THE ARCHITECTS' JOURNAL

Wednesday, July 18, 1928

DURHAM CASTLE

THE LORD MAYOR OF LONDON is calling a meeting at the Mansion House on behalf of the Durham Castle Preservation Fund. It will be held at 3.30 p.m. on July 23. It is possible that no other view in England is so well known and so much admired as the group formed by Durham Cathedral and Castle Buildings on the crest of a precipitous rock which rises from the lapping waters of the River Wear to face the western sun. In May 1904, owing to the fact that the walls of the castle had shown signs of movement for a considerable time, the university authorities secured the services of Sir Thomas Jackson to make an examinaton of the foundation.

Again in 1925 an examination was made of the western front of the castle, when it was proved that the walls there were built upon a thin layer of broken freestone below which, to a depth of about 45 ft., is a bed of marly shale resting upon sound rock. It was then stated that the weight of the walls and buttresses of the hall, built almost on the verge of the steep bank, were crushing this yielding and uncontained mass outwards towards the river. It was at that time that the warning came that the movement of the walls should not be neglected, but that steps should be taken to secure the foundations. That the warning was serious, and still is serious, cannot be belied, for a portion of the west courtyard wall disappeared without the slightest warning, some time in the nineteenth century.

Sir Francis Fox reported on the condition of the western front of the castle on April 24, 1925, when he wrote: " It is worthy of note that when Sir Thomas Jackson reported on the building there was nothing to indicate the serious movement now taking place." He quoted from an interim report of November 1922 wherein the architect, Mr. W. T. Jones, stated that the wall had sunk 11 in. towards the north end, and that unless precautions were taken there was every possibility of a collapse. Sir Francis Fox himself advised that the need of remedial measures was both urgent and positive. He recommended grouting the damaged walls " under pressure " and bonding the fissues solidly together with the use of Delta Metal Ties, and also the underpinning of the west wall down to the staple rock. The cost was then estimated at £30,000.

In March of this year a meeting was held in the council chamber at Newcastle-on-Tyne to launch an appeal for £150,000 to preserve Durham Castle. It was then announced that this sum was immediately required to save the castle from falling into the river. Both Dr. Oscar Faber, consulting engineer, and Mr. H. M. Fletcher, consulting architect, had reported that the condition was serious, and had advised that the work was necessary. Dr. Oscar Faber's last report, dated June 25, 1928, contains the following sentence: " The most urgent portion of the work is undoubtedly the tying and underpinning of the west courtyard wall and buttresses for which we believe a sum of £50,000 is required. It must, however, be stated that there can be no guarantee that some of the other portions which appear at the moment to be less urgent, might not at any moment and without notice call for immediate treatment."

It will be remembered that on the third of this month the Bishop of Durham asked the Government and the Commission on Ancient Monuments to assist in raising the required money. Lord Peel, First Commissioner of Works, found himself compelled to explain to the House that the Government was powerless to help. The Act of 1913, which gives the Government certain powers with regard to uninhabited buildings, specially precludes assistance being given for the repair of buildings of any other sort. Lord Peel stated that the Office of Works could neither take over the statutory responsibility for the building nor subscribe to the restoration.

Those who know the 1913 Ancient Monuments Act are aware, however, that it contains a clause (subsection three, section fifteen) as follows: " The ancient monument board, may, if so required by the owner of an ancient monument, give advice free of charge, except for out-of-pocket expenses, with reference to the treatment thereof." This clause is important, for when an ancient monument of national importance, whether secular or ecclesiastical, is to undergo costly repair the confidence of the public in the need for repair and in the advisability of the methods suggested would be strengthened beyond any doubt by the confirmatory opinion of the Ancient Monuments Board. This is a clause of the Act which has hitherto been almost entirely neglected, and it is one which gives an opportunity for very useful action by the Board where the guardians of ancient buildings care to get its help. There is little doubt that greater support would be offered to the various repair appeals which are recommended to the public if this were done. Dean after dean appeals for money to save his cathedral, and each does so in the strongest terms that are possible for him to use. The lay public has not the knowledge which enables it to choose between the needs of the various buildings; it would appear, therefore, that were this clause used some sense of the right evaluation of these needs would be possible and the public told where the need is greatest. Therefore, while we whole-heartedly support the Bishop of Durham and the committee who are working so zealously to save this building, we recommend that they strengthen their appeal by taking advantage of the clause in the 1913 Act.

A photograph of this detail is given on the preceding page.

NEWS AND TOPICS

In the current issue of the *New Statesman*, Mr. W. J. Turner, dramatic critic of that enterprising journal, tells the inner story of the scheme for a National Theatre in Bloomsbury which was recently illustrated in these pages. Mr. Turner, it appears, was the first to realize how well the site is suited to such a purpose, and Mr. Morley Horder quickly saw that a theatre of almost any capacity (two theatres in fact) could be built behind the present façade of the Foundling Hospital, preserving both the building and the open spaces. It was Mr. Turner and Mr. Horder in collaboration who laid the scheme before Sir Israel Gollancz, the secretary of the National Committee, and before Lady Oxford, and Mr. Bernard Shaw, and many others, all of whom " went almost ecstatic with delight." It was they, again, who got Sir Arthur du Cros, chairman of the syndicate which owns the site, to extend the period available for negotiations. And what is the result of their labours? Readers of this journal are already aware of the fate which now awaits the Foundling Hospital site, but they will learn with surprise that though both the National Committee (of which Mr. Shaw is a member) and the British Drama League (presided over by Mr. Granville-Barker) formally expressed their approval of the site, no money whatever has been found by these influential bodies. The fact is that while people of comparatively low intelligence and little influence are raising many thousands every day for less worthy objects, " Mr. Bernard Shaw and Mr. Granville-Barker—perhaps the world's greatest dramatists—cannot raise a sixpenny bit for a National Theatre " in which they both believe. Regretfully I endorse Mr. Turner's advice to the National Committee that it should commit suicide forthwith. I can conceive of no other decent termination to a career which would have been farcical but for the many generous aspirations it has succeeded in bringing to naught.

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The L.C.C. Improvements Committee is excessively damping about the prospects of an embankment on the south side of the Thames. In the report which was presented, all hopes of even considering the proposal are silenced in face of the heavy commitments of the council, and nothing further will be done. It is more than likely though that the Charing Cross Bridge scheme will bring the question to the front again, for if architects are to have anything to do with this little affair they will want to incorporate with it the logical development of the abutments and the southern bank. I think that the embankment will be built, however empty may be the civic purse today. It might be well to start with a manageable slice, say from the County Hall to Waterloo Bridge.

* * *

Mr. Walter Tapper distributed the awards at the annual prize-giving of the Architectural Association on Friday. The longer he lived, said he, the more he reverenced the work of the great masters—their inventiveness, their technique, and their knowledge of the minor crafts of which so much had been lost in recent times. There would be far greater opportunities in the future than in the immediate past. There were acres of mediocre buildings in all the industrial towns, and he believed that, as a result of education, before they got very much older the community would ask for something better, realizing that architecture, painting, and the arts generally did count in life. That would give present-day students a big opportunity—the opportunity of making the towns more beautiful than they were today.

* * *

The fatal fall of a portion of the plaster ceiling in the staircase of the Central Hall at Westminster has been made the occasion for a thorough examination of other plasterwork in the building, and the visitor entering the front vestibule sees a neat scaffold on the landing in front of him and trial-holes probed in various places through the plaster to the concrete of the floors. The Central Hall was one of the first works in this country to embody the use of reinforced concrete on a large scale, and the difficulty of obtaining a sound key between plaster and concrete was just as great a problem then as it is at the present time. It was a notable departure from precedent when plaster ceilings were applied to the hard undersides of concrete floors provided merely with a nominal key produced by hacking or scratching the surface instead of to laths fixed with a space to permit of a hook-shaped key being formed by the plaster itself in the process of its application. A large measure of success seems to have attended the modern method in a great many concrete floored buildings, and the fall of plaster from ceilings built up upon old-fashioned wooden laths is sufficiently familiar. In either case, safety depends upon tenacity and adhesion, which qualities depend in turn upon sound material and workmanship and the avoidance of shock and vibration, both when the plaster is green and throughout the endurance of the building, for in process of time many repeated shocks have the effect of destroying cohesion by minute degrees until danger point is reached.

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It would seem that a fashion is growing up of dispensing with projecting cornices on the fronts of large buildings; and whatever the artistic results may be, there can be no question that in the long run buildings without cornices are safer than those provided with them. Any mass of material which juts out over an empty space is subjected to damaging stress by gravitation and is more likely to decay and fall than other parts of the building which receive direct support in a vertical line from the foundation. It is only a question of time before a cornice of ordinary construction decays to a point at which it will fall, and in a great city like London there must be many which are nearing the time limit and which should be inspected and repaired forthwith. In 1919, after the neglect of landlords to execute necessary repairs and redecorations during the period of the war, several stucco cornices fell from the fronts of houses in the West End, the tenacity of their brick and mortar cores having been undermined by damp and destroyed by frost after the outer coating of protective stucco had become disintegrated. In hatred of what he called " the base principles of modern building," Ruskin vigorously expostulated against the " nascent rottenness " of a wall which fell almost as soon as erected, but after " *a massive*

compo cornice" had been put on top. His emphasis of the words in italics was not only a characteristic fling at the imitation of the pagan styles of architecture, but fair comment upon the unsound practice of stinting the expense necessary to build a decent wall in order to squander the money on ineffectual ornament. Unless a cornice fulfils a real need, logical design requires its omission; and in this climate where light, and not shadow, is the primary consideration, the need of a cornice is not often a serious one.

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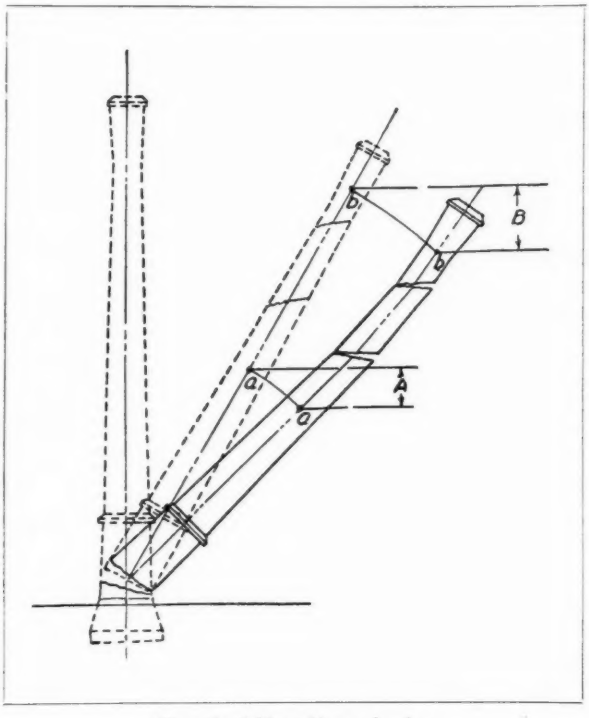
Why tall chimneys break as they fall has impressed some people as paradoxical. When reaching an angle somewhat more than 30 deg. from the vertical, diagonal cracks appear; at about 45, the chimney has broken into two or more pieces, with the upper surface bent upward as though the outer end were impeded by an external resistance of some kind. One explanation of the upward curve of the chimney is the resistance offered by the air, an idea which may be dismissed because the fractures appear in the



How the falling chimney breaks.

chimney when its velocity is slight compared with that necessary to cause rupture by wind-pressure. The fractures are the characteristic shear, or diagonal-tension kind, common to tests of beams. In its movement downward, the chimney is subjected to centrifugal force by reason of the constantly changing direction of its particles, and to the pressure of the air by reason of the rapidly increasing velocity of fall. Both these forces increase with the descent, and aid, although slightly, in the transverse rupture of the chimney.

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Those who believe that it is impossible to control designs of buildings without resort to compulsion by law should visit the fashionable seaside resort of Deauville in France There a special attempt has been made to preserve the picturesque Norman style of architecture. The Hotel Normandy is, of course, well known for its beauty, and all round the hotel the new shops and villas are built in a similar style so that they may harmonize. I asked the Mayor of Deauville how he succeeded in preserving this similarity of architecture, and he told me that it was done entirely by persuasion. Those intending to build were interviewed, and the value of keeping the picturesqueness of the place unspoilt was explained. Very rarely was the advice disregarded.

* * *

I quote the following from Mr. Clough Williams-Ellis's recently published book, *England and the Octopus:*

PETROL PUMPS

These ubiquitous engines have gained an undeservedly bad name as eyesores for three bad reasons. They are subconsciously associated with the slatternly array of variegated advertisements that commonly deface filling-stations; the stations themselves are too often placed where their presence is an impertinence; and the actual pumps—usually a mixed bouquet of violent reds, yellows, and greens—are so painted not to produce an acceptable harmony, but the most reverberating discord. There is no denying that one cannot pass a wayside filling-station without having one's attention distracted to it by its bludgeoning importunity; but having noted and resented its presence, one just passes. But there is nothing repulsive about the pumps themselves. They may not be consummate examples of functional designing, but they are reasonable and seemly machines enough, and where ranged neatly along a grass plat and painted some acceptable and uniform colour are by no means unsightly. In these days of spare tins and reserve tanks there is no possible excuse for the wayside petrol pedlar; and the way to discourage him is to refuse him your patronage.

* * *

Throughout twenty-five years of motoring the author has sedulously avoided any dealings whatever with such destroyers of highway amenity—invariably filling at some station (when possible a decently discreet one) within the actual boundaries of a town or village, not certainly at the clamorously touting pumps that attempt the motorist's seduction at every main road entrance to such places. Often there are two rival establishments glaring at each other across the road, selling identical wares at the same controlled prices. The result is a doubling of ugliness and presumably a halving of the profits to either one of them, which does not seem a very sensible arrangement. Spirits in the liquor sense cannot be sold except by those holding a licence, which can only be obtained on the payment of fees after good cause has been shown for its granting and a public demand has been proved. Is there any good reason why the retailing of motor spirit should not be similarly limited before the country is so overburdened with a plethora of pumps that petrol selling ceases to be remunerative, resulting in the disfiguring of our highways by derelict stations even more unsightly in their dilapidated abandonment than in their flaunting youth.

ASTRAGAL

STUDENTS' WORK AT LIVERPOOL

[BY F. X. VELARDE]

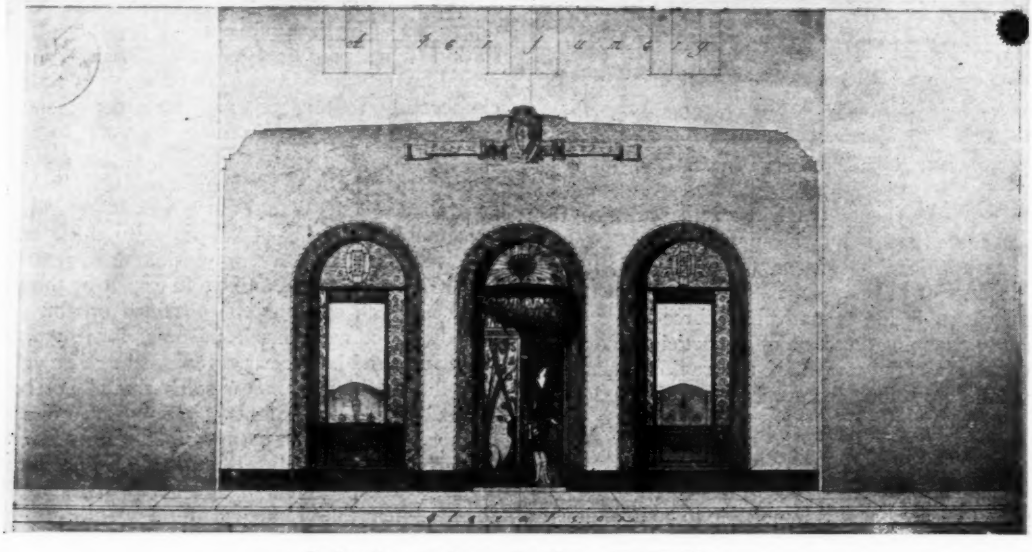
EACH succeeding year of the Liverpool University School of Architecture's life seems to give an added zest and glory to the work shown in the annual exhibition, which is held in such suitable surroundings and through the kindly courtesy of the Walker Art Gallery sponsors. Even the posters that flank the entrance and herald the goods within are unusually stimulating with their devastating treatment of the art exuberance of a preceding age.

Treating the years in progressive order: *First year*—These students devote much of their time to external subjects, such as geology, physics, and chemistry, the amount of studio work done being therefore somewhat less than that of the later years. Amongst this work are seen the efforts of those who needs must learn the technique and spirit of their art. This, of necessity, is mainly achieved by the copying of works of unquestionable merit, and yet of widely different character, ranging in type from the Parthenon, Greece, to the new cathedral at Liverpool. The school benefits greatly by its proximity to the latter building, giving opportunity for close and repeated scrutiny of its spirit and function. Simple but consequential sketch designs are shown, such as a "Porch to a Village School," a "Well Head," from which splendid little working drawings are built up.

Second year.—This and the preceding year might be termed the novitiate period to our art, and show the student mind gradually maturing. Again subjects of traditional value form the basis of the programmes set. Sketch designs become a tiny bit harder. Italian Renaissance subjects rightly inform the spirit of the work, as, indeed, such spirit does all true beauty and proportion of almost any age. Here are exhibited the working drawings for the Holland and Hannen and Cubitt first prize, ably won by N. W. Goodacre. The subject is a suburban house and reflects the renown the school has for its insight into the constructional requirements of our art.

Third year.—This is the middle year of the student's life and, like the middle years of a man's life, somehow tells us where he is going. The subjects set rightly increase in their complexity of arrangement, function, etc. Presentation again makes a great leap. The scheme for a main road inn, full of charm and character, is delightfully presented by Mr. Lawrence Wright. Other schemes for the same subject are too Italianate and thus, perhaps, a trifle incongruous in character for our own great clime. A compromise in styles, as shown in Mr. Wright's scheme, appears to achieve the correct solution. A truly elegant creation is the scheme for a small town house submitted by Mr. Hutton. It is a goodly expression of good planning. A prize for a petrol filling station sign has been secured this year by Mr. G. Stephenson. The solution is apt, being composed of a slender column surmounted by a winged wheel, the symbolism being appropriate. A bracketed rectangular frame is provided to contain printed matter. The scheme provides an attractive solution to what is at present an immediate problem throughout the countryside. The oil combine should surely take notice. The Anthony Minoprio prize for rendering, secured by Mr. Kenyon, is a design for a playing pavilion, quietly arranged, of modern tendency, and splendidly rendered in cool, ash-grey colours.

Fourth year.—Here the student mind is immerging into a wider horizon, and vigour and assuredness begin to give solid character to the work. Delightful shop fronts of marked French influence (and what other influence is there for such a subject) appear amongst this year's efforts. One by Mr. W. Plant is worthy of special mention. In this scheme three round arched openings, set lightly into



Design for a perfumery shop front. By W. Plant.

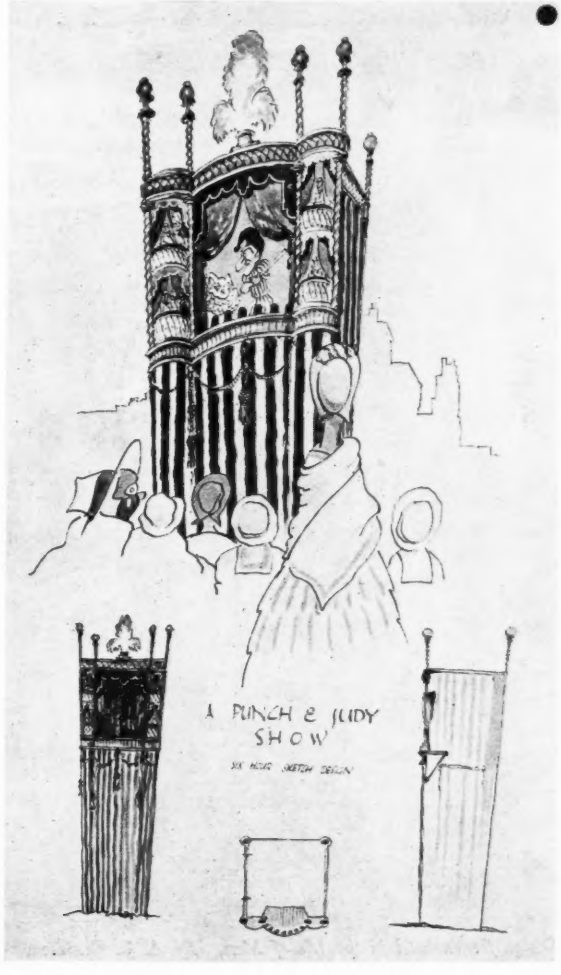
a pale yellow marble ground, filigree bronzework unconventionally treated meshes the tympani and sides of the two flanking windows and forms the decoration of the central door opening. Flat architraves of highly-coloured mosaics surround each opening. At the top and centre of the marble field an elegant shield sets between an open scroll. The whole is reminiscent of the Rue de la Paix, and truly delightful. Mr. Freeman presents an admirable solution to a lakeside restaurant, in the manner of what we all imagine to be the traditional solution and what we too seldom see. To a design for the same subject Mr. Hillier adds a round tower, giving quaintness and almost a Breton flavour to the pleasure of the subject. Working drawings of a more complex nature form a large part of this year's work. Holland, Hannen and Cubitt prizes for working drawings are secured for this year by Messrs. Wilkinson and Knowles.

Fifth year.—Students taking the degree and diploma in architecture. Here one is appalled by the magnitude of the subjects for the constructional thesis. Subjects chosen are: An opera house, a college library, a cinema, all admirably developed and testifying to the acquired knowledge of these students. For the design thesis the subjects chosen are mostly of a serious nature, ecclesiastical or civic in type, and mostly conform to traditional styles. One cannot help but be gratified by such clean and competent workmanship.

Subjects shown. Courts of Justice for Southern Rhodesia by Mr. MacGillivray; mosque at Cairo by Mr. El Towil; air club at Hooton by Mr. H. Bramhill (this is a modernist attempt as such a subject deserves, with clean, sharp rendering); a political club with a marked Italian feeling by Mr. Hough; a maritime club by Mr. Owen; an hotel in the Isle of Man by Mr. Davidson (perhaps one of the best schemes of the year, both in presentation and architectural development. The programme suggests the development of an hotel on a promontory site in the Isle of Man. The scheme builds up well, and procures ample protection for its internal parts from cold winds, etc. It does so, however, with a loss of sea views to important portions, such as main lounge, palm court, etc. The character of the building is good, and immensely suitable to the place. Its cool grey walls and fortress-like mass provide that protective quality so essential for such a building on so small an island, open to the great winds and seas).

Sketch designs. These as ever form an integral part of the school's work, and how worthily they express her ideals. Almost every one shown should have eulogy and mention.

Outstanding examples. A dining loggia for Mussolini by Mr. Wright, and by Mr. Freeman. Special mention should be made of a "Cemetery Entrance" by Mr. L. Wright, rendered in blue crayon, full of that wistful elegance all such associations should have. A "Punch and Judy Show Box," by the same author, is novelly



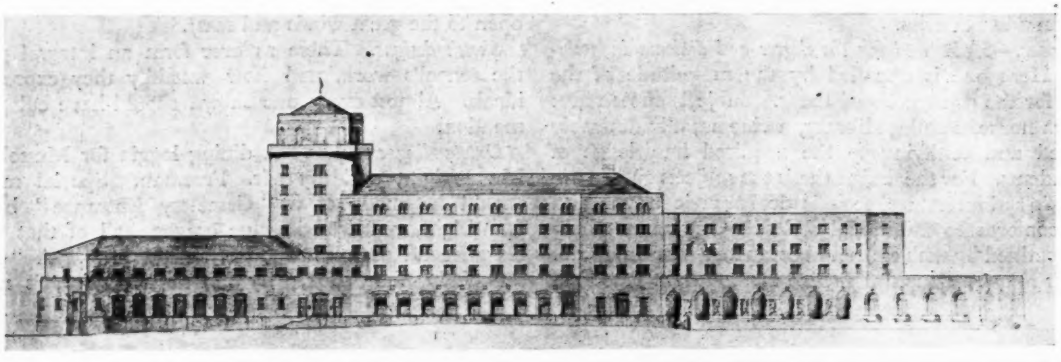
Design for a Punch and Judy Show Box. By L. Wright.

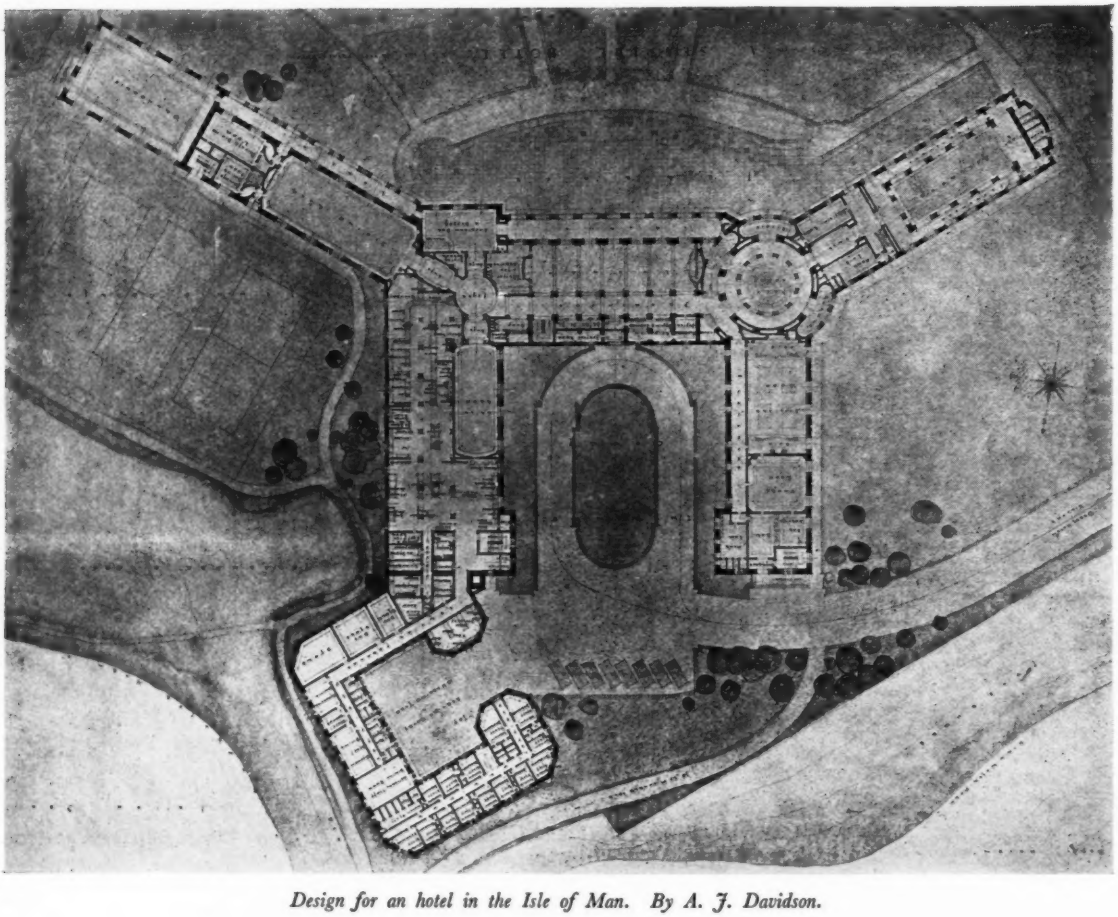
treated, sufficiently gaudy and ornate without being vulgar. A splendid thing.

Study charts, colour, and decoration. A whole stand is devoted to this branch of study together with sketches of historical details.

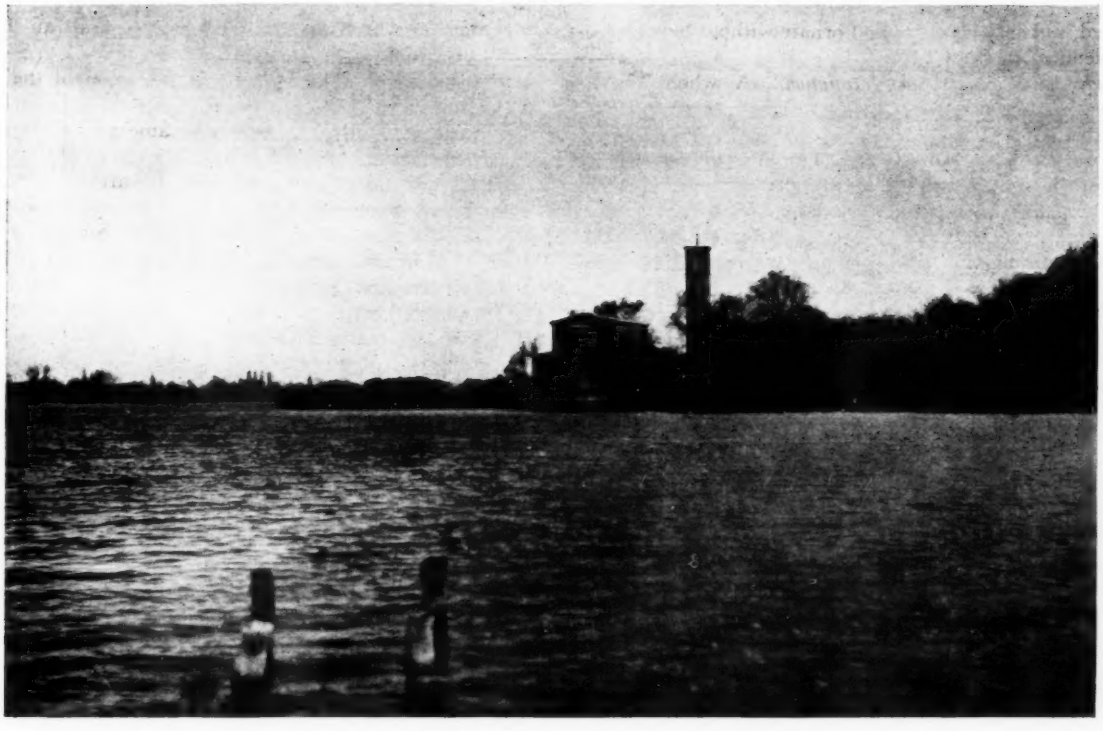
Work of former Rome students. The glory of the departed students is represented in the good work, done whilst in Italy, by Mr. C. A. Minoprio and Mr. G. A. Butling, winners of the Henry Jarvis Scholarship and the Prix de Rome respectively. The drawings, which are beautifully developed, are most conscientiously treated. The main drawings depict the Basilica of Constantine as it now stands, showing the plan restored with the existing remains. Pale brown to cream, with deep, solid colour for the plan, forms the colour-scheme of these drawings. Other drawings are La Casa Regau-Vicenza, and an Italian Baroque gateway.

Measured work. The school's appreciation of the value of measured work is depicted in the hangings devoted to this branch of study. Conspicuous amongst the drawings shown are those of Holyrood Palace by Mr. Hutton, which have been awarded THE ARCHITECTS' JOURNAL prize, given annually. Others of considerable worth by Mr. W. Kenyon show fragments after Sir Christopher Wren. Somehow one sees evidence in this exhibition of that independent growth of ability so peculiar to this great seaport town. This same spirit permeates her other activities—her maritime relations, her industry life, and her civic outlook. The whole exhibition teems with that verve and cultured optimism which forms the genius of the school.





Design for an hotel in the Isle of Man. By A. J. Davidson.



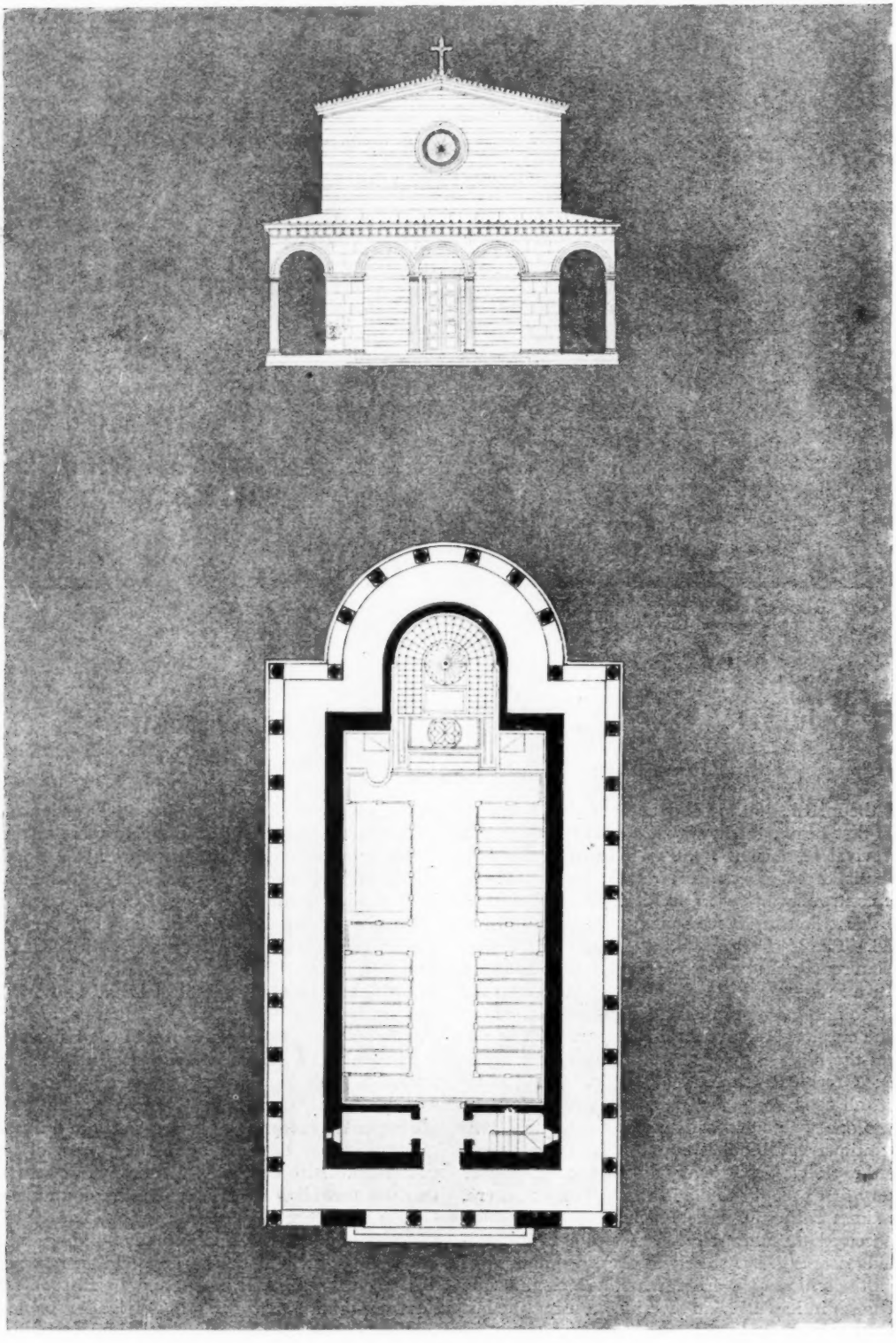
Heilands Kirche (St. Saviour's Church), Sakrow, near Potsdam. By Ludwig Persius.

LUDWIG PERSIUS OF POTSDAM: i

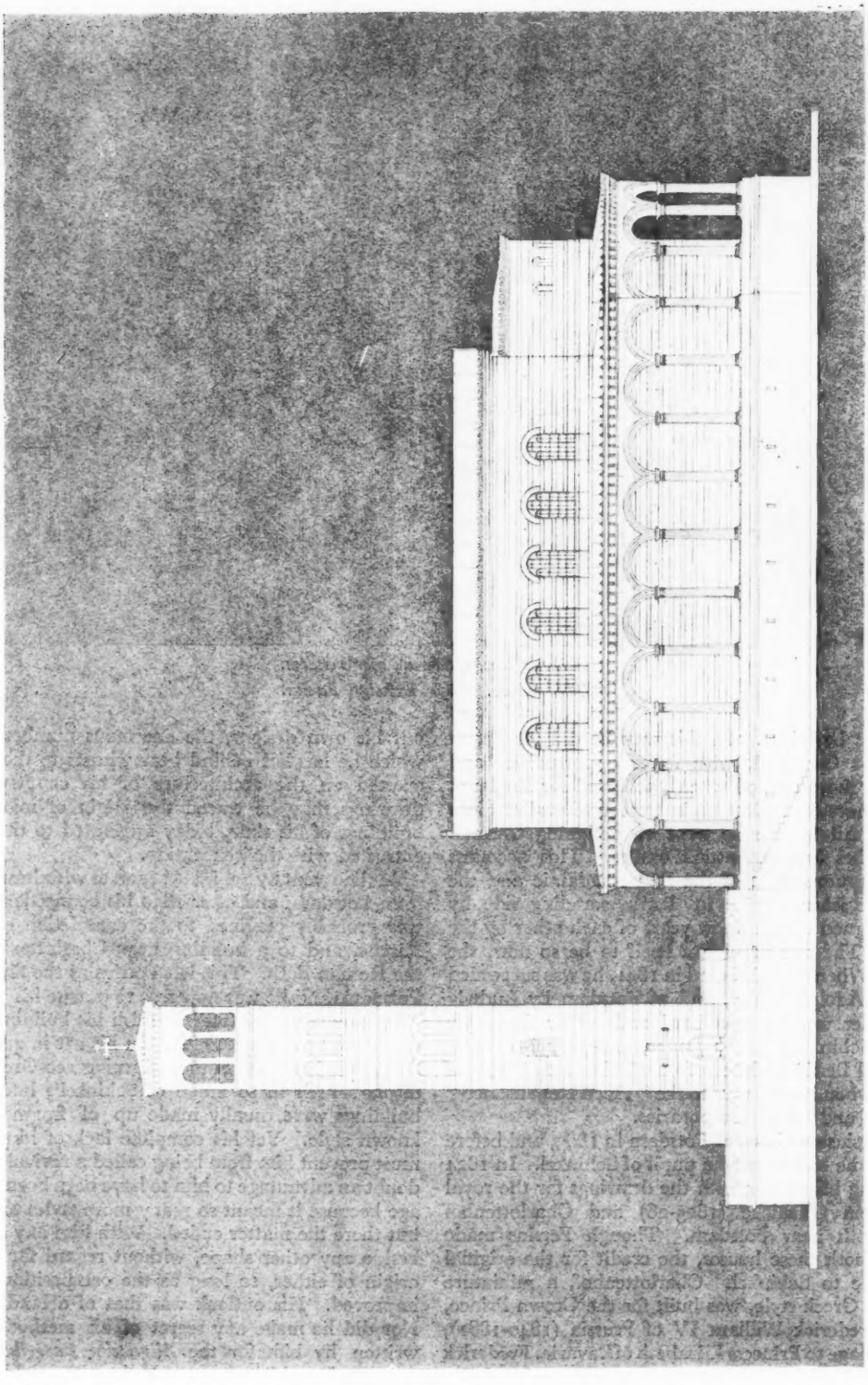
[BY R. AND P. FLEETWOOD HESKETH]

SOON after the middle of the eighteenth century, Western architecture first began to show that tendency towards a wholesale revival of ancient styles which was destined to form the basis of all subsequent development and to remain the controlling factor in architectural design until recent times. At first the movement confined itself to the classical fold. The discovery and appreciation of Grecian and Pompeian remains drove out the last traces of baroque and brought a more severe classicism into favour. So far it amounted to nothing more than a late phase in the long history of the classical Renaissance in Europe. But at the beginning of the nineteenth century the movement broke all bounds: Greek, Romanesque, Gothic, and Italian architecture, all came to receive an equal degree of attention, until no one style could claim to predominate. This second, or antiquarian Renaissance, as it has been called, which spread rapidly over Germany during the last quarter of the century first brought to life in that country a severe, though at times rather ill-digested classical style which has since received the alternative names of "Frühklassicismus" and "Zopfstil." As early as 1773 Erdmannsdorf had finished the schloss at Wörlitz, whose principal façade is almost English in its Palladian severity. During the last years of the century the style was developed by men such as K. G. Langhans and David Gilly at Berlin and Potsdam, by Gentz at Weimar, and by Jussow at Cassel. Then came the Napoleonic Wars. Between the battles of Jena in 1807 and Leipzig in 1813 very little was done. After peace had been restored, an adapted version of the style of the first French Empire came to most of the German States as a natural development from the Zopfstil. The school of Weinbrenner, of Karlsruhe, had an important influence in effecting this transition.

Prussia did not follow the example of her neighbours. Under the direction of her great artist, Karl Friedrich Schinkel, she was led into new paths. Schinkel was born in 1781, and became a pupil of David Gilly. From 1803 to 1805 he travelled in Italy and France, and in 1810 he was appointed Ober-hof-baurat to the King of Prussia—a post which he held until his death in 1841. During his tenure of office he founded a great school of architecture, and practically gave to Berlin its present appearance. He began his career as a pure revivalist at a time when the movement was entering upon the period of its greatest expansion. Although severely classical at heart, Schinkel was not unwilling to join in the new enthusiasm for the Gothic and other lately revived styles. But the tremendous diversity of purpose which his many buildings had to serve, and the poorness of the Berlin building material (nearly all decorations had to be done in stucco) soon made demands upon him which strict revivalism could not have fulfilled. As a revivalist he had acquired a perfect technique in the use of Grecian forms; by means of this skill he worked out, in the course of time, what practically amounted to a new style, whose details were mainly Greek, but which could be more easily adapted to the needs of nineteenth-



Heilands Kirche, Sakrow, near Potsdam. By Ludwig Persius. The western elevation and plan.



Heilands Kirche, Sakrow, near Potsdam.
By Ludwig Persius. The south elevation.

Heilands Kirche, Sakrow, near Potsdam.
The arcade. By Ludwig Persius.

century public buildings. In this way he did for Berlin what Professor Cockerell, with fewer opportunities and therefore to a more limited extent, achieved for England. But Schinkel never quite lost his interest in revivalism pure and simple. All his life he went on designing German Gothic churches and embattled castles. This accounts for the incongruous sight of the Bau Akadamie and the Gothic Werderscher Kirche in Berlin standing side by side, and designed within a few years of each other by the same hand. The one proclaims itself to be so new, the other so old. When Schinkel died in 1841, he was succeeded in Berlin by Adolph Stüler, and at Potsdam by Ludwig Persius. Stüler worked in a hard and rather thin style based upon Schinkel's later manner, and his school continued to lead Berlin architecture until the last quarter of the century, when it gave way to the " Hoch Renaissance " of Raschdorff and his contemporaries.

Ludwig Persius was born at Potsdam in 1803, and before the year 1820 he had become a pupil of Schinkel. In 1824 he was helping his master with the drawings for the royal villas of Klein Glienicke (1825-26) and Charlottenhof (1826-29), both near Potsdam. Though Persius made additions to both these houses, the credit for the original designs is due to Schinkel. Charlottenhof, a miniature palace in the Greek style, was built for the Crown Prince, afterwards Frederick William IV of Prussia (1840-1861), after his marriage to Princess Elizabeth of Bavaria. Frederick William had himself a real natural talent for architecture, and when he was still a child he had received drawing lessons from Schinkel, who afterwards became his lifelong friend. Though prevented by his office from ever carrying out his own designs, the enormous number of drawings which he has left behind bear witness to the influence he exerted on the architecture of his country. To these drawings may be traced the origin of many important buildings of his time, today attributed to those who were entrusted with their execution.

As time went by Schinkel began to withdraw his attention from Potsdam, and after 1830 his connection with Persius was probably confined to the completion of the Nicolai Kirche, and to a building near Charlottenhof known as the Roman Bath. This left Persius as the first architect in Potsdam, and he was now free to pursue his own course.

It is always easy to distinguish his buildings from those of his master. He looked upon his art in quite a different light. He had none of the reforming neo-Grec spirit which displays itself in so much of Schinkel's later work. His buildings were usually made up of fragments of every known style. Yet his complete lack of historical scruple must prevent him from being called a revivalist. It was no doubt an advantage to him to have been born in a revivalist age because it meant so many more styles to choose from, but there the matter ended. With him any shape went in beside any other shape, without regard for the historical origin of either, so long as the composition was thereby improved. His outlook was that of a landscape painter. Nor did he make any secret of his methods. An article written by him for the *Allgemeine Bauzeitung* contains a passage in which he emphasizes the admirable effects which can be obtained by combining the features of several styles beneath a single roof. It must be admitted that by this system of architectural piracy Persius succeeded in

creating a very distinct style of his own which can never fail to be recognized and which is often more pleasing than the achievements of those whose consciences denied them such freedom. But a method of design so completely unfettered by rules and so dependent upon the individual skill of the artist could hardly be expected to survive its creator by many years. After Persius' death it was continued with a certain degree of success by the architects Hesse and Arnim, but in the hands of lesser men it soon became lost in the general confusion which had established itself at the middle of the nineteenth century.

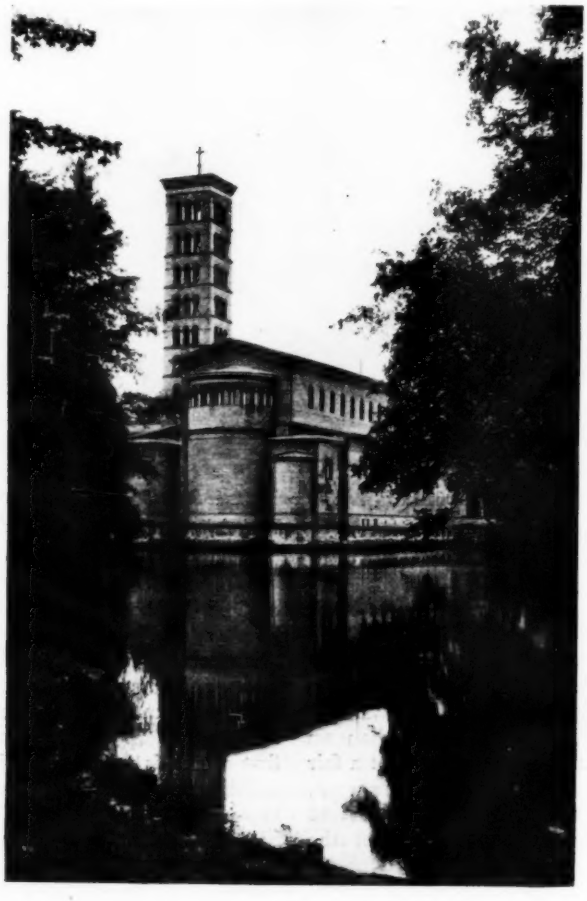
Throughout his career the interpretation of ideas suggested to him by the king formed a large part of his work. This has made it difficult to form a true estimate of Persius' greatness. A comparison of their drawings provides no solution. Nearly all the most characteristic features of his work are also to be found in the king's sketches. That Persius owes much to Frederick William is beyond doubt; indeed, it is probable that their connection contributed to the formation of this remarkable style. But the view sometimes put forward that Persius was no more than an executive instrument in the hands of the king is not a fair one and overstates the case. The quality of his work, from the beginning to the end of his career, is too even and spontaneous to allow one to suppose that, but for the intervention of the king, Persius would have adopted entirely different methods of design. On the other hand, if Persius is indebted to Frederick William, it is equally certain that the obligation is mutual. That Persius alone among his contemporaries was in full sympathy with the king's genius is proved by the events which followed his death. Until the end of his reign Frederick William continued to employ architects to carry out to his designs; but in these later buildings it usually happened that the executing hand was interposed in such a way as to obscure the original idea behind a new one. Stüler's basilican church in the Oranien Strasse at Berlin, and the Orangery at Potsdam, by Hesse and Arnim, are evidence of this.

The greater number of Persius' designs were made within the space of four years—between his succession to the post of Ober-hof-baurat at Potsdam, on the death of Schinkel in 1841, and his own early death in the summer of 1845. His executed works include churches, public buildings, villas, and improvements to parks and gardens.

His best known, though not his most authentic church, is the Friedens Kirche near Sans Souci. Although the first design is dated 1842, it was not until 1849 that the building was finished under the direction of the architect Hesse. Inspired by the churches of San Clemente and Santa Maria in Cosmedin at Rome, it is basilican in plan

View of the Nicolai Kirche, from the court of the Stadt Schloss. This church was designed by Schinkel and built under Persius' direction. After it was finished it showed signs of collapse, so Persius added the four corner towers for support.

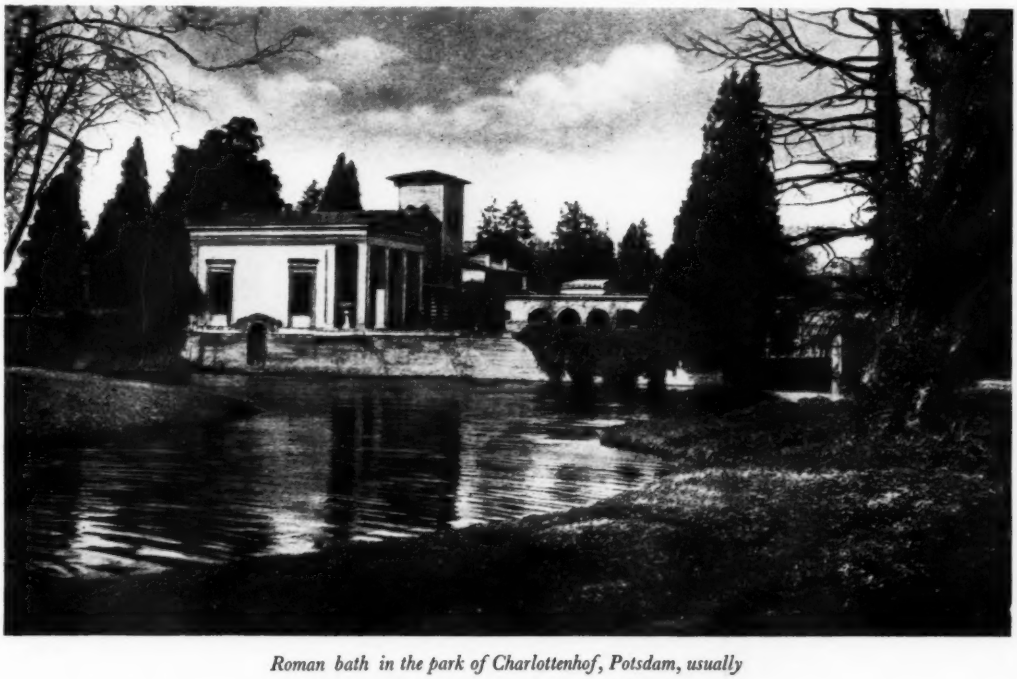
and section. Its aisles are separated from the nave by arcades supported on Ionic pillars of dark-green marble with white marble capitals. The eastern apse is flanked by smaller apses which belong to chapels placed at the ends of the aisles. Except for a detached campanile of yellow brick, the church is built entirely of stone. The adoption of basilican forms in this and other churches of the neighbourhood is due to the king, whose religious principles



Friedens Kirche (Church of Peace), Potsdam. By Ludwig Persius. Above, the interior. Below, a general view.

led him to believe that this was the only true Christian style—an interesting parallel to the views held by promoters of the Gothic revival in England. It is said that Frederick William valued Canina's *Architectura dei tempi Christiani*, which he had received as a present from the author, more highly than any other book in his library.

More characteristic of Persius in its details is the Heilands Kirche at Sakrow, about two miles north-east of Potsdam. Built on a foundation of piles at the edge of the Havel and backed by trees, it gains much from its fine isolated position, and may be seen across the water from more than a mile away. Its chief interest lies in its plan and unusual materials. The general style is Early Christian. It has no



Roman bath in the park of Charlottenhof, Potsdam, usually attributed to Schinkel, but, in fact, a product of Persius, Frederick William, and Schinkel working together.

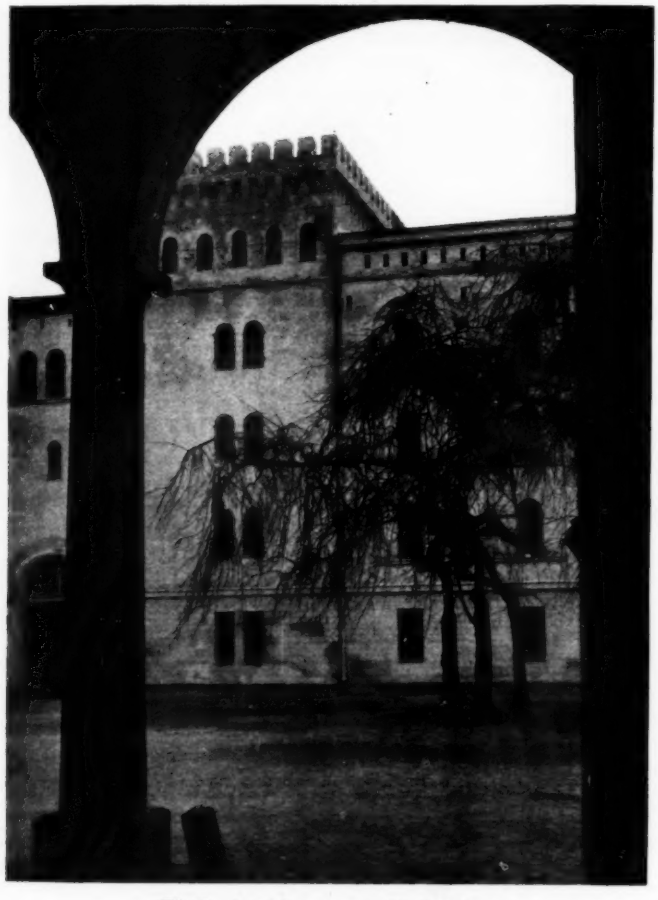
aisles, but a basilican section is obtained by the employment of an external arcade which encircles the whole building. A paved courtyard at the west end takes the place of an atrium. Both the church and the campanile, which stands at the north end of the court, are built of light-coloured bricks with a band of pale blue tiles at every fourth course, the tiles having white four-leaved rosettes set diagonally upon their faces. The pillars of the arcade are stone, and the archivolts and spandrils are stuccoed to give an appearance of the same material. The bracket cornice to the arcade, also the neckings and capitals of the pillars which are of beautiful design and remarkably sharp outline, are made of zinc painted over with a thin coat of stone stucco. Roofs and antefixæ are also zinc. The inside, tall and narrow in proportion, has an open timber roof. The ceiling is painted blue and powdered with gold stars.

Persius was entrusted with the completion of Schinkel's great domed church of St. Nicholas in the centre of the town at Potsdam, and it was he who added the four corner towers to act as a means of support when the building showed signs of collapse. He also made some elaborate designs for enlarging the Garrison and Holy Ghost churches, but these were never carried out.

His public buildings include two barracks, those of the Uhlan Regiment in the Jäger Allee, and of the Life Guards in the Luisen Platz (the latter an old building reconstructed), two military storehouses, the Proviant Magazin in the Neue Luisen Strasse, near Charlottenhof Station, and the Proviant Amt in the southern quarter of Potsdam on the edge of the Havel, and the Sans Souci waterworks behind the Alte Luisen Strasse.

The Proviant Magazin is a building of vast dimensions and possesses, though tempered by the influence of Southern Italy, that archaic military character which has been perpetuated in the design of toy forts. The Proviant Amt is remarkable for its simplicity and fine proportion. Words used by Professor Geyer in a lecture on Frederick William IV and intended to refer generally to the works of Persius, might well be applied to this building in particular. "Ludwig Persius was an artist who understood how to produce great effects from small means, and by this gift was able to turn the most unassuming building into a piece of architecture of great delicacy—very often merely through the skilful placing of ordinary windows in the wall surface." This criticism cannot be extended to the Potsdam waterworks. The novelty of machinery on a large scale always seems to have tempted Persius to extravagance. On this occasion he found relief in the Egyptian Saracenic style. The building is an adaptation of the Mosque of Kait Bey at Cairo, and from its tall and intricate minaret smoke continually pours. A similar impulse once led him to design an Italian Gothic sawmill.

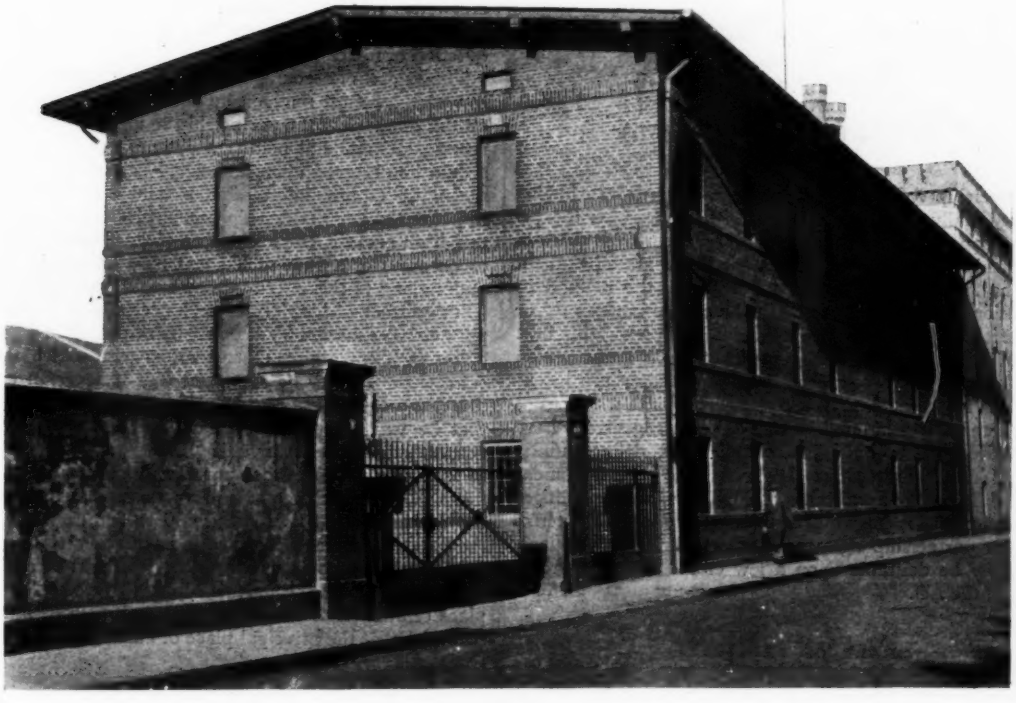
[*To be concluded*]



The Proviant Magazin, near Charlottenhof Station, Potsdam. By Ludwig Persius.

The Proviant Magazin, near Charlottenhof station, Potsdam. By Ludwig Persius. Above, the gatehouse. Below, the entrance.

Proviant Amt on the Havel, near the Leipziger Strasse, Potsdam. By Ludwig Persius.



Above, outhouse (in the Leipziger Strasse) belonging to the Proviant Amt, Potsdam. By Ludwig Persius. Below, barracks near the Brandenburg Gate at Potsdam. By Ludwig Persius.

PARTNERSHIP AND PROFIT SHARING

[BY A BARRISTER-AT-LAW]

THE Partnership Act of 1890 cannot be regarded as having effected any really substantial change in the law, with the exception, perhaps, as to the mode of making a partner's share of the partnership assets available for paying his separate judgment debts. The Act does not touch, for instance, the method of administration of partnership assets in the case of bankruptcy or death, and it is by no means a complete code of partnership law. It provides, indeed, that the existing rules of equity and common law shall remain in force, except in so far as they are inconsistent with its own express statutory provisions. Persons associated in a partnership undertaking or business generally have their respective rights and liabilities, *inter se*, defined under written articles of partnership. It is when no such document exists that differences and disputes usually arise, although litigation is by no means unknown over the construction of the terms of a written partnership agreement. Some brief observations, however, may be desirable upon a few of the more important provisions of the Act.

SHARE OF PROFITS

To decide whether or not a partnership actually exists in a particular case there are certain rules to which regard must be had under the Act. Joint tenancy, tenancy in common, joint or common property, or part ownership, will not, in itself, create a partnership as to anything so held or owned, whether the tenants or owners do or do not share any of the profits made by the use thereof. Moreover, the sharing of gross returns does not, of itself, create a partnership, whether the persons sharing such returns have or have not a joint or common right or interest in any property from which or from the use of which the returns are derived. But the receipt by a person of a share of the profits of a business is, *prima facie*, evidence of his partnership therein. The receipt of such a share, however, or of a payment contingent on or varying with the profits of a business will not, in itself, constitute him a partner in that particular business. This latter provision has especial application to the receipt by a person of a debt or other liquidated amount by instalments or otherwise out of the accruing profits of a business. In itself, this will not make him a partner in the business or render him liable as such. Furthermore, a contract for the remuneration of a servant or agent of a person engaged in a business by a share of the profits of a business does not, in itself, make that servant or agent a partner in that business or responsible as such. Again, where a widow or child of a deceased partner receives by way of annuity a part of the profits of the business in which the deceased was a partner, such widow or child is not by reason only of such receipt a partner in that business or liable as such.

RETIRED PARTNERS

Under the Act a partnership is defined as the relation which subsists between persons carrying on a business in common with a view of profit. The Act makes provision for the discharge of a retiring partner from any existing liabilities by an agreement to that effect between himself and the members of the firm as newly constituted and the creditors. This agreement may be either expressed or inferred as a fact from the course of dealing between the creditors and the new firm. It will be readily recognized in such a case that such a discharge is based upon an agreement between the retiring and continuing partners and the creditors, and that even though such agreement may not be in writing, or otherwise expressly made, it may still arise in the conduct of business transactions between the newly constituted firm and the creditors. Whether or not a creditor has abandoned his right to resort to a retired partner for payment becomes, however, a question of mixed fact and law.

The subject of accounts is, perhaps, not unimportant. By the Act partners must render true accounts and full information of all things affecting the partnership to any partner or to his legal representatives. But neither a partner nor his agent—and this should be observed upon authority—possesses any legal right to make use of any information obtained through access to or inspection of the partnership accounts for an improper purpose; and if an agent is employed by a partner to examine the books or accounts of a firm such agent may be required to give an undertaking to this effect. One partner cannot deprive another fellow-partner of his right of such access to or inspection of the partnership accounts by keeping them posted in a private book of his own containing other matters with which they are not connected. It may be remarked that if a person entitled to a share in the profits of a partnership undertaking expressly agrees that he will accept the balance sheets prepared by others as accurate, and will not investigate the books or accounts himself, in such circumstances that partner will be bound by his agreement. But an assignee of a partner's share has no right during the continuance of the partnership to demand any accounts of the partnership transactions or to have access to or inspection of the partnership books or accounts. It should be added that the Act provides that the partnership books are to be kept at the place of business of the partnership, or, if there is more than one such place, at the principal place of business.

KEEPING ACCOUNTS

A word should be said as to the position which arises where there are no books or accounts kept at all, or where they are kept in such a state as to be unintelligible; or where they have been destroyed; or where they are being wrongfully withheld. In such circumstances upon an account being ordered by the Court every presumption will be made against those to whose negligence or misconduct the default is due in failing to produce proper accounts. It may be that all the persons interested in such accounts are equally to blame, when this, of course, would not apply; but it is important to bear in mind that it is the duty of continuing or surviving partners always to keep the accounts of the firm in such a condition that at any time they will disclose the actual position of that firm whenever a change has taken place among the members of the partnership.

The question of judgments recovered against particular partners is often a troublesome one to deal with in actual practice. But it may be observed that a judgment recovered against continuing partners and an incoming partner is a defence to an action against a retired partner who might have been sued in the first place with the continuing partners. It should be pointed out, however, that proof in bankruptcy against the estate of one partner in respect of a partnership debt will not prevent the proving creditor from afterwards suing the solvent partners and recovering from them what he might have failed to obtain in the bankruptcy. But generally in a case of this kind the creditor would no doubt pursue his remedy against the partners who were solvent.

It will be recognized, of course, that when it is shown that liability has attached to a member of any firm, the burden of proving that such liability has ceased to exist will always rest upon the particular partner or upon those who represent him. The average person who wishes to retire from a firm should, therefore, carefully consider the actual circumstances under which he can free himself from any further liability for the debts and liabilities of that firm, particularly in view of the fact that the Act provides that a partner who retires does not thereby cease to be liable for partnership debts or obligations incurred before his retirement. But upon these matters it is not possible to proceed further within the limits of this article.

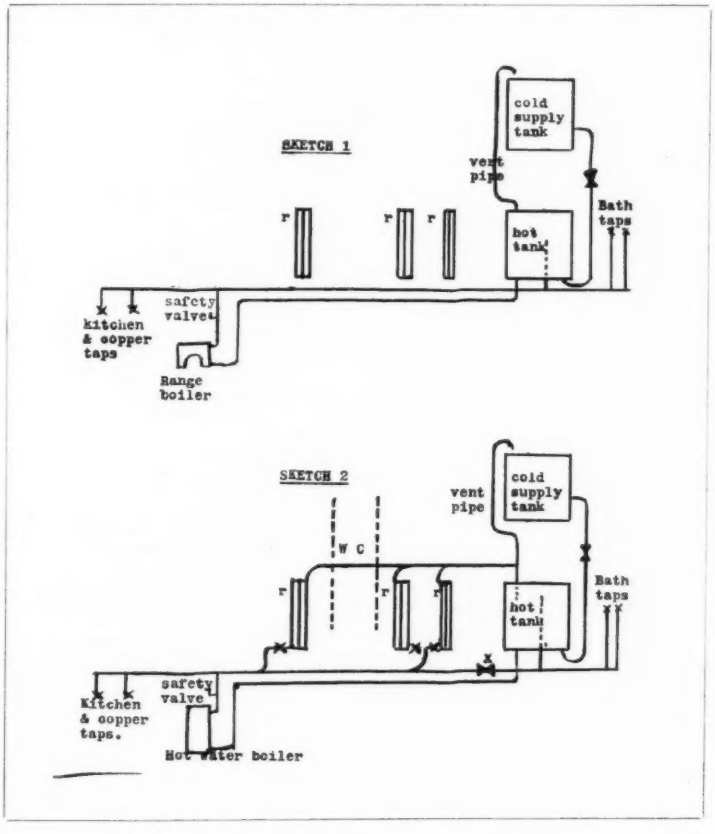
ENGLISH PRECEDENT

23 *This North Street front in Chichester is an interesting composition, sturdy, and having no affectation, though exception might be taken to the way the heavy entablature of the order obliterates the pediment. The massiveness of the brick arcading of the ground floor is accentuated by the heavy imposts; the brick niches with stone mouldings are well executed, and the "Gothic" glazing bars of the central window accord well with its lines.*—[NATHANIEL LLOYD]

MODERNIZING A SMALL KITCHEN: i

[BY EWART TREVELYAN]

A CLIENT desired to modernize the kitchen of a small house. An old kitchen range, supplying hot water, was to be removed, and in the space left vacant, a gas cooker, on site, and a new coke-anthracite hot-water boiler fitted. It was also desired that a gas copper, on site, and an electrically-driven washing machine should be installed in the kitchen, and three hot-water radiators fitted on the first floor. It is generally considered that to fit radiators on the ordinary hot-water supply is bad practice, as stained water coming from the radiators may be expected. for bath taps is drawn from the upper clearer water, so obviating the stained water that might otherwise be expected. Provision was made to cut out the radiators in warmer weather by opening the valve (X) and closing the radiator valves. This passes the hot water directly into the hot tank via the old entry. I may add this: it worked satisfactorily. Economy of heating surface was not overlooked though the pipes were not lagged. It was found that the boiler surface and the pipes exposed in kitchen gave about the correct heating surface value properly to warm



Secondly, it is desirable that the hot tank should be some feet above the level of the radiators in order to assist circulation.

The accompanying sketch 1 shows the arrangement of the pipes as originally installed and the levels of the radiators proposed. In usual practice, the fitting of a separate boiler, or, alternatively, a calorifier will overcome the stained water difficulty. The owner was unwilling to go to the expense and constructional disturbance of fitting a calorifier; space and expense were against the fitting of a second boiler, and moreover, to add to the troubles, the hot tank could not be raised without very undesirable building alterations.

After consideration, the following plan was adopted. The old 1 in. pipes were found to be corroded, as might be expected, and were removed and 1¼ in. pipes fitted in place following the plan shown in sketch 2. It will be noted that the rising flow of hot water passing through the radiators now discharges into the hot tank via the vent pipe opening, and precipitates the rust, etc., into the bottom of the hot tank. The hot water required that room (approx. 12 sq. ft. per 1,000 cubic feet space). On the first floor the ¾ in. pipe feeding one of the radiators passed through a w.c. warming this place and preventing freezing of pipes and ball valve which had previously occurred. In the kitchen, advantage was taken of the narrow design of the boiler to fit this with the gas cooking stove in the space previously occupied by the old range. The space previously occupied by the gas stove was filled by the gas copper and the electric washing machine installed beside it. Tiling was carried out around and beneath this new work in the kitchen.

First-grade material was used throughout and the net cost, excluding labour of hot-water boiler, piping, radiators, valves, tiling, electric motor and washing machine, was under £50. This allowed a fair profit to be made by the builder and gave me a well satisfied client. The method adopted does not reach ideals which might be attained by a larger expenditure, but it gives satisfaction at a very moderate cost, and that must be its excuse.

LITERATURE

ARCHITECTURE

THE sight of a volume of handy size and prettily attractive exterior, bearing a title so simple and so profound as *Architecture*, induces a certain caution in the approach, lest it prove to be a sweetmeat with nothing but the sugared coating. But Mr. Russell's book, forming one of a series of "Simple Guides" to complex aspects of science, history, art, and literature, possesses the sound qualities often lacking in attempts to bring "specialist" subjects within range of the ordinary non-technical layman. The flourishing green tree depicted on jacket and title page is presumably the tree of knowledge, and the volume is evidently to be regarded as a harvest of crystallized fruit from its branches. The fruit is no less good because of the judicious treatment to make it more palatable to young people and others for whom the book is designed. Possibly the fact of its being a "popular" work leads one to expect more illustrations than the pages offer; but although they may be few compared with the number of plates and photographs so common nowadays, particularly in this type of book, the sixty or so diagrams, drawings, and photographs are very much to the point. Moreover, the author has the ability to describe details of construction and plan so graphically that the common difficulty of visualizing a building without pictures or drawings is largely overcome. It is the same with the historical and geographical data required to build up the background for the types of building described. Neither chronological tables nor maps are really necessary to supplement lucid statements coloured by restrained imaginative touches, such as the thirty lines or so that paint the historic scene against which arose the glories of the Athens of Pericles; the brief description of the transference of the Imperial Court from Rome to Byzantium, or the vivid little touches showing the difficulties of dealing with labour in the building trades in the early Norman period in England. If here and there enthusiasm for the picturesque and the conversational in style seems to run riot a little, there is much to commend the practice of assisting the imagination by relating the unknown to the known. For example, to indicate the size of the great east window of Gloucester Cathedral the author compares its extent with that of a full-sized lawn-tennis court, which it closely approximates in dimensions.

In statements of fact the reader may feel a comfortable confidence not always possible in books of this kind. One must mention, however, the small matter of Greenstead Church, of whose origin the more reasonable and more generally accepted theory is that it was built where the body of King Edmund rested on its return to Suffolk, not on its way thence to London, as Mr. Russell states perhaps a little too dogmatically. But the honesty and care with which the vast subject is prepared for the public for whom it is intended disarms criticism on other points admitted or omitted. Not only does the book offer a very broad and comprehensive view of the history of architecture down the ages, in relation to the materials and the men who produced it, but the author aims at encouraging a healthy spirit of critical observation of old and new work. "The more we know about architecture of other days the better fitted we shall be to hold the balance between respect for our great inheritance of tradition and the desire for fresh growth and new adventure." Of the "new adventure" being undertaken in our own age Mr. Russell has much to say in his final chapters, to which he leads by a summary of the nineteenth century in England and a brief outline of American building history, while he presents the subject of "Modernism in Northern Europe" in a dozen pages of illuminating analysis.

One may not always agree entirely with Mr. Russell's theories, but he evidently does not intend that his readers should do so blindly. Rather does he indicate in his "introductory" pages—the least skilful part of the book—that he desires them to think and observe for themselves. A careful, but not too insistent, system of references within the book will help the non-technical reader to refresh his memory on points previously elucidated, and necessary as a basis for fresh information. The index is clear, and the list of books "about architecture," while not pretending to anything approaching completeness, contains suggestions likely to be welcomed by the reader stimulated to further study by this attractive presentation of so large a subject.

V. M. C.

Architecture. By A. L. N. Russell, A.R.I.B.A. Illustrated. Chatto and Windus. 7s. 6d.

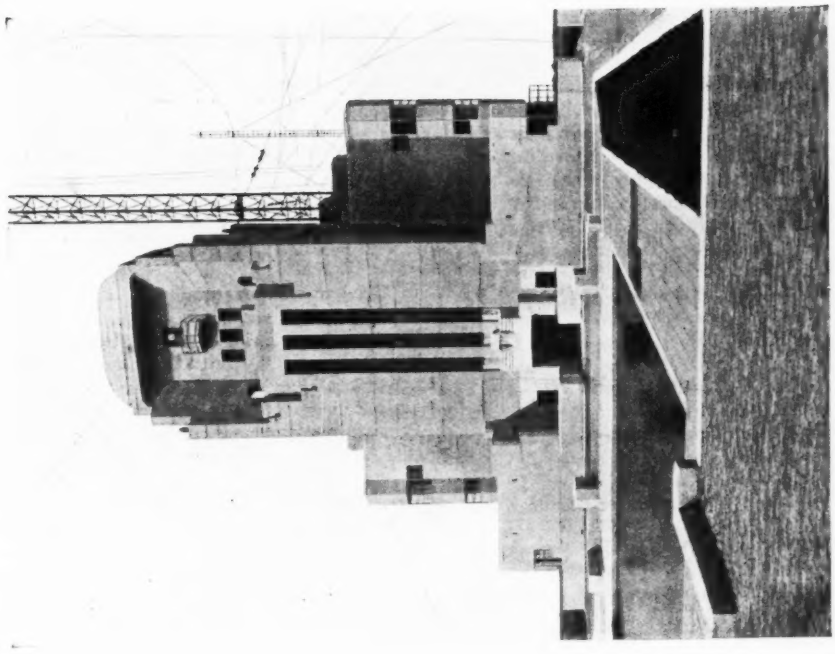
THREE CENTURIES OF ENGLISH MONUMENTAL SCULPTURE

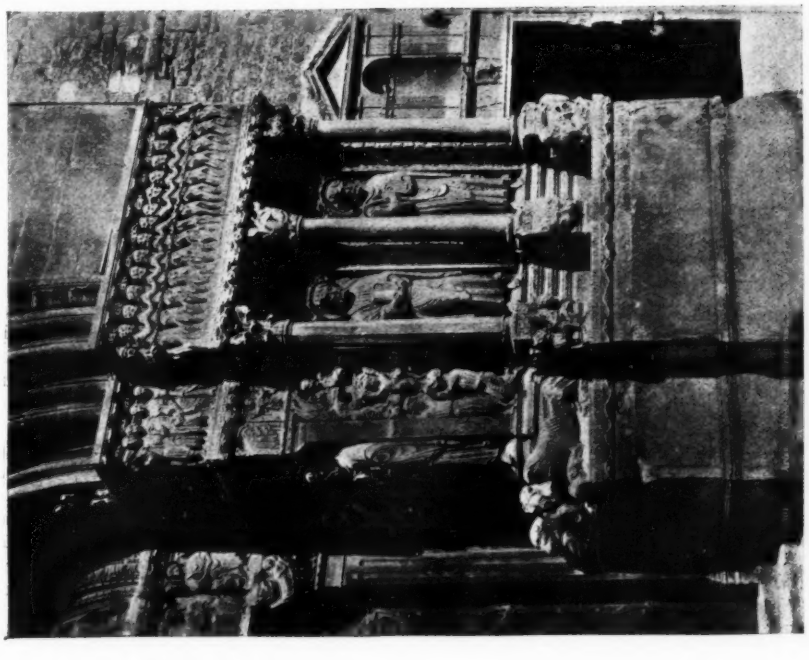
A born research worker, Mrs. Katharine Esdaile is so surcharged with detail that she does her subject less than justice by a superabundance more suited for a specialist journal less fitted for a popular presentation. To the specialist, however, the book is invaluable for its authenticity, if less so for its criticism of the art of the subject with which it is her happiness and privilege to deal. Mrs. Esdaile is so enthusiastic that she finds everything good—a most commendable attitude in many ways. She is so thorough that she strays widely outside her actual subject which, narrowed down, is rococo and baroque in English monumental sculpture—a fascinating theme, indeed, which is admirably illustrated by the thirty-three fine examples of fine memorials. The theme, however, is not presented with entire coherence, and the lack of continuity is somewhat of a handicap to a clear view.

Mrs. Esdaile has been very thorough in her survey, and seems to have visited the monuments with which she deals over a wide area. She has no objection to the way she finds things so long as the situation has not been created during her own period. She has no desire for the removal of the tombstones from Westminster Abbey. So long as the situation is old enough, it is for her sanctified. She does not want to see the Abbey as a Gothic structure, but as a continuing documentation of the ages, good or bad. Her sense is historical, not artistic; antiquarian rather than archæological. Monumental sculpture for her largely consists of stepping-stones from period to period, and she manages to make them extraordinarily interesting.

The book contains almost as much matter concerning Renaissance sculpture as post-Renaissance, and is none the less welcome on this account, for it serves to bridge the gulf between Gothic—which has been treated amply if not adequately—and eighteenth-century work. To separate the sixteenth, seventeenth, and eighteenth centuries in this matter is difficult, and Mrs. Esdaile wisely refrains from attempting it, and, equally gratifying, she does not hesitate to trespass on the nineteenth for so long as the older conditions were sustained.

Consequently, not the least valuable chapters of the volume are the two devoted to a chronological list of the sculptors whose works have been described and discussed in the earlier sections. Mrs. Esdaile at once assumes for the work of those men who came to England an English character. After the foreign work of the earlier Renaissance by which native talent was eclipsed, new blood was necessary. Irrespective of the country of their origin, the men who worked in England and subsequent to the Italians, all their lives and up to their deaths, are rightly classed as native artists. Some few masons of purely English blood rose to the status of artist, too, and the two classes are treated together. "Richard Parker, the Alablaster Man," was the first of the long line, and the first known date is 1544, when he was paid £24 for what Mrs. Esdaile calls "the magnificent monument of the first Earl of Rutland at Bottesford, with its noble effigies, rich Renaissance detail, and remarkable isolated figure." Sculpture is in the habit of providing families and generations devoted to the craft, and in the Johnsons or Janssens there is an example following on the work of Parker and linking it with that of Richard Stephens, also medallist and painter, who was associated with them in what is called the Southwark school. The Cures or Cuers followed, and





Left, Southern Romanesque, St. Trophime, Arles. Right, Modern Dutch concrete design, the Wireless Station at Kootwyk. [*From* Architecture.]

were in turn succeeded by the Coultes or Poultrains—names all full of suggestion of the welcome alien. Soon, however, England comes into her own in the person of Nicholas Stone—stone by name and by nature, for his father was a quarryman at Woodbury, near Exeter. Stone died in 1647, and for the next name of importance we have to go to Denmark for Caius Gabriel Cibber—a name, however, which became peculiarly English, for it has come down in the annals of our literature as well as art. Cibber became foreman to Stone's son, and in 1667, on his master's death, set up as an independent sculptor.

John Bushnell, an older man, was Cibber's rival. The two were most considerable artists, but were outshone by a later and greater man—Grinling Gibbons, who was destined to raise English carving to a high state of efficiency and to carry it over into the eighteenth century and lay the foundation of English baroque, and by the overworking of detail to bring it to a stage requiring drastic and robust treatment. The history continues through the Birds; the well-known Peter Scheemaeckers; J. M. Rysbrack; and the splendid Roubiliac, until Nollekens is reached, all flamboyant, ornate, often redundant; through the prolific Bacon, whose worst work Mrs. Esdaile puts to the credit of Winckelmann's teachings; the variable Banks, and the coldly classic Flaxman, "the popularizer of Greek ideas," as the author calls him. With these the nineteenth century is entered, and there is not too much room in Westminster Abbey for its monuments. Mrs. Esdaile has produced a valuable and interesting book on a subject that has long cried out for treatment.

KINETON PARKES

English Monumental Sculpture since the Renaissance. By Katharine E. Esdaile. London: Society for Promoting Christian Knowledge. 8vo. pp. xvi + 179. Illus. xxxiii. 10s. 6d.

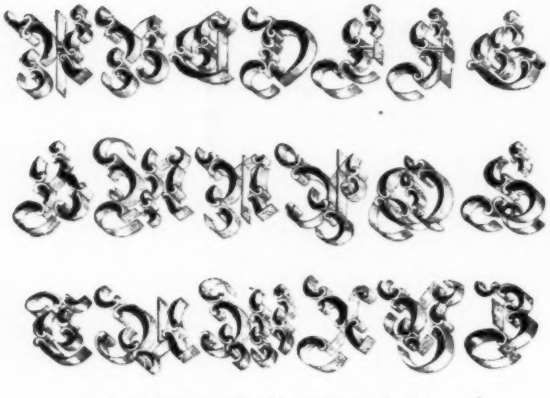
A BOOK OF ALPHABETS

Alphabets for Signwriters, Artists, and Illuminators, Plain and Ornamental is a remarkable book, and one full of mysteries. I am, I suppose, a "plain artist" (I have, at least, never been called ornamental), but I confess that I can make little of it. Were it not for the title page, which, by the way, is set in ten different founts of type, one might suppose that the specimens had been collected by some humorist, but the introduction of "several original designs" leaves one no option but to presume that the book is seriously meant. The alphabets shown are, for the most part, somewhat weird, and a trifle illegible, so that it is difficult to see where they will be of great value.

M. L. A.

Alphabets for Signwriters, Artists, and Illuminators, Plain and Ornamental. Collected and Engraved by F. Delamotte. Crosby Lockwood. 2s. 6d. net.

German Bibund. Large.



[*From* Alphabets for Signwriters, Artists, and Illuminators, Plain and Ornamental.]

FORM IN GOTHIC

The literature of artistic appreciation shows no sign of an abating output. Much—perhaps, indeed, the bulk of it—is of popular appeal, and the fact that Messrs. Rutter and Lethaby can market their wares at half-a-crown says much for the decay of our traditionally cheerful Philistinism. At the same time there is undoubtedly room for specialist treatises which, without terrifying the layman with his own ignorance of specialist technology, will enable him to pursue in detail the speculative promptings which it is the function of the general survey to stimulate.

Form in Gothic is essentially a book of this class. Though its reasoning is too closely knit to make an appeal to the casual reader, it requires no equipment beyond a nodding acquaintance with Classic and Gothic forms, and a taste for romantic theorizing. There is little of new in its intellectual content, although when Professor Worringer first advanced his theories some twenty years ago, the psychological interpretation of art-forms was practically unexplored in this country. It is as a well-tried statement of psychological evolution in art that his work is put before an English public, and in its method of exposition its appeal consists.

To Professor Worringer, Gothic and Classic are synonyms for abstraction and naturalism. From primitive man he derives the geometricality of Gothic. "Confused and alarmed by life (primitive man) takes refuge in the inanimate, because the restlessness of life is therein eliminated and an enduring stability afforded. He begins with the rigid line, which is essentially abstract and alien to life." In proportion, as reason asserts its sway over the instinctive fear of the unknown, "life becomes more beautiful, more joyful, but it loses in depth, grandeur, and force . . . the world is no longer something strange, inaccessible, and mystically great, but a living completion of his own ego." The characteristic modes of expression of these radically different attitudes are summed up in the contrast between the naturalistic trend of Greek plant-ornament and the distorted animal motives of northern art, "evolved more or less arbitrarily from the linear fantasy." This is the least satisfactory stage in the exposition, the more so as it is a crucial one; the Gothic "will to form," which it is the author's purpose to analyse, is made to appear simply as the climax of a racial tendency to abstraction whose supreme expression was the almost complete dematerialization of stone. It is unfortunate because plant-ornament seems to us precisely one of the least naturalistic elements in classical art, and the difference between the classic and the northern approach to the question appears as one of degree, not of kind. Moreover, despite Professor Worringer's disclaimer, we feel that to postulate Germanic blood as a racial ingredient in the production of Gothic smacks of a sentimentalism that is founded in a somewhat out-of date school of anthropological inquiry. It suggests a return to the old view that a particular culture is the product of a particular race rather than of a particular complex of geographical and economic conditions.

With this reservation, we must allow that the author has achieved his original purpose, which is to dispose of the popular notion that Gothic shares with primitive art a lack of technical ability to imitate Nature. In a chapter on the psychology of scholasticism, he draws an arresting picture of the mental atmosphere which removed intellectual activity as far away from actuality as it divorced art from Nature. It is a fascinating analogy, even if the attempt to establish a necessary interdependence puts psychology as an exact science to an undue strain.

The book is well worth the money for its illustrations. German Gothic is apt to be overlooked in this country, and these examples are singularly well chosen, both in themselves and as a commentary on the text.

Finally, a word as to the translation. It is not clear whether Mr. Read himself is responsible for it; whoever the translator is, he has achieved a minor masterpiece in the handling of a singularly stubborn idiom.

C. CAMPBELL CROWTHER

Form in Gothic. By Wilhelm Worringer. Edited, with Introduction, by Herbert Read. London: G. P. Putnam's Sons. 12s. 6d.

A BOOK OF FICTION

It is, perhaps, a little unusual to see a review of a work of fiction in a technical paper, but *The Devil's Dagger* has a special claim to notice, in that the author is the Secretary of the Institution of Structural Engineers.

The title of the book is inclined to be over-lurid, and suggests a story which the pages do not contain; the story, in fact, deserves a very much better title, being concerned with a young man who joins the secret service and goes to Russia commissioned to cope with the machinations of "Zah," a mysterious individual behind the Bolshevist regime, whose ideal is to control the whole of Europe through the money market. There are few better fields for an exciting life than Soviet Russia, and the adventures in escaping from the Bolshevists and the powers behind them make exciting reading. Captain Kiddy has, incidentally, produced some useful and convincing anti-Bolshevist propaganda.

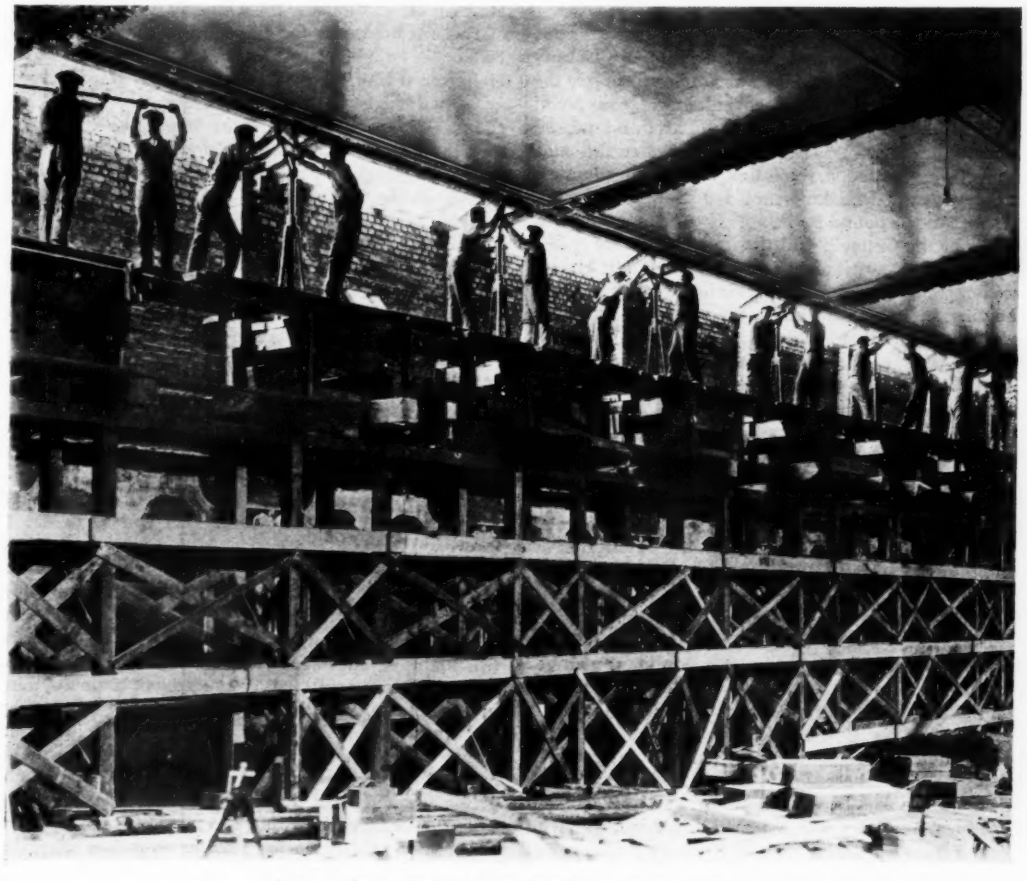
The Devil's Dagger. By Maurice Kiddy. Hutchinsons. 7s. 6d. net.

BODILY RAISING A ROOF

An interesting piece of engineering work has been carried out successfully at the Queen's Cinema, Forest Gate, London, E. Under the direction of the architects, Messrs. Leathart and Grainger, the engineers, The Pitcher Construction Co., Ltd., lifted the roof of the cinema bodily to allow of the addition of a balcony to hold 500 people. The entire work comprised three principal operations, as follows: i: lifting the roof; ii: raising the walls of the cinema by an addition of 16 ft.; iii: constructing the balcony in the extra headroom thus provided. The roof was raised by screw jacks, as shown by the accompanying illustration: the height of the walls being increased as the roof was raised.

The roof of the cinema weighs 150 tons and is of the usual R-S truss and timber construction, covered with slates. It was raised by means of nine screw jacks placed on either side of the building, these jacks being worked by man-power simultaneously, and the roof raised in a series of twelve actual lifts. Each lift occupied two days, a stop then being made to rescaffold. To carry the platform bearing the jacks and the men working them, elaborate timber scaffolding was necessary. The task of erecting this platform was made none the easier by the fact that outside scaffolding was not permissible. The whole of the timber structure had to be erected inside the building, and the outside scaffold carried on heavy cross baulks of timber inserted through the walls and connected to the inside platform. There is a temporary transverse structure of spar bracing to carry the end bays of roof and ceiling until the new steel principals are erected, this temporary supporting structure being held together by a series of Spanish windlasses. The raising of the roof has been carried out so successfully that there is not even a crack in the plaster of the ceiling.

By the erection of the new balcony and the addition of tea-rooms, etc., the Queen's Cinema, which is owned by Mr. A. E. Abrahams, will be transformed into a well-equipped modern super-cinema, with a holding capacity of 2,000. It is calculated that a saving of about 30 per cent. in both time and cost will be effected by raising the roof in the manner described, instead of demolishing it and rebuilding. Work has proceeded uninterruptedly by day and night, the night work being carried out by the ordinary electric lighting of the house. The contract time for the job is four months, and The Pitcher Construction Co., Ltd., are satisfied that they will complete well within the scheduled time.



Raising the roof of the Queen's Cinema, Forest Gate.

LAW REPORTS

ARCHITECTS' CLAIM FOR FEES

Green and Hudson v. *Grisewood. King's Bench Division. Before Mr. Justice Mackinnon*

This was an action by Mr. William Nicholas Green and Mr. Alan Hudson, trading as Green and Hudson, of London, architects and surveyors, against Col. Harman Joseph Grisewood, of Warwick Gardens, Kensington, for damages for alleged breach of contract in connection with the erection of houses on Gipsy Lane estate, Leicester.

Plaintiffs' case was that they were engaged by defendant under an agreement dated November 27, 1925, to act as architects and surveyors in the erection of 1,500 houses on the Gipsy Lane estate, and were to be paid £10 on each house. Subsequently defendant repudiated the contract.

A term of the contract, defendant contended, was that plaintiffs should introduce contractors and be paid £10 on each house completed by such contractors. As plaintiffs had failed to carry out that part of the contract, defendant denied that he was under any liability to them.

His lordship, after hearing the evidence, in giving judgment, said it was clear from the terms of the contract between the parties that the plaintiffs were entitled to judgment. As to damages, the contract, if carried out, would not have been concluded for some time, and in the circumstances thought the damages should be £4,000.

Judgment was entered for the plaintiffs for this amount, with costs.

WATER SUPPLY. RIGHT TO CHARGE

Whitby R.D.C. v. *Agar. King's Bench Division. Before Justices Swift and Finlay*

This was an appeal by the plaintiffs from a decision of a County Court judge holding that the defendant was not forced to pay the Council their water rate in respect of their public water supply at Aislaby. Defendant had a good water supply on his own land and he and his tenants used it. When there was a water shortage, however, the villagers passed a resolution asking the plaintiffs to give them a supply, and defendants provided a supply and made a charge of 1s. 3d. in the pound for it.

Mr. Naldrett, for the Council, said the members of the public agreed to pay, and the Council was entitled by the Public Health Act, 1875, section 56, to charge a rent; and the judge misdirected himself in holding Mr. Agar did not agree to pay and that no agreement was binding on him because there was none in writing. The question was whether the possession of a gratuitous supply exempted him from liability to pay water rate. Counsel contended the Council took over this spring, and in relieving it of some of those who made a draught on it had augmented the quantity available for Mr. Agar; the spring vested in the Council as part of their water system, and if the defendant did not pay the rate they could exclude him from it.

Mr. Blanco White, for the defendant, said it was unthinkable that a landowner should be asked to pay a water rate for water welling up in his own land.

The Court dismissed the appeal.

Mr. Justice Swift, giving judgment, said he would not consider Mr. Agar's position as a landowner as it was not raised in the County Court, but he would regard him as an ordinary member of the public who by long usage took water out of the well until he acquired a right to take it and converted the well into a public well. The well became vested in the local authority in due course, by section 64 of the Public Health Act, and Mr. Agar must be treated as having no more interest in it and no more right to water from it than any other member of the public. But his lordship found that the local authority was not supplying Mr. Agar with water; he took it from a field on his estate, and as a member of the public he and his predecessors had been entitled to take it from time immemorial. The well did not rest in the local authority to make it their absolute property, but only that they might protect the public interest in it. They had no absolute right to do what they liked with the well. If they had, section 70 would not have gone into the Act requiring the local authority, if the source of supply became polluted, to go before a court of summary jurisdiction to close it. The local authority, he held, had no power to deprive Mr. Agar of his right to use this particular well. The position was that this was a gratuitous supply of water, and the Council was to do all that was necessary to maintain it as such.

Mr. Justice Finlay concurred.

ARCHITECT'S CLAIM FOR COMMISSION

Beard v. *Debenham, Tewson and Chinnocks. King's Bench Division. Before Mr. Justice Mackinnon.*

This case, said his lordship, showed that the plaintiff, Mr. John Stanley Beard, an architect, of National Board House, Baker Street, had been treated rather badly, and that he had good ground for recovering from a party other than defendants, who are estate agents of Park Place, W. Plaintiff alleged that he was entitled to recover £370 odd from defendants as a third share of their commission under an agreement in the sale of a cinema site in Victoria Street, S.W.

The defence set up was that the agreement sued upon was void because 1: the plaintiff, when he asked the defendants for commission, did not tell them that he was agent for the purchaser and acting as his architect; 2: that he did not inform his principal that he was applying for the commission; and 3: that the agreement gave the plaintiffs an interest above the interests of his principal and, therefore, his interest conflicted with duty to his principal.

Mr. M. Druquer appeared for the plaintiff and Mr. W. Bowstead for the defendants.

Mr. Druquer said that a client of the plaintiff's, Mr. Vernon Hardwicke, was looking for a cinema site, and plaintiff told him of the one that was for sale in Victoria Street, S.W., for the vendors of which, a firm of brewers, the defendants were agents. He wrote telling the defendants that Mr. Hardwicke would call, and obtained from them an agreement to pay him one-third commission in the event of the sale going through. The sale took place, but defendants had declined to pay Mr. Beard commission, alleging that the agreement entered into was illegal and unenforceable on the ground that plaintiff never disclosed that he was an agent for a principal. The evidence was that, after Mr. Beard received his agreement from the defendants, Mr. Hardwicke wrote to the defendants saying he was prepared to pay Mr. Beard; but when Mr. Beard contended that defendants were liable under their agreement, Mr. Hardwicke consented to reimburse defendants any sum they might pay plaintiff. Defendants, however, seemed to think that as plaintiff acted as architect he could not also claim commission.

Plaintiff gave evidence, and said Mr. Hardwicke was aware of the agreement to get commission from defendants if the sale went through. He received no payment from Mr. Hardwicke for all the advice he gave him about the site and its possibilities, although, of course, he hoped to get the position as architect when the building took place. He had sued Mr. Hardwicke for fees. He would not charge Mr. Hardwicke for the advice he gave him if the defendants had not promised him commission.

Mr. Bowstead, for the defendants, agreed that if plaintiff told his principal, before he applied for the share of the commission, that he was applying for it, then the agreement he got from the defendants would have been legal, but that was not done in this case. The law would not allow an agent to do anything that was in conflict with his principal's interests. In this case by claiming a share of commission the agent might have forced his principal to pay more for the property than he otherwise would have paid.

His lordship dismissed the plaintiff's claim with costs. In giving judgment his lordship observed that this case was free from the moral obliquy that often attached to allegations of secret commission; there seemed nothing improper in plaintiff asking the defendants for a share of their commission; but he thought plaintiff was agent for a principal in this transaction, although

at the time he had no arrangement to receive fees from Mr. Hardwicke for the advice he gave. However, as agent for Mr. Hardwicke, it was his duty to watch that gentleman's interest and inform him of any commissions he might be receiving. In fact, he thought that had plaintiff told Mr. Hardwicke beforehand that he was arranging to get a share of the defendants' commission he would not have been rebuffed, because then Mr. Hardwicke would have been relieved of the obligation to pay plaintiff's fees for the advice he gave. It was plaintiff's duty to inform Mr. Hardwicke of the bargain he had made, and his lordship thought that had not been done. Therefore, as plaintiff could not show that his principal approved of the bargain the defendants' defence prevailed. He was sorry for plaintiff, who had been treated rather badly, and he thought, if he claimed from Mr. Harwicke his fees for the advice he gave him about the site and its possibilities for a cinema, that Mr. Hardwicke could have no good ground for refusing to pay.

SOCIETIES AND SCHOOLS

Liverpool University School of Architecture

Following are the results of the prizes, scholarships, and examinations just issued by the Liverpool University School of Architecture. All those who have passed the fifth examination, either degree or diploma, are eligible for their R.I.B.A.'s, and all those who have passed the third examination, either degree or diploma, are exempt from their intermediate R.I.B.A.:

	Value.	Year.	Name of Student.
The Gordon Selfridge Prize in Architecture	£10	Second	Lunn, N. S.
Holland and Hannen and Cubitts Prizes for Working Drawings	£10	Second	Timmis, C. J.
Ditto	£10	Third	Hughes, J. Stephenson, G.
Ditto	£10	Fourth	Knowles, H. J. Plant, W. G. Wilkinson, H. H.
The Holt Travelling Scholarship	£50	Third	Stephenson, G.
Measures Drawing Prize ..	£5	Third	Hutton, C. W.
The Charles Anthony Minoprio Prize	£5	Third	Kenyon, G.
The White Star Line Prize ..	£10 10s.	Fourth	Cowin, J. N. Freeman, P. G.
John Rankin Prizes ..	£12	Fourth	Freeman, P. G.
	£12	Fifth	Powell, H. H.

FACULTY OF ARTS

Degree of B.Arch.

FIFTH EXAMINATION

Honours in Architectural Design: Class II

Hough, G. C.

Honours in Architectural Construction: Class II

Docking, S. J. Neumann, M. C.

Ordinary Degree

Powell, H. H. el Tawil, M. Z.

FOURTH EXAMINATION

[For Honours in Architectural Design]

Eden, W. A. Hough, G. C.
Ellis, H. G. Wright, L.
Freeman, P. G.

[For Honours in Architectural Construction]

Neumann, M. C. Wilkinson, H. H.

THIRD EXAMINATION

Archer, Hilary Holford, W. G.
Dawbarn, C. Y. Hutton, C. W.
Gilham, E. C. Nelson, J. O.
Harper, D. R. Stephenson, G.

SECOND EXAMINATION

Baird, Margaret M. Mitchell, N. B.
Best, A. M. Mitchell, T. N.
Bolsover, G. Roberts, R. E.
Gardner-Medwin, R. J. Rossell, R. E.
Goodacre, N. W. Winston, D.
Lunn, N. S. Worsnip, J. V.
Miles, Marjorie

FIRST EXAMINATION

Blair, W. Lake, H. J.
Dowling, R. H. Rathmell, M.
Fidler, A. G. S. Smith, R. V.
Gearey, K. W. de Soysa, E. L. F.
Hope, A. H. Stammers, Constance S.
Horsburgh, E. R. Thomson, W. K.
Hubbard, R. P. S. Wilkinson, J. G.

Diploma in Architecture

FIFTH EXAMINATION

Distinction in Architectural Design

Bramhill, H. MacGillivray, I. D.
Hughes, J. L. Owen, A.

Distinction in Architectural Construction

Solomon, D. B.

Ordinary Diploma

Butling, G. A. Hall, D.
Davidson, A. J. Isherwood, J. H. I.
Doran, P. J. Parry, H. T.

FOURTH EXAMINATION

[For Distinction in Architectural Design]

Bramhill, H. Doran, P. J.
Burrows, A. C. Owen, A.
Davidson, A. J.

[For Distinction in Architectural Construction]

Hillier, N. B. Plant, W. G.
Knowles, H. J. Solomon, D. B.

Ordinary Diploma

Ashworth, A. T. Poulton, D.
Kelly, S. W.

THIRD EXAMINATION

Archibald, R. M. Morter, P. S. P.
Fairless, C. L. O'Flynn, E. P. J.
Griffith, R. G. Owen, H.
Hughes, J. Woods, H. J.
Kenyon, G. Wright, J. H.

SECOND EXAMINATION

Banister, H. Shennan, W. M.
Kelly, R. H. Sheridan, G. R.
Mukhtar, A. Stirrup, G.
Ormrod, F. J. M. Timmis, G. J.
Parker, R. G. Weerasinghe, O. F.
Richardson, Rachel J.

FIRST EXAMINATION

Beard, R. W. McIntosh. Jean
Cousins, W. E. Mayo, Mary I.
Crighton, A. Parkinson, J. L.
Davies, T. E. Rennie, H. G.
Fraser, Barbara M. Reynolds, P. F.
Hay, Sir A. T. E., Bart. Smith, H. B. K.
Hernandez, L. M. Sydney, P. A.
Lazarus, J. Tulyananda, C.
Littler, F. H. Wyatt, H.

R.I.B.A. Statutory Examinations

The R.I.B.A. statutory examinations for the office of district surveyor under the London Building Acts, or building surveyor under local authorities, will be held at the R.I.B.A., London, on October 17, 18, and 19, 1928. The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is October 1. Full particulars of the examinations and application forms can be obtained from the secretary, R.I.B.A.

CORRESPONDENCE

HOUSING COSTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Lady Walston, the chairman of the Pulford Street Site Committee, in her most courteous letter published on July 4, raised certain issues involved in her appeal for £32,000 to purchase two acres of land in Westminster for housing purposes.

The price is, of course, exceptionally high, and is significant of the zeal of those anxious to find better accommodation for Westminster people who are compelled to live for the time being near to their daily work.

I must, however, refute her suggestion that she "satisfied" me at a recent meeting that it is possible to erect "working-class dwellings at cheap and economic rent" on this land without a heavy loss. Will the committee be prepared to state, for the information of architects and others interested in the housing problem, their answer to the following questions:

1: How many flats they expect to erect on two acres?

2: How many stories in height?

3: What is the estimated cost?

4: What will be the total sum needed each year to pay interest on capital expended, and allow for repairs?

5: What rent per room do the committee regard as "cheap" for Westminster?

6: Who is the architect?

I am in no way antagonistic to the proposal, but as the chairman has written stating that she had "satisfied" me, it is my duty to reply that she has not given me definite replies to the above questions.

B. S. TOWNROE

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Mr. Harris asked the Under-Secretary of State for the Home Department, as representing the First Commissioner of Works, if he would state what was the policy of his department in the selection of architects for public buildings of first-class importance; how far their designing was now confined to officials in his department; and whether he gave reasonable opportunity to eminent architects in private practice to submit designs for important public works so that the State should have the service of the best architects available?

Sir V. Henderson said it was the policy of the First Commissioner of Works to utilize, as far as possible, the services of the architects in his department for designing the public buildings for which he was responsible; but in the case of a building of outstanding importance, the desirability of giving eminent architects in private practice reasonable opportunity to submit designs was always carefully considered.

Mr. Hurd asked the Minister of Transport if his attention had been called to the protests of district councils and other bodies, as, for instance, Eastbourne, against the proposed erection of high standards over the countryside in order to carry the new national electric cables; and what steps he was taking in this matter to carry out the intention of the Government to preserve the beauty of rural England?

Colonel Ashley said he could not find that he had received any protests against the erection of the standards for the lines of the Central Electricity Board. In order to carry out schemes under the Act of 1926 it was necessary to erect overhead transmission lines, but he had reason to know that the Central Electricity Board were anxious to carry out this work so as to interfere as little as possible with rural amenities.

Asked by Mr. Harris whether a conference had been arranged or was contemplated between his department, the L.C.C., and the Southern Railway on the question of Charing Cross Bridge, and whether, in view of the urgency of the question, as the reconstruction of Waterloo Bridge was dependent on the decision arrived at on the Charing Cross scheme, he would arrange for such a conference as soon as possible? Colonel Ashley said he was personally in close touch with representatives of the L.C.C. and the Southern Railway, and a conference had been arranged to take place.

TRADE NOTES

From July 18 to 20 the motor travelling caravan of the National Radiator Company, Ltd., which contains an Ideal Cookanheat installation, will be demonstrated at stand number 65 at the Great Yorkshire Agricultural Show at Halifax.

A cleaning shed for the Southern Railway with over 145,000 sq. ft. of floor space is nearing completion at Victoria on the site of the old Victoria basin. During the summer season it is anticipated that over thirty trains daily will receive attention in this shed, and they will enter and leave on a sleeperless railway track, the rails being embedded directly on to a concrete floor. The floor will therefore have to withstand a load of some 12,000 tons daily, which constitutes a severe test. The thickness of the concrete under the rails is 12 in. to 14 in., whilst the concrete for the remainder of the floor is 4 in. to 5 in. thick. Over 800 tons of Blue Circle Portland cement have been used on this work.

COMPETITION CALENDAR

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

July 30. New Town Hall in West Marlands, for the County Borough Council of Southampton. Assessor: Mr. H. Austen Hall, F.R.I.B.A. Premiums: £500, £300, £150. Total cost not to exceed £385,000. Particulars from the Town Clerk, Municipal Offices, Southampton.

September 1. The Council of the R.I.B.A. have accepted an offer from the directors of the Gloster Aircraft Co., Ltd., and Messrs. H. H. Martyn & Co., Ltd., to give a prize for the best imaginative scheme for a London aircraft terminus suitable to the supposed requirements of air traffic fifteen years hence. The competition is open to Associates, elected Students, or registered Probationers of the R.I.B.A. below the age of thirty years on September 1. The competition will be in two stages. From the preliminary competition ten competitors will be selected for the final, and each will be paid £5 for his expenses. The closing date for the final is January 10. There will be two prizes in the final, a first prize of £125 and a second prize of £25. The following have consented to form the jury to award the prizes: Sir Sefton Brancker, K.C.B., Mr. C. Cowles-Voysey, Mr. E. Vincent Harris, Sir Edwin Lutyens, R.A., Major R. Mayo (consulting engineer, Imperial Airways, Ltd.), Mr. T. S. Tait, Mr. Maurice E. Webb, Mr. G. E. Woods-Humphery (general manager, Imperial Airways, Ltd.). Particulars may be obtained free on application at the R.I.B.A.

September 5. School at Rickmansworth to accommodate 400 senior girls, for the governors of Royal Masonic Institution for Girls. Assessor: Mr. H. V. Ashley, F.R.I.B.A. Premiums: £750, £500, £400, £300 and £200. Particulars from Mr. M. Beachcroft, 31 Great Queen Street, W.C.2. Deposit £2 2s.

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 only may be used 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

MIDLAND BANK LIMITED

The directors of the Midland Bank Limited announce an interim dividend for the half-year ended June 30 last at the rate of 18 per cent. per annum less income tax. The dividend for the corresponding period of 1927 was at the same rate.

THE WEEK'S BUILDING NEWS

The BIRMINGHAM Corporation has in view the following schemes: Acquisition of properties on arterial roads, £85,837; public conveniences, £2,750; sewerage works, £305,242; Suffolk Street widening, traffic control, £32,650; road construction and omnibus routes, £50,720; footpaths, £75,000; Holly Lane Bridge, Erdington, £6,100; Quinton, etc., town-planning scheme, £17,656.

*

The BIRMINGHAM Education Committee is to erect a junior school at Fir Tree Road, Birches Green, at a cost of £18,050.

*

The trustees of St. Thomas' Church School are to extend the school, St. Thomas Circle, OLDHAM.

*

Plans passed by the WATFORD Corporation: two houses, Kelmscott Crescent, for Mr. S. H. Swain; three houses, Nascott Avenue, for Mr. S. W. Cocks; smith's shop and stores building, Tolpits Lane, for Scammell Lorries, Ltd.; alterations, 137 High Street, for Messrs. Melias; additions and alterations, 18 Queen's Road, for Mr. J. W. Russell; three houses, Bucks Avenue, for Mr. A. J. Eldridge; ten houses, Woodland Drive, for Mr. A. J. Eldridge; alterations and additions, Queen's Road, for Messrs. Selfridge & Co.; two houses and shops, 46 Market Street, for Mr. C. H. Collins; additions and alterations, 10 Cassio Hamlet, for the Langley Estates, Ltd.; alterations and additions, "Essex Arms," High Street, for the licensee.

*

Plans passed by the BRADFORD Corporation: Eight houses, St. Leonard's Grove, for Messrs. F. P. Leach and Sons, Ltd.; two houses, Moor Top Road, Low Moor, for Mr. H. E. Peachey; fifteen houses, Hutton Road, Hawes Crescent and Hawes Road, for Mr. J. Priestley; four houses, Whitehead Place, for Messrs. A. Cansfield and Sons; four houses, Victoria Road, Eccleshill, for Messrs. R. R. North & Co.; four houses, Thorn Grove, for Mr. A. and K. Chippindale; four houses, Ascot Avenue, for Messrs. E. Balmforth and Sons; four houses, Haycliffe Drive, for Messrs. Shepherd Bros. and Brown; two houses, Briarwood Drive and Bradlaugh Road, for Mr. J. A. Groves; four houses, Cleckheaton Road, for Mr. J. Bentley; eight houses, Brierwood Crescent, for Mr. J. A. Groves; five houses, Fairfield Road, for Mr. J. Bentley; four houses, Leamington Drive, for Messrs. W. North and Son; three bungalows, Hawes Road, for Mr. S. Priestley; twenty-two houses, Bolingbroke Street and Hastings Avenue, for Mr. H. Farnish.

*

The Board of Education has approved the final plans for the new school to be erected by the Surrey Education Committee at Castelnau, BARNES, at a cost of £17,720.

The BIRKENHEAD Education Committee is now to proceed with the erection of an elementary school for 500 boys and 500 girls, a junior school for 700 at Rock Ferry, a central school for 1,000, and a junior elementary school for 700 in the northern area.

*

Plans passed by the STRETFORD U.D.C.: Offices, Trafford Park Road, for Messrs. Co-operative Wholesale Society, Ltd.; bank, Ashburton Road, for the Westminster Bank, Ltd.; two houses, Ruskin Road, for Messrs. Smith and Allcock; two houses, Cecil Road, for Mr. H. W. Maunders; extension to works, Ayres Road, for Messrs. International Wafer Co.; joiners' shop, off Park Road, for Messrs. D. Anderson and Son, Ltd.

*

The STRETFORD U.D.C. has asked the surveyor to prepare a scheme comprising approximately 250–300 houses (two- and three-bedroom types), together with an estimate of the "all-in" cost.

*

The Governors of the ANCOATS Hospital are to extend the hospital to provide accommodation for an additional 100 beds.

*

Plans passed by the FARNHAM U.D.C.: House, Weybourne, for Mr. C. Leaper; bungalow, Three Stiles, for Messrs. G. Baigent and Sons; subsidy bungalow, Buller's Road, for Mr. A. J. Lehman; houses, Menin Way, for Mr. E. Stock; house and business premises, Firgrove Hill, for Mr. H. S. Burningham; bungalow, Longley Road, for Mr. A. J. Figg; alterations, "Six Bells" public-house, for Watney, Combe, Reid & Co.

*

The STAYLBRIDGE Corporation is to purchase land at the junction of Huddersfield Road and Buckton Vale Road as a site for the provision of working-class houses.

*

The STALYBRIDGE Corporation is seeking sanction to borrow £37,576, for the erection of 106 houses of a cheaper working-class type on the "Hague" site.

*

The LEEDS Corporation has sold a site in York Road to Messrs. W. and R. Jacob & Co. (Liverpool), Ltd., for the erection of a warehouse.

*

The TORQUAY Corporation is to take steps to acquire land sufficient for the erection of another 200 houses.

*

The WATFORD Corporation has now approved plans in connection with a cinema at The Parade, for the Purple Picture Palace, Ltd. Amendments have been made whereby the capacity and seating accommodation has been increased.

Plans passed by the ROTHERHAM Corporation: Petrol depot, Don Street, for British Petroleum Co., Ltd.; extensions, "Donfield House" public house, Eldon Road, for Messrs. Tennant Bros., Ltd.; pattern store, Don Street, for Messrs. Guest and Chrimes, Ltd.; two houses, Doncaster Road, for Mr. J. B. Kesteven; two houses, Treherne Road, for Mr. George Lancaster; steel-framed building, Alsing Road, for Messrs. Howell & Co., Ltd.; cricket pavilion, Meadowhill Road and Hill Top Lane, for the committee of the Kimberworth Congregational Cricket Club; strong-room, Grove Road, for the Rotherham R.D.C.; alterations and additions, Park Street, for Messrs. Geo. Cartledge, Ltd.

*

Plans passed by the BRISTOL Corporation: Seventeen houses, Queen's Road, Knowle, for the Northville Building Co.; twelve houses, Portway, Shirehampton, for Messrs. E. Dyke and Sons.

*

Plans passed by the BIRKENHEAD Corporation: Showroom, 168 Conway Street; conversion of four houses, 99 to 105 Greenway Road, into houses and shops; alterations, 183 and 185 Beckwith Street; eleven houses and shops, Mount Road.

*

The STRETFORD U.D.C. has passed plans for the erection of a senior boys' school at Old Trafford at a cost of £20,325.

*

At a meeting of the TORQUAY Education Committee, Mr. B. Widdows, architect, attended with preliminary sketch plans of the Barton Council School for 300 junior children, and the plan, based on the Westhill type of school, was generally approved.

*

Plans passed by the TORQUAY Corporation: Alterations and additions, Astwell Hall, Warren Road, for Mr. W. Riley; additions, South Devon Hotel, St. Margaret's Road, for Mrs. Colville Smith; eight houses, Third Avenue, Daison estate, for Messrs. J. Lloyd and Sons; two houses, Berea Road, Warberry Vale estate, for Mr. F. White; eight houses, Chatsworth Road, for Mr. R. E. Narracott.

*

A conference of representatives of urban and rural district councils in the county is to be held at Leicester to consider the proposals of the County Council to erect a joint isolation hospital and tuberculosis sanatorium at MARKFIELD.

*

The Essex Education Committee has passed sketch plans for the enlargement of South CHINGFORD Council School to provide accommodation for approximately 400 additional children, at an estimated cost of £14,094.

Messrs. Dymond, Findeisen and Tosswill are to reconstruct 101, 103, 105, 107, 109, and 111 Babbacombe Road, TORQUAY.

*

The CHELTENHAM Corporation has approved amended plans prepared by the borough engineer for the alteration to the municipal offices, including 21 and 27 Promenade.

*

The COULSDON U.D.C. is in negotiation with Messrs. Blake, Son and Williams regarding the development of the Old Lodge estate.

*

Plans passed by the ROTHERHAM Corporation: Additions, "Fullerton Arms," Sheffield Road; The Baths Inn, Westgate, and Shakespeare Inn, Eldon Road, for Messrs. Witworth, Son, and Nephew, Ltd.; three houses, Clifton Lane, for Mr. Garvin Bilton; depot, Northfield Road, for Russian Oil Products, Ltd.; extensions, Meadowhall Road, for Messrs. Geo. Turton Platts & Co., Ltd.

*

The COULSDON U.D.C. Public Buildings Committee has considered the procedure to be adopted with regard to the submission by the architects of detailed plans of the premiated design for the new council offices, and decided to confer with the architects with a view to the preparation of detailed plans of the new offices.

*

The SMETHWICK Corporation has acquired a housing site in Halfords Lane.

*

The Essex Education Committee has acquired premises for the extension of the COLCHESTER County High School for Girls.

*

Plans passed by the HACKNEY B.C.: Structural alterations, Restall's Garage, 241 Lower Clapton Road, for Messrs. T. W. Kingsland and Sons; structural alterations, caretaker's cottage, and addition to Clergy House, Eton Mission, Gainsborough Road, for Messrs. R. Brown Bros.; factory, Belfast Mews, for Messrs. F. Dod & Co.; additions, 47 and 49 Hackney Grove, for Messrs. T. Gates and Sons; factory, 92-100 Stoke Newington Road, for Mr. H. Kent; concert and billiard hall, Well Street, for Mr. S. S. Holden; extension to factory, Hackney Grove, for Messrs. V. C. Bond and Sons.

*

The South Metropolitan Gas Company is to purchase from the LONDON C.C., for £25,000, the freehold of the Old Kent Road tramways depot. The property has frontages to Old Kent Road, Leo Street, and Gervase Street.

*

The L.C.C. Education Committee has purchased a site for an elementary school in Cooper's Lane, Burnt Ash Hill, LEWISHAM.

*

The HAMPTON U.D.C. has purchased the Hillfield site for the erection of ninety-five houses.

The Prudential Assurance Co., Ltd., is to redevelop a site between Warwick Road and the west side of Warwick Close, KENSINGTON.

*

The L.C.C. Education Committee has approved preliminary plans for the erection of an elementary school on the STREATHAM Vale estate, at a cost of £40,846.

*

The L.C.C. Education Committee has decided to provide central schools for the accommodation of 400 boys and 400 girls at Downham, LEWISHAM, S.E.

*

The L.C.C. Education Committee is to purchase premises in Lewisham High Road, DEPTFORD, for the extension of the site of the South-east London Technical Institute.

*

The L.C.C. Education Committee is to erect a school for about 400 children on the Back-alley site at BOW and Bromley, and to enlarge the "Old Palace" School.

*

The L.C.C. Education Committee is to erect a central school for about 400 children, and a school for about 400 junior children on the Hope Street site, ISLINGTON.

*

Plans passed by the BARNSLEY Corporation: Shop, Carlton Lane, Smithies, for Mr. E. Jones; house and garage, Cavendish Road, for Mrs. Owram; house, Cavendish Road, for Mr. W. Methley; house and shop, Doncaster Road, for Mr. F. Hey; two houses, Greenfoot Lane, for Mr. Tom Dand; house, Pontefract Road, Monk Bretton, for Messrs. E. Oakland & Co., Ltd.; latrines to greyhound racing course, Queen's Ground, for Barnsley Sports Club.

*

Plans passed by the SOUTH SHIELDS Corporation: Alterations, 1 Harwick Street, for Mr. Howard Hill; alteration to business premises, 4 Victoria Road, for Mr. Frank Lake; fourteen garages, Village Terrace, for Mr. C. J. Daniels; bungalow, South View Terrace, Green Lane, for Mrs. E. N. Maloy.

*

Plans passed by the HAMPTON U.D.C.: Bottle-beer store, 21 Priory Road, for Messrs. Watney, Combe, Reid & Co., Ltd.; eleven houses, Holly Bush Lane, for Mr. W. Ellis; twenty-nine houses, Holly Bush Lane and Falcon Road, for Messrs. Snelling and Sharman, Ltd.; additions to Pound Cottage, Hanworth Road, for Messrs. Bentalls, Ltd.; eight houses, Barlow Road and Tudor Avenue, for Messrs. Bullen & Co.; timber storage sheds, Station Depot, Oldfield Road, for the Hampton Timber Co., Ltd.; nineteen houses, Uxbridge Road and Broad Lane, for Mr. S. S. Smith.

*

The BARNSLEY Corporation has decided to erect an additional 150 houses on the Burton Grange estate.

Mr. B. Yeo is to erect ten shops and houses at Watling Avenue, HENDON.

*

The LONDON C.C. Theatres Committee has sanctioned the following alterations at cinemas: Academy (late Picture House), Oxford Street, alterations to auditorium; Brixton Astoria, Stockwell Road, provision of a system of heating and ventilating; Charing Cross Cinema, Villiers Street, provision of a system of heating and ventilating; Clock Tower Cinema, Wandsworth Road, enlargement of main entrance vestibule and construction of iron and glass shelter; Electric Pavilion, Marble Arch, installation of new organ; Empire Kinema, High Street and Garibaldi Street, alterations to seating and to orchestra enclosure; Globe Cinema, Skinner Street and Goode Street, alterations to stage, auditorium and cinematograph enclosure and provision of additional dressing-rooms; Greenwich Hippodrome, provision of additional staff accommodation; Lido Palace (Old Town Hall), Islington, revised heating and ventilating arrangements; New Clarence Cinema, Mare Street, revised heating and ventilating arrangements and provision of lighting installation; Palladium Picture Theatre, Mile End Road, reconstruction and provision of heating, ventilating, and electric lighting installations; Peckham Hippodrome, reconstruction of premises; Regal Cinema, Marble Arch, arrangements in connection with ventilating installation and lifts and motor rooms.

*

The Treasury has obtained control of the vaults on a site at Lancaster Place, LONDON, on which it is proposed at some future date to erect buildings for the use of the Board of Inland Revenue.

*

The LEEDS Corporation is seeking sanction to borrow £46,400 for the erection of twenty-four cottage flats and sixty-two houses on the York Road and Selby Road housing estate, and fifty houses on the Meanwood housing estate.

*

The STRETFORD U.D.C. proposes to grant another 250 housing subsidies.

*

The SHEFFIELD Education Committee is to erect an elementary school at Woodhouse Mill.

*

The LONDON C.C. is to spend £29,500 on works to prevent the flooding from the Thames of the districts of Wandsworth and Fulham.

*

The ROTHERHAM Education Committee has prepared revised plans for the proposed central and infants' schools to be erected at Cranworth Road.

*

The ROTHERHAM Education Committee has obtained sanction to acquire the proposed site in Howard Street for the erection of a technical college and school of art.

READERS' QUERIES

The Editor welcomes readers' inquiries on all matters connected, directly or indirectly, with architectural practice. These inquiries are dealt with by a board of experts, to which additions are constantly being made as, and when, need arises. No charge is made to readers for this expert service. Diagrams must be clearly and legibly drawn out and lettered in black ink. Querists must enclose name and address.—Ed. A. J.

A GEOMETRICAL TRUE SHAPE

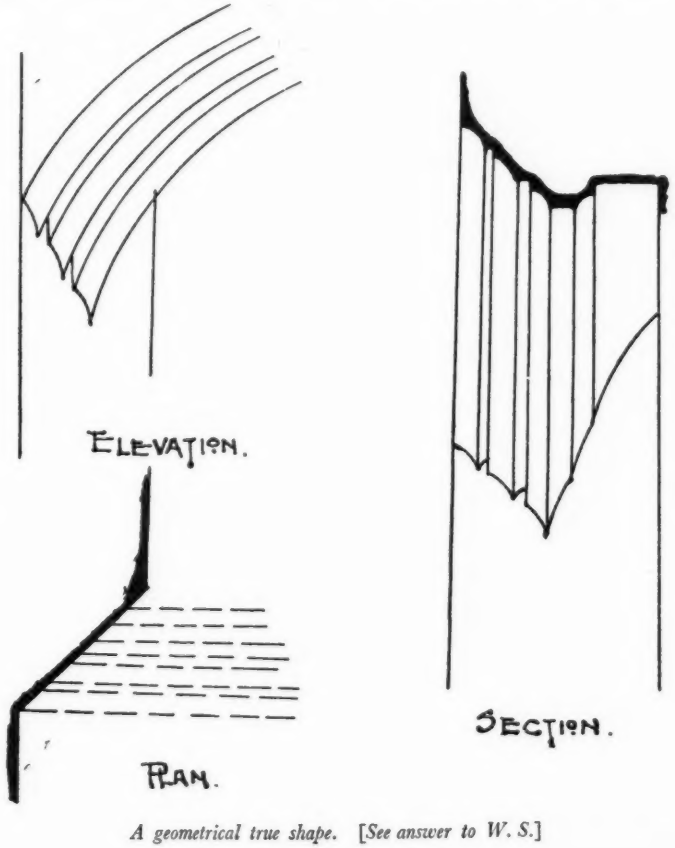
W. S. writes: "*How can the true shape of the mouldings round a two-centred arch be arrived at when dying-off on to a 45 degree jamb, as shown on the accompanying sketch?*"

If the arch is already built it is probably as simple an operation to measure the full-size section of the arch ring as to arrive at it geometrically. A template prepared in a sheet of zinc or three-ply wood by filing and repeated application to the arch gives the true shape of the mouldings as accurately as possible. In making a template, the widths are first marked on the sheet and ordinates are taken from a base line to represent the depths of the recessed mouldings on a plane normal to the curve. The "Adjusto" patent template is adapted to perform such functions mechanically. To obtain the true shape geometrically without direct measurement it is necessary to know the level of the centre and the radius of the curve in relation to the point of contact of the arch with the splayed jamb. It is then possible to work out the true shape by projection if the angle of splay and the line of intersection of arch and splay are known.

A plan is first drawn showing the widths and directions of the several moulded members of the arch. If the true widths are unknown, they may be ascertained by marking the distorted widths shown on the known true shape of the intersection line upon the plan of the splay and drawing parallels to the plan of the face of the arch. The true width of each moulded member will then be the smallest distance between the parallels on plan representing the traces of vertical planes containing that member. This fact makes it convenient that the true shape should be drawn in connection with the plan by using the parallels as projectors to mark the true widths.

An accurate elevation is then drawn by projection from the plan showing a foreshortened view of the line of intersection of arch and jamb. The width dimensions are projected up from the plan, and the heights are true heights taken from the known true shape of the intersection of the arch and jamb. The position of the centre from which the arch is struck must then be marked and a series of concentric arcs drawn to represent the elevations of the moulded members of the arch. The ends of these arcs are already marked on the elevation of the jamb at the turns of the foreshortened elevation of the intersection line. These concentric arcs are true elevational shapes and the distances between them on any radius (or line normal to the curves) are true heights, which may be transferred to the horizontal projectors on plan, and when used in conjunction with them the true shape of a normal section of the arch is obtained. The neatest way of drawing the true shape is to continue the curves of the arch members in elevation down to the level of a horizontal line passing through the centre from which the curves are struck, and to drop vertical projectors on to the horizontal projectors from the plan of the jamb. By this means the plan, elevation, and true shape of every point are linked up by continuous projection lines, and the identity of any point in the true shape can be followed back to both plan and elevation. The true outlines of curved parts of the moulded members are determined by taking a series of points on the plan and elevation of the intersection line of arch and jamb and constructing projectors for them parallel to those dealing with the outlines of the plain members of the arch. Each point dealt with in plan, elevation, and true shape should be lettered to facilitate identification. A geometrical convention establishes the use of a small italic letter for a point on plan, the same type of italic letter with a minute sign for a point in elevation and a capital letter for a point in a true shape—*a*, *a'*, A.

W. H.



A geometrical true shape. [*See answer to W. S.*]

ARCHITECT'S LICENCE

R. H. writes: "*Is it necessary for an architect to take out a valuer's or appraiser's licence, when reporting and estimating as to the value of property for advances on loan, either by instalments during building operations or for total amounts on completion, as one would do in reporting and estimating for advances on loan by a building society, or by a public authority, under the Housing Act? Also whether such reports and estimates require stamping? I have always understood that when a report and estimate is given for the information of one party only, a licence is not required, and such a report and estimate requires no stamping; a licence and stamping only being necessary for valuations between parties in dispute, or for probate purposes and such like documents.*"

When a valuation of property—whether real or personal—is made for the information of one party only (e.g. a surveyor reporting to his principal) no Government "Appraiser's Licence" is needed, and no stamp is necessary on the instrument of valuation. "Appraiser's Licences Act, 1806 (46 Geo. III, c. 43)." These exceptions would appear to be plainly applicable to all the circumstances mentioned in the question—though I am a little doubtful about the building society, and care should be taken not to overstep the limitation line.

F. S. I.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 7½	1 2¼
A1	Abergavenny	S. Wales & M.	1 7	1 2½
B	Abingdon ..	S. Counties	1 5½	1 1½
A	Accrington	N.W. Counties	1 7½	1 2¼
A3	Addlestone	S. Counties	1 6	1 1½
A	Adlington ..	N.W. Counties	1 7½	1 2¼
A	Airdrie ..	Scotland	*1 7½	1 2¼
C1	Aldeburgh	E. Counties	1 3	1 1½
A	Altrincham	N.W. Counties	1 7½	1 2¼
B2	Appleby ..	N.W. Counties	1 4	1 0
A	Ashton-under-Lyne	N.W. Counties	1 7½	1 2¼
A3	Atherstone	Mid. Counties	1 6	1 1½
B3	Aylesbury ..	S. Counties	1 4	1 0
B3	BANBURY ..	S. Counties	1 4	1 0
B2	Bangor ..	N.W. Counties	1 4½	1 0½
A	BarnardCastle	N.E. Coast	1 7½	1 2¼
A	Barnsley ..	Yorkshire	1 7½	1 2¼
B1	Barnstaple	S.W. Counties	1 5	1 0½
A	Barrow ..	N.W. Counties	1 7½	1 2¼
A	Barry ..	S. Wales & M.	1 7½	1 2¼
B3	Basingstoke	S.W. Counties	1 4	1 0
B	Bath ..	S.W. Counties	1 5½	1 1½
A	Batley ..	Yorkshire	1 7½	1 2¼
B	Bedford ..	E. Counties	1 5½	1 1½
A2	Berwick-on-Tweed	N.E. Coast	1 6½	1 2
A2	Bewdley ..	Mid. Counties	1 6½	1 2
B3	Bicester ..	Mid. Counties	1 4	1 0
A	Birkenhead	N.W. Counties	*1 7½	1 2¼
A	Birmingham	Mid. Counties	1 7½	1 2¼
A	Bishop Auckland	N.E. Coast	1 7½	1 2¼
A	Blackburn	N.W. Counties	1 7½	1 2¼
A	Blackpool	N.W. Counties	1 7½	1 2¼
A	Blyth ..	N.E. Coast	1 7½	1 2¼
B3	Bognor ..	S. Counties	1 4	1 0
A	Bolton ..	N.W. Counties	1 7½	1 2¼
A2	Boston ..	Mid. Counties	1 6	1 1½
B1	Bournemouth	S. Counties	1 5	1 0½
B2	Bovey Tracey	S.W. Counties	1 4½	1 0½
A	Bradford ..	Yorkshire	1 7½	1 2¼
A2	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 7½	1 2¼
B2	Bridgwater	S.W. Counties	1 4½	1 0½
A1	Bridlington	Yorkshire	1 7	1 2½
A	Brighouse ..	Yorkshire	1 7½	1 2¼
B1	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 7½	1 2¼
B3	Brixham ..	S.W. Counties	1 4	1 0
A2	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 3½	11¼
A	Burnley ..	N.W. Counties	1 7½	1 2¼
A	Bursiem ..	Mid. Counties	1 7½	1 2¼
A2	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 7½	1 2¼
A1	Buxton ..	N.W. Counties	1 7	1 2½
B	CAMBRIDGE	E. Counties	1 5½	1 1½
B2	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 7½	1 2¼
A	Carlisle ..	N.W. Counties	1 7½	1 2¼
B	Carmarthen	S. Wales & M.	1 5½	1 1½
B2	Carnarvon	N.W. Counties	1 4½	1 0½
A1	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford	Yorkshire	1 7½	1 2¼
B1	Chatham ..	S. Counties	1 5	1 0½
B1	Chelmsford	E. Counties	1 5	1 0½
A3	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W. Counties	1 7½	1 2¼
A	Chesterfield	Mid. Counties	*1 7½	1 2¼
B1	Chichester	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7½	1 2¼
B2	Cirencester	S. Counties	1 4½	1 0½
A	Clitheroe ..	N.W. Counties	1 7½	1 2¼
A	Clydebank	Scotland	1 7½	1 2¼
A	Coalville ..	Mid. Counties	1 7½	1 2¼
B	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 7½	1 2¼
A3	Colwyn Bay	N.W. Counties	1 6	1 1½
A	Consett ..	N.E. Coast	1 7½	1 2¼
A2	Conway ..	N.W. Counties	1 6	1 1½
A	Coventry ..	Mid. Counties	1 7½	1 2¼
A2	Crewe ..	N.W. Counties	1 6	1 1½
A3	Cumberland	.....	1 6	1 1½
A	DARLINGTON	N.E. Coast	1 7½	1 2¼
A	Darwen ..	N.W. Counties	1 7½	1 2¼
B2	Deal ..	S. Counties	1 4½	1 0½
A3	Denbigh ..	N.W. Counties	1 6	1 1½
A	Derby ..	Mid. Counties	1 7½	1 2¼
A	Dewsbury	Yorkshire	1 7½	1 2¼
B	Didcot ..	S. Counties	1 5½	1 1¼
A	Doncaster ..	Yorkshire	1 7½	1 2¼
C1	Dorchester	S.W. Counties	1 3	11¼
A3	Driffield ..	Yorks	1 6	1 1½
A3	Droitwich	Mid. Counties	1 6	1 1½
A1	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7½	1 2¼
A	Durham ..	N.E. Coast	1 7½	1 2¼
B1	EAST-BOURNE	S. Counties	1 5	1 0½
A	Ebbw Vale	S. Wales & M.	1 7½	1 2¼
A	Edinburgh	Scotland	1 7½	1 2¼
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 7½	1 2¼
B	Exeter ..	S.W. Counties	*1 5½	1 1½
P2	Exmouth ..	S.W. Counties	1 4½	1 0½
B	FELIXSTOWE	E. Counties	1 5½	1 1½
A3	Filey ..	Yorks	1 6	1 1½
A	Fleetwood ..	N.W. Counties	1 7½	1 2¼
B2	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W. Counties	1 7½	1 2¼
B3	Frome ..	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7½	1 2¼
B1	Gillingham	S. Counties	1 5	1 0½
A3	Gloucester	S.W. Counties	1 6	1 1½
A2	Goole ..	Yorkshire	1 6½	1 2
B	Gosport ..	S. Counties	1 5½	1 1½
A3	Grantham	Mid. Counties	1 6	1 1½
A1	Gravesend	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 7½	1 2¼
A	Grimsby ..	Yorkshire	1 7½	1 2¼
B1	Guildford ..	S. Counties	1 5	1 0½
A	HALIFAX ..	Yorkshire	1 7½	1 2¼
A	Hanley ..	Mid. Counties	1 7½	1 2¼
A	Harrogate	Yorkshire	1 7½	1 2¼
A	Hartlepools	N.E. Coast	1 7½	1 2¼
B2	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 4½	1 0½
B1	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 5½	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A1	Heysham ..	N.W. Counties	1 7	1 2½
A	Howden ..	N.E. Coast	1 7½	1 2¼
A	Huddersfield	Yorkshire	1 7½	1 2¼
A	Hull ..	Yorkshire	1 7½	1 2¼

The initial letter opposite each entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; column II for labourers; the rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 7½	1 2¼
A	Immingham	Mid. Counties	1 7½	1 2¼
B	Ipswich ..	E. Counties	1 5½	1 1½
C1	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 7½	1 2¼
A	KEIGHLEY	Yorkshire	1 7½	1 2¼
B1	Kendal ..	N.W. Counties	1 5	1 0½
B1	Keswick ..	N.W. Counties	1 5	1 0½
A3	Kettering ..	Mid. Counties	1 6	1 1½
A2	Kiddermin-ster	Mid. Counties	1 6½	1 2
B2	King's Lynn	E. Counties	1 4½	1 0½
A	LANCASTER	N.W. Counties	1 7½	1 2¼
A2	Leamington	Mid. Counties	1 6½	1 2
A	Leeds ..	Yorkshire	1 7½	1 2¼
A	Leek ..	Mid. Counties	1 7½	1 2¼
A	Leicester ..	Mid. Counties	1 7½	1 2¼
A	Leigh ..	N.W. Counties	1 7½	1 2¼
B3	Lewes ..	S. Counties	1 4	1 0
A3	Lichfield ..	Mid. Counties	1 6	1 1½
A	Lincoln ..	Mid. Counties	1 7½	1 2¼
A	Liverpool ..	N.W. Counties	*1 10	1 4½
A3	Llandudno	N.W. Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 7½	1 2¼
	London (12 miles radius)		1 9	1 4
	Do. (12-15 miles radius)		1 8½	1 3½
A	Long Eaton	Mid. Counties	1 7½	1 2¼
A	Lough-borough	Mid. Counties	1 7½	1 2¼
A3	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7½	1 2¼
A1	MACCLES-FIELD	N.W. Counties	1 7	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A3	Malvern ..	Mid. Counties	1 6	1 1½
A	Manchester	N.W. Counties	1 7½	1 2¼
A	Mansfield	Mid. Counties	1 7½	1 2¼
B2	Margate ..	S. Counties	1 4½	1 0½
A2	Matlock ..	Mid. Counties	1 6	1 1½
A	Merthyr ..	S. Wales & M.	1 7½	1 2¼
A	Middles-brough	N.E. Coast	1 7½	1 2¼
A3	Middlewich	N.W. Counties	1 6	1 1½
B2	Minehead ..	S.W. Counties	1 4½	1 0½
A	Monmouth S. and E. Glamorganshire	S. Wales & M.	1 7½	1 2¼
A1	Morecambe	N.W. Counties	1 7	1 2½
A3	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7½	1 2¼
A	Nelson ..	N.W. Counties	1 7½	1 2¼
A	Newcastle ..	N.E. Coast	1 7½	1 2¼
A	Newport ..	S. Wales & M.	1 7½	1 2¼
A	Normanton	Yorkshire	1 7½	1 2¼
A1	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 7½	1 2¼
A	North Shields	N.E. Coast	1 7½	1 2¼
A3	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7½	1 2¼
A	Nuneaton ..	Mid. Counties	1 7½	1 2¼
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 7½	1 2¼
A3	Oswestry ..	Mid. Counties	1 6	1 1½
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 7½	1 2¼
C	Pembroke	S. Wales & M.	1 3½	11¾
A	Perth ..	Scotland	*1 7½	1 2¼
A3	Peterborough	Mid. Counties	1 6	1 1½
A	Plymouth	S.W. Counties	*1 7½	1 2¼
A	Pontefract	Yorkshire	1 7½	1 2¼
A	Pontypridd	S. Wales & M.	1 7½	1 2¼
B	Portsmouth	S. Counties	1 5½	1 1½
A	Preston ..	N.W. Counties	1 7½	1 2¼
A	QUEENS-FERRY	N.W. Counties	1 7½	1 2
A3	READING	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A3	Retford ..	Mid. Counties	1 6	1 1½
A	Rhondda Valley	S. Wales & M.	1 7½	1 2¼
A3	Ripon ..	Yorkshire	1 6	1 1½
A	Rochdale ..	N.W. Counties	1 7½	1 2¼
B	Rochester ..	S. Counties	1 5½	1 1½
A1	Ruabon ..	N.W. Counties	1 7	1 2½
A2	Rugby ..	Mid. Counties	1 6½	1 2
A3	Rugeley ..	Mid. Counties	1 6	1 1½
A	Runcorn ..	N.W. Counties	1 7½	1 2¼
A3	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7½	1 2¼
B3	Salisbury ..	S.W. Counties	1 4	1 0
A1	Scarborough	Yorkshire	1 7	1 2½
A	Scunthorpe	Mid. Counties	1 7½	1 2¼
A	Sheffield ..	Yorkshire	1 7½	1 2¼
A	Shipley ..	Yorkshire	1 7½	1 2¼
A3	Shrewsbury	Mid. Counties	1 6	1 1½
A2	Skipton ..	Yorkshire	1 6½	1 2
A3	Slough ..	S. Counties	1 6	1 1½
A2	Solihull ..	Mid. Counties	1 6½	1 2
A3	South'pton	S. Counties	1 6	1 1½
A2	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ..	N.W. Counties	1 7½	1 2¼
A	S. Shields ..	N.E. Coast	1 7½	1 2¼
A2	Stafford ..	Mid. Counties	1 6½	1 2
A	Stockport ..	N.W. Counties	1 7½	1 2¼
A	Stockton-on-Tees	N.E. Coast	1 7½	1 2¼
A	Stoke-on-Trent	Mid. Counties	1 7½	1 2¼
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 7½	1 2¼
A	Swadlincote	Mid. Counties	1 7½	1 2¼
A	Swansea ..	S. Wales & M.	1 7½	1 2¼
B	Swindon ..	S.W. Counties	1 5½	1 1½
A1	TAMWORTH	N.W. Counties	1 7	1 2½
B1	Taunton ..	S.W. Counties	1 5	1 0½
A	Teeside Dist.	N.E. Counties	1 7½	1 2¼
B	Teignmouth	S.W. Coast	1 5½	1 1½
A	Todmorden	Yorkshire	1 7½	1 2¼
A2	Torquay ..	S.W. Counties	1 6½	1 2
C	Truro ..	S.W. Counties	1 3½	11¾
B1	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall ..	Mid. Counties	1 7½	1 2¼
A	Tyne District	N.E. Coast	1 7½	1 2¼
A	WAKE-FIELD	Yorkshire	1 7½	1 2¼
A1	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7½	1 2¼
A2	Warwick ..	Mid. Counties	1 6½	1 2
A	Welling-borough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 7½	1 2¼
B	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A2	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W. Counties	1 7½	1 2¼
A	Wigan ..	N.W. Counties	1 7½	1 2¼
B2	Winchester	S. Counties	1 4½	1 0½
A3	Windsor ..	S. Counties	1 6	1 1½
A	Wolver-hampton	Mid. Counties	1 7½	1 2¼
A3	Worcester	Mid. Counties	1 6	1 1½
A3	Worksop ..	Yorkshire	1 6	1 1½
A1	Wrexham ..	N.W. Counties	1 7	1 2½
B	Wycombe	S. Counties	1 5½	1 1½
B1	YARMOUTH	E. Counties	1 5	1 0½
B2	Yeovil ..	S.W. Counties	1 4½	1 0½
A	York ..	Yorkshire	1 7½	1 2

* 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, 1*s.* 4*d. per hour*; LABOURER, 1*s.* 4*d. per hour*; NAVVY, 1*s.* 4*d. per hour*; TIMBERMAN, 1*s.* 5½*d. per hour*; SCAFFOLDER, 1*s.* 5*d. per hour*; WATCHMAN, 7*s.* 6*d. 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
Lias 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 grano. 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
HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	0	2	1
DO. 6 in. thick, per yd. sup.	0	2	10
PUDDLING, per yd. cube	1	10	0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3	0
DO. 6-2-1, 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, 1*s.* 4*d. per hour*; TIMBERMAN, 1*s.* 5½*d. per hour*; BRICKLAYER, 1*s.* 9*d. per hour*; PLUMBER, 1*s.* 9*d. per hour*; WATCHMAN, 7*s.* 6*d. 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 cwt.	£2	0	0
Gaskin, per lb.	0	0	4½

*

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

*

Midhurst white facing bricks, per M	£5	0	0
London stocks, per M.	4	15	0
Flettons, per M.	3	0	0
Staffordshire blue, per M.	9	10	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory 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 fireclay, 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
FACINGS 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. 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. 1½ 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 grano. paving to old, per ft. run	0	0	4
Extra for dishing grano. 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	0	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, 1*s.* 9*d. per hour*; DO. *fixer*, 1*s.* 10*d. per hour*; LABOURER, 1*s.* 4*d. per hour*; SCAFFOLDER, 1*s.* 5*d. 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 shelves, 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, 33⅓ 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	9

SLATER AND TILER

SLATER, 1*s.* 9*d. per hour*; TILER, 1*s.* 9*d. per hour*; SCAFFOLDER, 1*s.* 5*d. per hour*; LABOURER, 1*s.* 4*d. 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*
24 in. × 12 in.	£42 11 3	£45 1 0
20 in. × 10 in.	31 4 3	33 0 6
16 in. × 10 in.	20 18 0	22 4 9
14 in. × 8 in.	12 1 0	12 16 3

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 cwt.	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. × 12 in.	£5 0 0	£5 2 0
20 in. × 10 in.	5 5 0	5 10 0
16 in. × 10 in.	4 15 0	5 1 0
14 in. × 8 in.	4 10 0	4 15 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 18*s.* 0*d.* 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, 1*s.* 9*d. per hour*; JOINER, 1*s.* 9*d. per hour*; LABOURER, 1*s.* 4*d. per hour.*

*

Timber, average prices at Docks, London Standard Scandinavian, etc. (equal to 2nds):			
7 × 3, per std.	£21	0	0
11 × 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. × 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 33⅓ per cent.			
FIXING only boarding in floors, roofs, etc., per sq.	0	13	6
SARKING FELT laid, 1-ply, per yd.	0	1	6
DO 3-ply, per yd.	0	1	9
CENTERING for concrete, etc., including horsing and striking, per sq.	2	10	0
TURNING pieces to flat or segmental soffits, 4½ in. wide, per ft. run	0	0	4½
DO. 9 in. wide and over per ft. sup.	0	1	2

continued overleaf.

CARPENTER AND JOINER: *continued.*

SHUTTERING to face of concrete, per square	£1	10	0
DO. in narrow widths to beams, etc., per ft. sup.	0	0	6
USE and waste of timbers, allow 25 per cent. of above prices.			
SLATE BATTENING, per sq.	£0	12	6
DEAL boarding to flats, 1 in. thick and firrings to falls, per square	2	10	0
STOUT feather-edged tilting fillet to eaves, per ft. run	0	0	6
FEATHER-edged springer to trimmer arches, per ft. run	0	0	4
STOUT herringbone strutting (joists measured in), per ft. run	0	0	6
SOUND boarding, ⅞ in. thick and fillets nailed to sides of joists (joists measured over), per square	2	0	0
RUBEROID or similar quality roofing, one ply, per yd. sup.	0	2	3
DO. two-ply, per yd. sup.	0	2	6
DO., three-ply, per yd. sup.	0	3	0
TONGUED and grooved flooring, 1¼ in. thick, laid complete with splayed headings, per square	2	5	0
DEAL skirting torus, moulded 1¼ in. thick, including grounds and backings, per ft. sup.	0	1	0
TONGUED and mitred angles to do.	0	0	6
WOOD block flooring standard blocks laid herringbone in mastic :			
Deal 1 in. thick, per yd. sup.	0	10	0
DO. 1¼ in. thick, per yd. sup.	0	12	0
Maple 1¼ in. thick, per yd. sup.	0	15	0
DEAL moulded sashes, 1¼ in. with moulded bars in small squares, per ft. sup.	0	2	6
DO. 2 in. do., per ft. sup.	0	2	9
DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup.	0	4	6
MOULDED horns, extra each	0	0	3
DOORS, 4-panel square both sides, 1¼ in. thick, per ft. sup.	0	2	6
DO. moulded both sides per ft. sup.	0	2	9
DO. 2 in. thick, square both sides, per ft. sup.	0	2	9
DO. moulded both sides, per ft. sup.	0	3	0
DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup.	0	3	6
If in oak, mahogany or teak, multiply 3 times.			
DEAL frames, 4 in. × 3 in., rebated and beaded, per ft. cube	£0	15	0
Add for extra labours, per ft. run	0	0	1
STAIRCASE work :			
DEAL treads 1¼ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1¼ in. thick, moulded, per ft. run	0	2	6
If ramped, per ft. run	0	5	0
SHORT ramps, extra each	0	7	6
ENDS of treads and risers housed to strings, each	0	1	0
2 in. deal mopstick handrail fixed to brackets, per ft. run	0	1	6
4½ in. × 3 in. oak fully moulded handrail, per ft. run	0	5	6
1¼ in. square deal bar balusters, framed in, per ft. run	0	0	6
FITTINGS :			
SHELVES and bearers, 1 in., cross-tongued, per ft. sup.	0	1	6
1¼ in. beaded cupboard fronts, moulded and square, per ft. sup.	0	2	9
TEAK grooved draining boards, 1¼ in. thick and bedding, per ft. sup.	0	4	6
IRONMONGERY :			
Fixing only (including providing screws) :			
TO DEAL—			
Hinges to sashes, per pair	0	1	2
Do. to doors, per pair	0	1	7
Barrel bolts, 9 in., iron, each	0	1	0
Sash fasteners, each	0	1	0
Rim locks, each	0	1	9
Mortice locks, each	0	4	0

SMITH

SMITH, *weekly rate equals* 1s. 9½d. *per hour ;* MATE, *do.* 1s. 4d. *per hour ;* ERECTOR, 1s. 9½d. *per hour ;* FITTER, 1s. 9½d. *per hour ;* LABOURER, 1s. 4d. *per hour.*

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Mild Steel in British standard sections, per ton	£12	10	0
Sheet Steel :			
Flat sheets, black, per ton	17	0	0
DO., *galvd., per ton*	19	0	0
Corrugated sheets, galvd., per ton	18	10	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts per cwt. and up	1	18	0

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MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO., in small sections as reinforcement, per ton	16	10	0
DO., in compounds, per ton	17	0	0
DO., in bar or rod reinforcement, per ton	20	0	0
WROT-IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO., in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

PLUMBER

PLUMBER, 1s 9½d. *per hour ;* MATE OR LABOURER, 1s. 4½d. *per hour.*

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Lead, milled sheet, per cwt.	£1	9	0
DO. *drawn pipes, per cwt.*	1	10	0
DO. *soil pipe, per cwt.*	1	12	0
DO. *scrap, per cwt.*	1	0	0
Copper, sheet, per lb.	0	1	3
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	9
Cast-iron pipes, etc. :			
L.C.C. soil, 3 in., per yd.	0	4	0
DO. *4 in., per yd.*	0	4	9½
R.W.P., 2½ in., per yd.	0	2	2
DO. *3 in., per yd.*	0	2	7
DO. *4 in., per yd.*	0	3	6½
Gutter, 4 in. H.R., per yd.	0	1	6½
DO. *4 in. O.G., per yd.*	0	1	10½

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MILLED LEAD and labour in gutters, flashings, etc. per cwt.	3	2	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	0
DO. ¾ in., per ft.	0	2	3
DO. 1 in., per ft.	0	3	0
DO. 1¼ in., per ft.	0	4	0
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
WIPED soldered joint, ½ in., each	0	2	6
DO. ¾ in., each	0	3	2
DO. 1 in., each	0	3	8
BRASS screw-down stop cock and two soldered joints, ½ in., each	0	11	0
DO. ¾ in., each	0	13	6
CAST-IRON rainwater pipe, jointed in red lead, 2½ in., per ft. run	0	1	7
DO. 3 in., per ft. run	0	2	0
DO. 4 in., per ft. run	0	2	10
CAST-IRON B.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	0
DO. O.G., 4 in., per ft.	0	2	3
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	4	6
DO. 3 in., per ft.	0	3	6
Fixing only :			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS, with all joints	1	3	6
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

PLASTERER, 1s. 9½d. *per hour (plus allowances in London only) ;* LABOURER, 1s. 4d. *per hour.*

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Chalk lime, per ton	£2	17	0
Hair, per cwt.	2	0	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	9
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	5
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	3	9	0
Lath nails, per lb.	0	0	4

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LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ¾ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	3
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1s. 8d. *per hour.*

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Glass : 4ths in crates :			
Clear, 21 oz.	£0	0	4½
DO. *26 oz.*	0	0	5
Cathedral white, per ft.	0	0	7½
Polished plate, British ¼ in., up to 2 ft. sup. per ft.	0	1	2
DO. *4 ft. sup.* ,,	0	2	3
DO. *6 ft. sup.* ,,	0	2	6
DO. *20 ft. sup.* ,,	0	3	1
DO. *45 ft. sup.* ,,	0	3	3
DO. *65 ft. sup.* ,,	0	3	5
DO. *100 ft. sup.* ,,	0	3	10
Rough plate, ⅛ in., per ft.	0	0	6½
DO. *¼ in. per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	15	0

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GLAZING in putty, clear sheet, 21 oz.	0	0	11
DO. 26 oz.	0	1	0
GLAZING in beads, 21 oz., per ft.	£0	1	1
DO. 26 oz., per ft.	0	1	4

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 | £0 | 3 | 0

Glazing only, polished plate 6½d. to 8d. 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.*

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Genuine white lead, per cwt.	£2	7	6
Linseed oil, raw, per gall.	0	3	6
DO., *boiled, per gall.*	0	3	8
Turpentine, per gall.	0	4	0
Liquid driers, per gall.	0	3	6
Knotting, per gall.	0	18	0
Distemper, washable, in ordinary colours, per cwt., and up	2	5	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4½
Single gold leaf (transferable), per book	0	2	0
Varnish, copal, per gall. and up	0	12	6
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	0	16	0
French polish, per gall.	0	17	6
Ready mixed paints, per gall. and up	0	15	0

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LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
WAX POLISHING, per ft. sup.	0	0	6
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SUNDRIES

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

The measured work price is on the same basis . . . per ft. sup. | £0 | 0 | 2½

FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, ⅛ in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, ⅛ in. punched per M. grey	16	0	0
DO., *red*	18	0	0
ASBESTOS COMPOSITION FLOORING : Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7

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

PLYWOOD, per ft. sup.

Thickness	⅛ in.			¼ in.			⅜ in.			½ in.		
Qualities ..	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon												
Mahogany	4	3	3	6½	5½	4	9½	7½	—	1 0½	10	—
Figured Oak												
1 side	8½	7	—	10	8	—	11½	—	—	1 6	—	—
Plain Oak												
1 side	6½	6	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5	4	—	5½	5	—	6 new	—	—	—	—	—