatheaf public-house, 48-50 High Street, CAMDEN TOWN.

★

The Bedfordshire, Cambridgeshire, and Huntingdonshire Electricity Company has obtained powers to compulsorily acquire a site at LITTLE BARFORD for the erection of a power station.

★

Plans passed by the WOKING U.D.C.: House, Wych Street, for Mrs. O. K. Mutter; house, Wilfred Street, for Messrs. Childs and Shee; shop and house, Beaconsfield Road, for Mr. R. Richardson; shop, High Street, Knaphill, for Mr. F. Harvey; six bungalows, Apers Avenue, Knaphill, for Mr. E. Ricks.

★

The HASTINGS Corporation has agreed to extend water mains to supply about twenty houses to be erected by Mr. J. B. Ward at Elphinstone Avenue, Hastings.

★

The HASTINGS Corporation Electricity Committee has acquired land for the extension of the coal storage accommodation at the Broomgrove power station.

★

The HASTINGS Corporation has obtained sanction to borrow £20,000 for further housing advances.

★

The BIRKENHEAD Corporation has now obtained sanction from the Ministry of Health to raise the loans necessary for the development of the central station site.

★

The Hospital Committee has prepared plans for additions to the Cottage Hospital, Coventry Road, MARKET HARBOROUGH.

★

The CARLISLE Corporation has obtained sanction to raise a loan of £62,000 for the erection of 202 additional houses.

★

The Ministry of Health has agreed to the proposal of the BRADFORD Corporation to appropriate land in Ludham Street for the purpose of a central motor-bus garage.

★

Plans passed by the DOUGLAS (I.O.M.) Corporation: Shop and tennis pavilion, Ballaquayle Road, for Mr. W. Keig; alterations to premises, Ridgeway Street, for the Corporation Electricity Department; steel sheds, Lake Road, for the Douglas Steam Saw Mills, Ltd.; warehouse, South Quay, for Messrs. Corlett, Sons and Cowley, Ltd.

★

In connection with the proposed development of the Priory estate, the borough engineer of DUDLEY has prepared plans for the proposed sewage works site.

Plans passed by the HAMPTON U.D.C.: Eight houses, Barlow Road, and four houses, Tudor Avenue, for Messrs. G. H. Bullen & Co.; office store, etc., Oak Avenue, for Mr. A. J. Shorthouse; house, Broad Lane, for Mr. A. A. Smith; house, Oak Avenue, for Messrs. H. Smith & Co.; two houses, Oldfield Road, for Messrs. Sheatfeild and Atwell; three houses, Broad Lane, for Messrs. H. Smith & Co.; workshops, etc., Oldfield Road, for Mr. J. A. T. Napier; additions, 205 High Street, Hampton Hill, for Messrs. North, Robin and Wilsdon.

★

At a meeting of the DOUGLAS (I.O.M.) Corporation, the town clerk submitted particulars of a scheme for the erection of a further 100 houses on the Pulrose estate. After allowing for the usual Government grant, the estimated capital cost to the Corporation was approximately £30,800; the estimated annual loss, allowing for rents and outgoings, was £145. The scheme was approved, and the application is to be made for approval to borrow a sum not exceeding £30,800.

★

The OLDHAM Corporation Electricity Committee has obtained sanction to borrow a further sum of £78,872 in respect of expenditure on the new generating station.

★

The BRADFORD Corporation Licensing Committee has approved plans which were submitted for a new second floor with dressing-rooms, etc., to the Great Horton Road frontage of the Alhambra Theatre, and for a new first-floor refreshment bar and lavatories to the Morley Street frontage of the building.

★

The LEWISHAM B.C. has passed plans submitted by Messrs. A. J. Glock, Ltd., for the layout of a site north of Southend Lane, Catford, and west of Bromley Road, subject to the gradients of the roads being approved by the Council and to sufficient plans and sections of the proposed diversion of the River Ravensbourne and the bridges carrying the new roads over the river, being submitted to and approved by the Council.

★

The DOUGLAS (I.O.M.) Corporation has been asked by the Government office for estimates and full particulars in connection with a: the widening of the Peel Road from the Quarter Bridge towards the Brown Bobby; and b: the widening and improvement of the Douglas Bridge.

★

The WAKEFIELD Corporation is seeking sanction to borrow £20,000 for further housing advances.

★

The librarian is urging the WAKEFIELD Corporation to consider the provision of branch libraries for the outlying districts.

The WOKING U.D.C. has obtained sanction for a loan of £10,835 for the erection of twenty-six houses at Old Woking.

★

The LEEDS Corporation is seeking sanction to borrow £17,700 for the erection of fifty type A3 houses on the Henconner Lane housing estate.

★

The BIRKENHEAD Corporation Electricity Committee is to erect a sub-station at Kirby Road, Greasby.

★

The Post Office authorities have made arrangements for the establishment of a new sub-post office at Kendray, BARNSELY.

★

The BIRKENHEAD Corporation has passed plans submitted by Mr. A. E. Shennan, on behalf of the Westminster Bank Ltd., for rebuilding the bank premises at the corner of Hamilton Street and Library Street.

★

The Rev. Canon Rooney has a scheme for the erection of a Roman Catholic church at Flaybrick Hill district, BIRKENHEAD.

★

The BIRKENHEAD Corporation Baths Committee has considered reports of the borough treasurer and of the borough surveyor with reference to the proposed provision of public baths in the south end of the borough, and deferred further consideration of the matter.

★

The Diocesan Training College trustees are to carry out alterations at the college buildings, TRURO.

★

The SWANSEA Corporation Housing Committee has secured land near Terrace Road, Townhill, for a housing scheme.

★

The SWANSEA Corporation has approved plans for alterations, reconstruction, and extension of the present premises of the borough treasurer's department in Somerset Place, and instructed the borough architect to proceed with the scheme forthwith.

★

The BEDFORD Corporation has asked the borough engineer to revise the layout of the Corporate estate so as to provide for a density of about twelve houses per acre and a frontage of not less than 24 feet per plot.

★

The ISLINGTON Corporation Electricity Committee is to acquire land and erect new sub-stations at a total cost of £12,000.

★

The GLASGOW Corporation Housing Committee has sold a site at Carntyne for the erection of a picture house.

★

The GLASGOW Education Committee has acquired a site on the Govanhill housing estate for the erection of an elementary school.



## RATES OF WAGES

		I	II			I	II			I	II
		s. d.	s. d.			s. d.	s. d.			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 7 1 2 1 2	A	E. Glamor-	S. Wales & M.	1 7 1 2 1 2	A	NANTWICH	N.W. Counties	1 6 1 1 1 1
A	Aberavenny	S. Wales & M.	1 7 1 2 1 2	A	Ganshire &			A	Neth	S. Wales & M.	1 7 1 2 1 2
B	Abingdon	S. Counties	1 5 1 1 1 1	B	Monmouthshire			A	Nelson	N.W. Counties	1 7 1 2 1 2
A	Accrington	N.W. Counties	1 7 1 2 1 2	B	Exeter	S.W. Counties	1 5 1 1 1 1	A	Newcastle	N.E. Coast	1 7 1 2 1 2
A	Addlestone	S. Counties	1 6 1 1 1 1	B	Exmouth	S.W. Counties	1 4 1 0 1 0	A	Newport	S. Wales & M.	1 7 1 2 1 2
A	Adlington	N.W. Counties	1 7 1 2 1 2	B	FELIXSTOWE	E. Counties	1 5 1 1 1 1	A	Normanton	Yorkshire	1 7 1 2 1 2
A	Airdrie	Scotland	1 7 1 2 1 2	A	Filey	Yorks	1 6 1 1 1 1	A	Northampton	Mid. Counties	1 7 1 2 1 2
C	Aldeburgh	E. Counties	1 3 1 1 1 1	A	Fleetwood	N.W. Counties	1 7 1 2 1 2	A	North Staffs.	Mid. Counties	1 7 1 2 1 2
A	Altrincham	N.W. Counties	1 7 1 2 1 2	B	Folkestone	S. Counties	1 4 1 0 1 0	A	North Shields	N.E. Coast	1 7 1 2 1 2
B	Appleby	N.W. Counties	1 4 1 0 1 0	A	Frome	N.W. Counties	1 7 1 2 1 2	A	Norwich	E. Counties	1 6 1 1 1 1
A	Ashton-un-	N.W. Counties	1 7 1 2 1 2	B	Frome	S.W. Counties	1 4 1 0 1 0	A	Nottingham	N.W. Counties	1 7 1 2 1 2
A	der-Lyne							A	Nuneaton	Mid. Counties	1 7 1 2 1 2
A	Atherstone	Mid. Counties	1 6 1 1 1 1	A	GATESHEAD	N.E. Coast	1 7 1 2 1 2	B	OAKHAM	Mid. Counties	1 5 1 1 1 1
B	Aylesbury	S. Counties	1 4 1 0 1 0	B	Gillingham	S. Counties	1 5 1 0 1 0	A	Oldham	N.W. Counties	1 7 1 2 1 2
B	BANBURY	S. Counties	1 4 1 0 1 0	A	Gloucester	S.W. Counties	1 6 1 1 1 1	A	Oswestry	Mid. Counties	1 6 1 1 1 1
B	Barnard Castle	N.E. Coast	1 7 1 2 1 2	A	Goole	Yorkshire	1 6 1 1 1 1	B	Oxford	S. Counties	1 6 1 1 1 1
A	Barnley	Yorkshire	1 7 1 2 1 2	B	Gosport	S. Counties	1 5 1 1 1 1	A	PAISLEY	Scotland	1 7 1 2 1 2
A	Barnstaple	S.W. Counties	1 5 1 0 1 0	A	Grantham	Mid. Counties	1 6 1 1 1 1	C	Pembroke	S. Wales & M.	1 3 1 1 1 1
A	Barrow	N.W. Counties	1 7 1 2 1 2	A	Gravesend	S. Counties	1 7 1 2 1 2	A	Perth	Scotland	1 7 1 2 1 2
A	Barry	S. Wales & M.	1 7 1 2 1 2	A	Greenock	Scotland	1 7 1 2 1 2	A	Peterborough	Mid. Counties	1 6 1 1 1 1
B	Basingstoke	S.W. Counties	1 4 1 0 1 0	A	Grimsby	Yorkshire	1 7 1 2 1 2	A	Plymouth	S.W. Counties	1 7 1 2 1 2
B	Bath	Yorkshire	1 5 1 1 1 1	B	Guildford	S. Counties	1 5 1 0 1 0	A	Pontefract	Yorkshire	1 7 1 2 1 2
A	Batley	Yorkshire	1 7 1 2 1 2	A	HALIFAX	Yorkshire	1 7 1 2 1 2	A	Pontypridd	S. Wales & M.	1 7 1 2 1 2
B	Bedford	E. Counties	1 5 1 1 1 1	A	Hanley	Mid. Counties	1 7 1 2 1 2	B	Portsmouth	S. Counties	1 5 1 1 1 1
A	Berwick-on-	N.E. Coast	1 6 1 1 1 1	A	Harrigate	Yorkshire	1 7 1 2 1 2	A	Preston	N.W. Counties	1 7 1 2 1 2
A	Tweed			A	Hartlepool	N.E. Coast	1 7 1 2 1 2	A	QUEEN-	N.W. Counties	1 7 1 2 1 2
A	Bewdley	Mid. Counties	1 6 1 1 1 1	B	Harwich	E. Counties	1 4 1 0 1 0	FERRY			
B	Bicester	Mid. Counties	1 4 1 0 1 0	B	Hastings	S. Counties	1 4 1 0 1 0	A	READING	S. Counties	1 6 1 1 1 1
A	Birkenhead	N.W. Counties	1 7 1 2 1 2	B	Hatfield	S. Counties	1 5 1 0 1 0	B	Reigate	S. Counties	1 5 1 1 1 1
A	Birmingham	Mid. Counties	1 7 1 2 1 2	B	Hertford	S. W. Counties	1 5 1 1 1 1	A	Retford	Mid. Counties	1 6 1 1 1 1
A	Bishop	N.E. Coast	1 7 1 2 1 2	B	Hertford	E. Counties	1 5 1 1 1 1	A	Rhondda	S. Wales & M.	1 7 1 2 1 2
A	Auckland			A	Heysham	N.W. Counties	1 7 1 2 1 2	A	Valley		
A	Blackburn	N.W. Counties	1 7 1 2 1 2	A	Howden	N.E. Coast	1 7 1 2 1 2	A	Ripon	Yorkshire	1 6 1 1 1 1
A	Blackpool	N.W. Counties	1 7 1 2 1 2	A	Huddersfield	Yorkshire	1 7 1 2 1 2	A	Rochdale	N.W. Counties	1 7 1 2 1 2
A	Blyth	N.E. Coast	1 7 1 2 1 2	A	Hull	Yorkshire	1 7 1 2 1 2	B	Rochester	S. Counties	1 5 1 1 1 1
A	Bognor	S. Counties	1 4 1 0 1 0					A	Ruabon	N.W. Counties	1 7 1 2 1 2
A	Bolton	N.W. Counties	1 6 1 1 1 1					A	Rugby	Mid. Counties	1 6 1 1 1 1
A	Boston	Mid. Counties	1 5 1 0 1 0					A	Rugeley	Mid. Counties	1 6 1 1 1 1
B	Bournemouth	S. Counties	1 5 1 0 1 0					A	Runcorn	N.W. Counties	1 7 1 2 1 2
B	Bovey Tracey	S.W. Counties	1 4 1 0 1 0								
A	Bradford	Yorkshire	1 7 1 2 1 2					A	ST. ALBANS	E. Counties	1 6 1 1 1 1
A	Brentwood	E. Counties	1 6 1 1 1 1					A	St. Helens	N.W. Counties	1 7 1 2 1 2
A	Bridgend	S. Wales & M.	1 7 1 2 1 2					B	Salisbury	S.W. Counties	1 4 1 0 1 0
B	Bridgwater	S.W. Counties	1 4 1 0 1 0					A	Scarborough	Yorkshire	1 7 1 2 1 2
A	Bridlington	Yorkshire	1 7 1 2 1 2					A	Scunthorpe	Mid. Counties	1 7 1 2 1 2
A	Brighouse	Yorkshire	1 7 1 2 1 2					A	Sheffield	Yorkshire	1 7 1 2 1 2
A	Brighton	S. Counties	1 5 1 0 1 0					A	Shipley	Yorkshire	1 7 1 2 1 2
A	Bristol	S.W. Counties	1 7 1 2 1 2					A	Shrewsbury	Mid. Counties	1 6 1 1 1 1
A	Brixham	S.W. Counties	1 4 1 0 1 0					A	Slough	S. Counties	1 6 1 1 1 1
A	Bromsgrove	Mid. Counties	1 6 1 1 1 1					A	Skipton	Yorkshire	1 6 1 1 1 1
C	Bromyard	Mid. Counties	1 3 1 1 1 1					A	Slough	S. Counties	1 6 1 1 1 1
A	Burnley	N.W. Counties	1 7 1 2 1 2					A	Sollihull	Mid. Counties	1 6 1 1 1 1
A	Burslem	Mid. Counties	1 7 1 2 1 2					A	South'pton	S. Counties	1 6 1 1 1 1
A	Burton-on-	Mid. Counties	1 6 1 1 1 1					A	Southend-on-	E. Counties	1 6 1 1 1 1
A	Trent							Sea			
A	Bury	N.W. Counties	1 7 1 2 1 2	A	ILKLEY	Yorkshire	1 7 1 2 1 2	A	Southport	N.W. Counties	1 7 1 2 1 2
A	Buxton	N.W. Counties	1 7 1 2 1 2	A	Immingham	Mid. Counties	1 7 1 2 1 2	A	S. Shields	N.E. Coast	1 7 1 2 1 2
				B	Ipwich	E. Counties	1 5 1 1 1 1	A	Stafford	Mid. Counties	1 6 1 1 1 1
				C	Isle of Wight	S. Counties	1 5 1 1 1 1	A	Stockport	N.W. Counties	1 7 1 2 1 2
								A	Stockton-on-	N.E. Coast	1 7 1 2 1 2
B	CAMBRIDGE	E. Counties	1 5 1 1 1 1	A	JARROW	N.E. Coast	1 7 1 2 1 2	A	Tees	Mid. Counties	1 7 1 2 1 2
B	Canterbury	S. Counties	1 4 1 0 1 0	A	KEIGHLEY	Yorkshire	1 7 1 2 1 2	B	Trent	Mid. Counties	1 7 1 2 1 2
A	Cardiff	S. Wales & M.	1 7 1 2 1 2	B	Kendal	N.W. Counties	1 5 1 0 1 0	B	Stroud	S.W. Counties	1 5 1 1 1 1
A	Cardle	N.W. Counties	1 7 1 2 1 2	B	Keswick	N.W. Counties	1 5 1 0 1 0	A	Sunderland	N.E. Coast	1 7 1 2 1 2
B	Cardmarton	S. Wales & M.	1 5 1 1 1 1	A	Kettering	Mid. Counties	1 6 1 1 1 1	A	Swadlincote	Mid. Counties	1 7 1 2 1 2
B	Cararvon	N.W. Counties	1 4 1 0 1 0	A	Kiddermin-	Mid. Counties	1 6 1 1 1 1	A	Swansea	S. Wales & M.	1 7 1 2 1 2
A	Carnforth	N.W. Counties	1 7 1 2 1 2	B	King's Lynn	E. Counties	1 4 1 0 1 0	B	Swindon	S.W. Counties	1 5 1 1 1 1
A	Castleford	Yorkshire	1 7 1 2 1 2								
B	Chatham	S. Counties	1 5 1 0 1 0	A	LANCASTER	N.W. Counties	1 7 1 2 1 2	A	TAMWORTH	N.W. Counties	1 7 1 2 1 2
A	Chelmsford	E. Counties	1 5 1 0 1 0	A	Leamington	Mid. Counties	1 6 1 1 1 1	B	Taunton	N.W. Counties	1 5 1 0 1 0
A	Cheltenham	S.W. Counties	1 6 1 1 1 1	A	Leeds	Yorkshire	1 7 1 2 1 2	A	Teeside Dist.	N.E. Counties	1 7 1 2 1 2
A	Chester	N.W. Counties	1 7 1 2 1 2	A	Leek	Mid. Counties	1 7 1 2 1 2	B	Teignmouth	S.W. Coast	1 5 1 1 1 1
A	Chesterfield	Mid. Counties	1 7 1 2 1 2	A	Leicester	Mid. Counties	1 7 1 2 1 2	A	Todmorden	Yorkshire	1 7 1 2 1 2
B	Chichester	S. Counties	1 4 1 0 1 0	B	Leigh	N.W. Counties	1 7 1 2 1 2	A	Torquay	S.W. Counties	1 7 1 2 1 2
A	Chorley	N.W. Counties	1 7 1 2 1 2	B	Lewes	S. Counties	1 4 1 0 1 0	C	Truro	S.W. Counties	1 3 1 1 1 1
B	Cirencester	S. Counties	1 4 1 0 1 0	A	Lichfield	Mid. Counties	1 6 1 1 1 1	B	Tunbridge	S. Counties	1 5 1 0 1 0
A	Clydebank	Scotland	1 7 1 2 1 2	A	Lincoln	Mid. Counties	1 7 1 2 1 2				
A	Coalville	Mid. Counties	1 7 1 2 1 2	A	Liverpool	N.W. Counties	1 10 1 4 1 4	A	Tunstall	Mid. Counties	1 7 1 2 1 2
B	Colchester	E. Counties	1 5 1 1 1 1	A	Llandudno	N.W. Counties	1 6 1 1 1 1	A	Tyne District	N.E. Coast	1 7 1 2 1 2
A	Colne	N.W. Counties	1 7 1 2 1 2	A	Llanelli	S. Wales & M.	1 7 1 2 1 2				
A	Colwyn Bay	N.W. Counties	1 6 1 1 1 1		London (12 miles radius)		1 9 1 4	A	WAKE-	Yorkshire	1 7 1 2 1 2
A	Consett	N.E. Coast	1 7 1 2 1 2		Do. (12-15 miles radius)		1 8 1 3 1 3	A	Walsall	Mid. Counties	1 7 1 2 1 2
A	Conway	N.W. Counties	1 6 1 1 1 1	A	Long Eaton	Mid. Counties	1 7 1 2 1 2	A	Warrington	N.W. Counties	1 7 1 2 1 2
A	Coventry	Mid. Counties	1 7 1 2 1 2	A	Lough	Mid. Counties	1 7 1 2 1 2	A	Warwick	Mid. Counties	1 6 1 1 1 1
A	Crewe	N.W. Counties	1 6 1 1 1 1					A	Well-	Mid. Counties	1 6 1 1 1 1
A	Cumberland		1 6 1 1 1 1					borough			
				A	Luton	E. Counties	1 6 1 1 1 1	A	West	Mid. Counties	1 7 1 2 1 2
				A	Lytham	N.W. Counties	1 7 1 2 1 2				
A	DARLINGTON	N.E. Coast	1 7 1 2 1 2								
A	Darwen	N.W. Counties	1 7 1 2 1 2	A	MACCLES-	N.W. Counties	1 7 1 2 1 2	B	Bromwich	S.W. Counties	1 5 1 1 1 1
B	Deal	S. Counties	1 4 1 0 1 0	B	FIELD			A	Weston-3-Mare	S.W. Counties	1 5 1 1 1 1
A	Denbigh	N.W. Counties	1 6 1 1 1 1	B	Maldstone	S. Counties	1 5 1 1 1 1	A	Whitby	Yorkshire	1 6 1 1 1 1
A	Derby	Mid. Counties	1 7 1 2 1 2	A	Malvern	Mid. Counties	1 6 1 1 1 1	A	Widnes	N.W. Counties	1 7 1 2 1 2
A	Dewsbury	Yorkshire	1 7 1 2 1 2	A	Manchester	N.W. Counties	1 7 1 2 1 2	A	Wigan	N.W. Counties	1 7 1 2 1 2
B	Didcot	S. Counties	1 7 1 2 1 2	A	Mansfield	Mid. Counties	1 7 1 2 1 2	B	Winchester	S. Counties	1 6 1 1 1 1
A	Doncaster	Yorkshire	1 7 1 2 1 2	B	Margate	S. Counties	1 4 1 0 1 0	A	Windsor	S. Counties	1 6 1 1 1 1
C	Dorchester	S.W. Counties	1 3 1 1 1 1	A	Matlock	Mid. Counties	1 6 1 1 1 1	A	Wolver-	Mid. Counties	1 7 1 2 1 2
A	Driffield	Yorks	1 6 1 1 1 1	A	Merthyr	S. Wales & M.	1 7 1 2 1 2	A	hampton		
A	Droitwich	Mid. Counties	1 6 1 1 1 1	A	Middles-	N.E. Coast	1 7 1 2 1 2	A	Worcester	Mid. Counties	1 6 1 1 1 1
A	Dudley	Mid. Counties	1 7 1 2 1 2	A	Mid-			A	Workop	Yorkshire	1 6 1 1 1 1
A	Dundee	Scotland	1 7 1 2 1 2	A	Middle-			A	Wrexham	N.W. Counties	1 7 1 2 1 2
A	Durham	N.E. Coast	1 7 1 2 1 2	A	Mid-			B	Wycombe	S. Counties	1 5 1 1 1 1
				A	Middle-						
B	EAST-	S. Counties	1 5 1 0 1 0	A	Middle-						
	BOURNE			A	Middle-						
A	Ebbw Vale	S. Wales & M.	1 7 1 2 1 2	A	Middle-						
A	Edinburgh	Scotland	1 7 1 2 1 2	A	Middle-						

\* In these areas the rates of wages for certain trades (usually Painters and Plasterers) vary slightly from those given.

The rates for each trade in any given area will be sent on request.



## PRICES CURRENT

## EXCAVATOR AND CONCRETOR

EXCAVATOR, 1s. 4d. per hour; LABOURER, 1s. 4d. per hour; NAVY, 1s. 4d. per hour; TIMBERMAN, 1s. 5d. per hour; SCAFFOLDER, 1s. 5d. per hour; WATCHMAN, 7s. 6d. per shift.

Broken brick or stone, 2 in., per yd.	£0 11 6
Thames ballast, per yd.	0 11 0
Pit gravel, per yd.	0 18 0
Pit sand, per yd.	0 14 6
Washed sand	0 15 0
Screened ballast or gravel, add 10 per cent. per yd.	
Clinker, breeze, etc., prices according to locality.	
Portland cement, per ton	£2 15 0
Lime, per ton	2 10 0
Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.	
Transport hire per day:	
Cart and horse £1 3 0 Trailer	£0 15 0
3-ton motor lorry 3 15 0 Steam roller	4 5 0
Steam lorry, 5-ton 4 0 0 Water cart	1 5 0

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube, 0 3 0. Exceeding 6 ft., but under 12 ft., add 30 per cent.

In stiff clay, add 30 per cent. In underpinning, add 100 per cent. In rock, including blasting, add 225 per cent. If basketed out, add 80 per cent. to 150 per cent. Headings, including timbering, add 400 per cent. RETURN, fill, and ram, ordinary earth, per yd., £0 1 6.

SPREAD and level, including wheeling, per yd., 0 1 6.

FILLING into carts and carting away to a shoot or deposit, per yd. cube, 0 10 6.

TRIMMING earth to slopes, per yd. sup., 0 0 6.

HACKING up old grando, or similar paving, per yd. sup., 0 1 3.

PLANKING to excavations, per ft. sup., 0 0 5.

DO. over 10 ft. deep, add for each 5 ft. in depth, 30 per cent.

If left in, add to above prices, per ft. cube, 0 2 0.

HARDWARE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup., 0 2 10.

DO. 6 in. thick, per yd. sup., 1 10 0.

PUDDLING, per yd. cube, 2 3 0.

CEMENT CONCRETE, 4-2-1, per yd. cube, 1 18 0.

DO. in upper floors, add 15 per cent.

DO. in reinforced-concrete work, add 20 per cent.

DO. in underpinning, add 60 per cent.

LIAS-LIME CONCRETE, per yd. cube, £1 16 0.

BREEZE CONCRETE, per yd. cube, 1 7 0.

DO. in lintels, etc., per ft. cube, 0 1 6.

CEMENT concrete 4-2-1 in lintels packed around reinforcement, per ft. cube, 0 3 9.

FINE concrete benching to bottom of manholes, per ft. cube, 0 2 6.

FINISHING surface of concrete spade face, per yd. sup., 0 0 9.

## DRAINER

LABOURER, 1s. 4d. per hour; TIMBERMAN, 1s. 5d. per hour; BRICKLAYER, 1s. 9d. per hour; PLUMBER, 1s. 9d. per hour; WATCHMAN, 7s. 6d. per shift.

Stoneware pipes, tested quality, 4 in., per ft., £0 0 10.

DO. 6 in., per ft., 0 1 3.

DO. 9 in., per ft., 0 2 3.

Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd., 0 5 6.

DO. 6 in., per yd., 0 8 6.

Portland cement and sand, see "Excavator" above.

Leadwool per cub., £2 0 0.

Gaskin, per lb., 0 0 4.

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft., 0 4 3.

DO. 6 in., per ft., 0 5 0.

DO. 9 in., per ft., 0 7 9.

CAST-IRON DRAINS, jointed in lead, 4 in., per ft., 0 8 0.

DO. 6 in., per ft., 0 10 0.

Note.—These prices include digging concrete bed and filling for normal depths, and are average prices.

Fittings in Stoneware and Iron according to type. See Trade Lists.

## BRICKLAYER

BRICKLAYER, 1s. 9d. per hour; LABOURER, 1s. 4d. per hour; SCAFFOLDER, 1s. 5d. per hour.

London stocks, per M., £4 15 0.

Flettons, per M., 3 0 0.

Midhurst white facing bricks, per M., 5 0 0.

T.L.B., multi-coloured facings, per M., 7 7 9.

DO. red best facings, per M., 7 7 9.

DO. rubbers 9½ in., per M., 12 0 6.

Staffordshire blue, per M., 9 10 0.

Firebricks, 2½ in., per M., 11 3 0.

Glazed sals, white, and teary stretchers, per M., 24 10 0.

DO. headers, per M., 24 0 0.

Colours, extra, per M., 5 10 0.

Seconds, less, per M., 1 0 0.

Cement and sand, see "Excavator" above.

Lime, grey stone, per ton, 2 17 0.

Mixed lime mortar, per yd., 1 6 0.

Damp course, in rolls of 4½ in., per roll, 0 2 6.

DO. 9 in. per roll, 0 4 9.

DO. 14 in. per roll, 0 7 6.

DO. 18 in. per roll, 0 9 6.

## BRICKWORK in stone lime mortar.

Flettons or equal, per rod, £33 0 0.

DO. in cement do., per rod, 36 0 0.

DO. in stocks, add 25 per cent. per rod.

DO. in blues, add 100 per cent. per rod.

DO. circular on plan, add 12½ per cent. per rod.

DO. in backing to masonry, add 12½ per cent. per rod.

DO. in raising on old walls, etc., add 12½ per cent. per rod.

DO. in underpinning, add 20 per cent. per rod.

HALF-BRICK walls in stocks in cement mortar (1-3), per ft. sup., £0 1 0.

BEDDING plates in cement mortar, per ft. run, 0 0 3.

BEDDING window or door frames, per ft. run, 0 0 3.

LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run, 0 0 2.

CUTTING do. in old walls in cement, per ft. run, 0 0 4.

CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup., 0 0 7.

TERRA-COTTA flue pipes 9 in. diameter, jointed in fire-lay, including all cuttings, per ft. run, 0 3 6.

DO. 14 ft. by 9 in. do., per ft. run, 0 6 0.

FLAUNCHING chimney pots, each, 0 2 0.

CUTTING and pinning; ends of timbers, etc., in cement, 0 1 0.

FACING fair, per ft. sup. extra, 0 0 3.

DO. picked stocks, per ft. sup. extra, 0 0 7.

DO. red rubbers gauged and set in putty, per ft. sup. extra, 0 4 9.

DO. in salt white or ivory glazed, per ft. sup. extra, 0 5 6.

TUCK pointing, per ft. sup. extra, 0 0 10.

WEATHER pointing, do., 0 0 3.

TILE creasing with cement fillet each side per ft. run, 0 0 6.

GRANOLITHIC PAVING, 1 in., per yd. sup., 0 5 0.

DO. 1 in., per yd. sup., 0 6 0.

DO. 2 in., per yd. sup., 0 7 0.

If coloured with red oxide, per yd. sup., 0 1 0.

If finished with carborundum, per yd. sup., 0 0 6.

If in small quantities in finishing to steps, etc., per ft. sup., 0 1 4.

Jointing new grando, paving to old, per ft. run, 0 0 4.

Extra for disking grando, or cement paving around gullies, each, 0 1 6.

BITUMINOUS DAMP COURSE, ex rolls, per ft. sup., 0 0 7.

ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup., 0 8 0.

DO. vertical, per yd. sup., 0 11 0.

SLATE DAMP COURSE, per ft. sup., 0 10 10.

ASPHALT ROOFING (MASTIC) in two thicknesses, ½ in., per yd., 0 8 6.

DO. SKIRTING, 6 in., 0 0 11.

BREEZE PARTITION BLOCKS, set in cement, 1½ in. per yd. sup., 0 5 3.

DO. DO. 3 in., 0 6 6.

BREEZE fixing bricks, extra for each, 0 0 3.

THE wages are the Union rates current in London at the time of publication.

The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. Though every care has been taken in its compilation it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry.

## MASON

MASON, 1s. 9d. per hour; DO. fixer, 1s. 10d. per hour; LABOURER, 1s. 4d. per hour; SCAFFOLDER, 1s. 5d. per hour.

Portland Stone:

Whitbed, per ft. cube, £0 4 6.

Basebed, per ft. cube, 0 4 7.

Bath stone, per ft. cube, 0 3 0.

Usual trade extras for large blocks.

York paving, av. 2½ in., per yd. super, 0 6 6.

York templates sawn, per ft. cube, 0 6 9.

Slate shales, rubbed, 1 in., per ft. sup., 0 2 6.

Cement and sand, see "Excavator," etc., above.

HOISTING and setting stone, per ft. cube, £0 2 2.

DO. for every 10 ft. above 30 ft. add 15 per cent.

PLAIN face Portland basis, per ft. sup., £0 2 8.

DO. circular, per ft. sup., 0 4 0.

SUNK FACE, per ft. sup., 0 3 9.

DO. circular, per ft. sup., 0 4 10.

JOINTS, arch, per ft. sup., 0 2 6.

DO. sunk, per ft. sup., 0 2 7.

DO. DO. circular, per ft. sup., 0 4 6.

CIRCULAR-CIRCULAR work, per ft. sup., 1 2 0.

PLAIN MOULDING, straight, per inch of girth, per ft. run, 0 1 1.

DO. circular, do., per ft. run, 0 1 4.

HALF SAWING, per ft. sup., £0 1 0.

Add to the foregoing prices, if in York stone, 35 per cent.

DO. Mansfield, 12½ per cent.

Deduct for Bath, 3½ per cent.

DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup., £0 0 6.

RUBBED round nosing to do., per ft. lin., 0 0 6.

YORK STEPS, rubbed T. & R., ft. cub. fixed, 1 9 0.

YORK SILLS, W. & T., ft. cub. fixed, 1 13 0.

ARTIFICIAL stone paving, 2 in. thick, per ft. sup., 0 1 6.

DO. 2½ in. thick, per ft. sup., 0 1 3.

## SLATER AND TILER

SLATER, 1s. 9d. per hour; TILER, 1s. 9d. per hour; SCAFFOLDER, 1s. 5d. per hour; LABOURER, 1s. 4d. per hour.

N.B.—Tiling is often executed as piecework.

Slates, 1st quality, per 1,200:

Portmadoc Ladies, £14 0 0.

Countess, 27 0 0.

Duchess, 32 0 0.

Old Delabole, Med. Grey, Med. Green, £45 1 0.

24 in. x 12 in., £42 11 3.

20 in. x 10 in., 31 4 3.

16 in. x 10 in., 20 18 0.

14 in. x 8 in., 12 1 0.

Green Randoms, per ton, 8 3 9.

Grey-green do., per ton, 7 3 9.

Green peggies, 12 in. to 8 in. long, per ton, 6 3 9.

In 4-ton truck loads, delivered Nine Elms station, Clips, lead, per lb., £0 0 6.

Clips, copper, per lb., 0 2 0.

Nails, compo, per cub., 1 6 0.

Nails, copper, per lb., 0 1 10.

Cement and sand, see "Excavator," etc., above.

Hand-made tiles, per M., £5 18 0.

Machine-made tiles, per M., 5 8 0.

Westmorland slates, large, per ton, 9 0 0.

DO. Peggies, per ton, 7 5 0.

SLATING, 3 in. lap, compo nails, Portmadoc or equal:

Ladies, per square, £4 0 0.

Countess, per square, 4 5 0.

Duchess, per square, 4 10 0.

WESTMORLAND, in diminishing courses, per square, 6 5 0.

CORNISH DO., per square, 6 3 0.

Add, if vertical, per square approx., 0 13 0.

Add, if with copper nails, per square approx., 0 2 6.

Double course at eaves, per ft. approx., 0 1 0.

SLATING with Old Delabole slates to a 3 in. lap with copper nails, at per square:

Med. Grey, Med. Green, 24 in. x 12 in., £5 0 0.

20 in. x 10 in., 5 5 0.

16 in. x 10 in., 4 15 0.

14 in. x 8 in., 4 10 0.

Green randoms, 6 7 0.

Grey-green do., 5 9 0.

Green peggies, 12 in. to 8 in. long, 4 17 0.

TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square, 5 6 0.

DO., machine-made do., per square, 4 17 0.

Vertical Tiling, including pointing, add 18s. 0d. per square.

FIXING lead soakers, per dozen, £0 0 10.

STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square, 0 10 0.

LABOUR only in laying slates, but including nails, per square, 1 0 0.

See "Sundries for Asbestos Tiling."

## CARPENTER AND JOINER

CARPENTER, 1s. 9d. per hour; JOINER, 1s. 9d. per hour; LABOURER, 1s. 4d. per hour.

Timber, average prices at Docks, London Standard Scandinavian, etc. (equal to 2nds):

7 x 3, per std., £21 0 0.

11 x 4, per std., 33 0 0.

Memel or Equal, Slightly less than foregoing.

Flooring, P.E., 1 in., per sq., £1 2 6.

DO. T. and G., 1 in., per sq., 1 2 6.

Planed boards, 1 in. x 11 in., per std., 30 0 0.

Wainscot oak, per ft. sup. of 1 in., 0 1 4.

Mahogany, Honduras, per ft. sup. of 1 in., 0 1 3.

DO. Cuba, per ft. sup. of 1 in., 0 2 3.

DO., African, per ft. sup., 0 1 0.

Teak, per ft. sup. of 1 in., 0 1 3.

DO., ft. cube, 0 12 6.

FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube, 0 5 6.

DO. framed in floors, roofs, etc., per ft. cube, 0 6 6.

DO. framed in trusses, etc., including ironwork, per ft. cube, 0 7 6.

PITCH pine, add 3½ per cent.

FIXING only boarding in floors, roofs, etc., per sq., 0 13 6.

SARKING FELT laid, 1-ply, per yd., 0 1 6.

## CARPENTER AND JOINER: continued.

SHUTTERING to face of concrete, per square

DO. in narrow widths to beams, etc., per ft. sup.

USE and waste of timbers, allow 25 per cent. of above prices.

SLATE BATTENING, per sq.

DEAL boarding to slate, 1 in. thick and string to falls, per square

STOUT leather-edged tilting fillet to eaves, per ft. run

FEATHER-edged springer to trimmer arches, per ft. run

STOUT herringbone strutting (Joists measured in), per ft. run

SOUND boarding, 1 in. thick and fillets nailed sides to of joists (Joists measured over), per square

RUBBEROID or similar quality roofing, one ply, per yd. sup.

DO., two-ply, per yd. sup.

DO., three-ply, per yd. sup.

TONGUED and grooved flooring, 1 1/2 in. thick, laid complete with splayed headings, per square

DEAL skirting torus, moulded 1 1/2 in. thick, including grounds and backings, per ft. sup.

TONGUED and mitred angles to do.

WOOD block flooring standard blocks laid herringbone in mastic

DEAL 1 in. thick, per yd. sup.

DO. 1 1/2 in. thick, per yd. sup.

Maple 1 1/2 in. thick, per yd. sup.

DEAL moulded sashes, 1 1/2 in. with moulded bars in small squares, per ft. sup.

DO. 2 in. do., per ft. sup.

DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup.

MOULDED horns, extra each

DOORS, 4-panel square both sides, 1 1/2 in. thick, per ft. sup.

DO. moulded both sides per ft. sup.

DO. 2 in. thick, square both sides, per ft. sup.

DO. moulded both sides, per ft. sup.

DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup.

If in oak, mahogany or teak, multiply 3 times.

DEAL frames, 4 in. x 3 in., rebated and beaded, per ft. cube

Add for extra labours, per ft. run

STAIRCASE work:

DEAL treads 1 1/2 in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.

DEAL wall strings, 1 1/2 in. thick, moulded, per ft. run

If ramped, per ft. run

SHORT ramps, extra each

ENDS of treads and risers housed to strings, each

2 in. deal mopstick handrail fixed to brackets, per ft. run

4 in. x 3 in. oak fully moulded handrail, per ft. run

1 1/2 in. square deal bar balusters, framed in, per ft. run

FITTINGS:

SHELVES and bearers, 1 in., cross-tongued, per ft. sup.

1 1/2 in. beaded cupboard fronts, moulded and square, per ft. sup.

TEAK grooved draining boards, 1 1/2 in. thick and bedding, per ft. sup.

IRONMONGERY:

Fixing only (including providing screws):

To DEAL—

Hinges to sashes, per pair

DO. to doors, per pair

Barrel bolts, 9 in., iron, each

Sash fasteners, each

Rim locks, each

Mortice locks, each

## SMITH

SMITH, weekly rate equals 1s. 9d. per hour; MATE, do. 1s. 4d. per hour; ERECTOR, 1s. 9d. per hour; FITTER, 1s. 9d. per hour; LABOURER, 1s. 4d. per hour.

Mild Steel in British standard sections, per ton

Sheet Steel:

Flat sheets, black, per ton

DO., galv., per ton

Corrugated sheets, galv., per ton

Driving screws, galv., per grs.

Washers, galv., per grs.

Bolts and nuts per cut. and up

MILD STEEL in trusses, etc., erected, per ton

DO., in small sections as reinforcement, per ton

DO., in compounds, per ton

DO., in bar or rod reinforcement, per ton

WROUGHT-IRON in chimney bars, etc., including building in, per cwt.

DO., in light railings and balusters, per cwt.

Fixing only corrugated sheeting, including washers and driving screws, per yd.

## PLUMBER

PLUMBER, 1s. 9d. per hour; MATE OR LABOURER, 1s. 4d. per hour.

Lead, milled sheet, per cut.

DO. drawn pipes, per cut.

DO. soil pipe, per cut.

DO. scrap, per cut.

Copper, sheet, per lb.

Solder, plumbers', per lb.

DO. fine, per lb.

Cast-iron pipes, etc.:

L.C.C. soil, 3 in., per yd.

DO. 4 in., per yd.

R.W.P., 2 1/2 in., per yd.

DO. 3 in., per yd.

DO. 4 in., per yd.

Gutter, 4 in. H.R., per yd.

DO. 4 in. O.G., per yd.

MILLED LEAD and labour in gutters, flashings, etc., per cwt.

LEAD PIPE, fixed, including running joints, bends, and tacks, 1/2 in., per ft.

DO. 1 in., per ft.

DO. 1 1/2 in., per ft.

LEAD WASTE or soil, fixed as above, complete, 2 1/2 in., per ft.

DO. 3 in., per ft.

DO. 4 in., per ft.

WIPED soldered joint, 1/2 in., each

DO. 1 in., each

DO. 1 1/2 in., each

BRASS screw-down stop cock and two soldered joints, 1/2 in., each

DO. 1 in., each

CAST-IRON rainwater pipe, jointed in red lead, 2 1/2 in., per ft. run

DO. 3 in., per ft. run

DO. 4 in., per ft. run

CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.

DO. O.G., 4 in., per ft.

CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.

DO. 3 in., per ft.

Fixing only:

W.C. PANS and all joints, p. or s., and including joints to water waste preventers, each

BATHS, with all joints

LAVATORY BASINS only, with all joints, on brackets, each

## PLASTERER

PLASTERER, 1s. 9d. per hour (plus allowances in London only); LABOURER, 1s. 4d. per hour.

Chalk lime, per ton

Hair, per cut.

Sand and cement see "Eccavator," etc., above.

Lime putty, per cut.

Hair mortar, per yd.

Fine stuff, per yd.

Sawn laths, per bd.

Keene's cement, per ton

Sirapite, per ton

DO. fine, per ton

Plaster, per ton

DO. per ton

DO. fine, per ton

Thistle plaster, per ton

Lath nails, per lb.

LATHING with sawn laths, per yd.

METAL LATHING, per yd.

FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, 1 in., per yd.

DO. vertical, per yd.

RENDER, on brickwork, 1 to 3, per yd.

RENDER in Portland and set in fine stuff, per yd.

RENDER, float, and set, trowelled, per yd.

RENDER and set in Sirapite, per yd.

DO. in Thistle plaster, per yd.

EXTRA, if on but not including lathing, any of foregoing, per yd.

EXTRA, if on ceilings, per yd.

ANGLES, rounded Keene's on Portland, per ft. lin.

PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.

WHITE glazed tiling set in Portland and jointed in Parian, per yd., from

FIBROUS PLASTER SLABS, per yd.

## GLAZIER

GLAZIER, 1s. 8d. per hour.

Glass: 4ths in crates:

Clear, 21 oz.

DO. 26 oz.

Cathedral white, per ft.

Polished plate, British 1/2 in., up to 2 ft. sup., per ft.

DO. 4 ft. sup., per ft.

DO. 6 ft. sup., per ft.

DO. 20 ft. sup., per ft.

DO. 45 ft. sup., per ft.

DO. 65 ft. sup., per ft.

DO. 100 ft. sup., per ft.

Rough plate, 1/2 in., per ft.

DO. 1 in., per ft.

Linseed oil putty, per cut.

GLAZING in putty, clear sheet, 21 oz. DO. 26 oz.

GLAZING in beads, 21 oz., per ft.

DO. 26 oz., per ft.

Small sizes slightly less (under 3 ft. sup.).

Patent glazing in rough plate, normal span, 1s. 6d. to 2s. per ft.

LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up

Glazing only, polished plate 6 1/2 d. to 8 d. per ft., according to size.

PAINTER AND PAPERHANGER

PAINTER, 1s. 8d. per hour; LABOURER, 1s. 4d. per hour; FRENCH POLISHER, 1s. 9d. per hour; PAPERHANGER, 1s. 8d. per hour.

Genuine white lead, per cut.

Linseed oil, raw, per gall.

DO., boiled, per gall.

Turpentine, per gall.

Liquid driers, per gall.

Knottling, per gall.

Distemper, washable, in ordinary colours, per cut., and up

Double size, per firkin

Fumice stone, per lb.

Single gold leaf (transferable), per book

Varnish, copal, per gall. and up

DO., flat, per gall.

DO., paper, per gall.

French polish, per gall.

Ready mixed paints, per gall. and up

LIME WHITING, per yd. sup.

WASH, stop, and whiten, per yd. sup.

DO., and 2 coats distemper with proprietary distemper, per yd. sup.

KNOT, stop, and prime, per yd. sup.

PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.

DO., subsequent coats, per yd. sup.

DO., enamel coat, per yd. sup.

BRUSH-GRAIN, and 2 coats varnish, per yd. sup.

FIGURED DO., DO., per yd. sup.

FRENCH POLISHING, per ft. sup.

WAX POLISHING, per ft. sup.

STRIPPING old paper and preparing, per piece

HANGING PAPER, ordinary, per piece

DO., fine, per piece, and upwards

VARNISHING PAPER, 1 coat, per piece

CANVAS, strained and fixed, per yd. sup.

VARNISHING, hard oak, 1st coat, yd. sup.

DO., each subsequent coat, per yd. sup.

## SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity.

The measured work price is on the same basis . . . per ft. sup.

FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds per ft. sup.

DO., from 3d. to

Plaster board, per yd. sup.

PLASTER BOARD, fixed as last, per yd. sup.

Asbestos sheeting, 1/2 in., grey flat, per yd. sup.

DO., corrugated, per yd. sup.

ASBESTOS SHEETING, fixed as last, flat, per yd. sup.

DO., corrugated, per yd. sup.

ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey

DO., red

Asbestos cement slates or tiles, 1/2 in., punched per M. grey

DO., red

ASBESTOS COMPOSITION FLOORING: Laid in two coats, average 1/2 in. thick, in plain colour, per yd. sup.

DO., 1/2 in. thick, suitable for domestic work, unpainted, per yd.

Metal casements for wood frames, domestic sizes, per ft. sup.

DO., in metal frames, per ft. sup.

HANGING only metal casement in, but not including wood frames, each

BUILDING in metal casement frames, per ft. sup.

Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.

PLYWOOD, per ft. sup.

Thickness 3/8 in. 1/2 in. 3/4 in. 1 in.

Qualities A.A. A. B.A.A. A. B.A.A. A. B.A.A. A. B.

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Alder . . . 3 2 2 2 2 2 2 2 2 2

Glaboon . . . 3 2 2 2 2 2 2 2 2 2

Figured Oak . . . 4 3 3 3 3 3 3 3 3 3

Plain Oak . . . 4 3 3 3 3 3 3 3 3 3

Oregon Pine . . . 4 3 3 3 3 3 3 3 3 3

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