THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
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The buildings recently erected by the Midland Bank throughout the country owe a great deal of their collective distinction to the admirable taste of Mr. Austen Hall, and of his firm, Messrs. Whinney, Son, and Austen Hall. This week we illustrate the buildings for which this firm is responsible, while in our next issue we hope to give a selection from those designed by other architects for the same bank.

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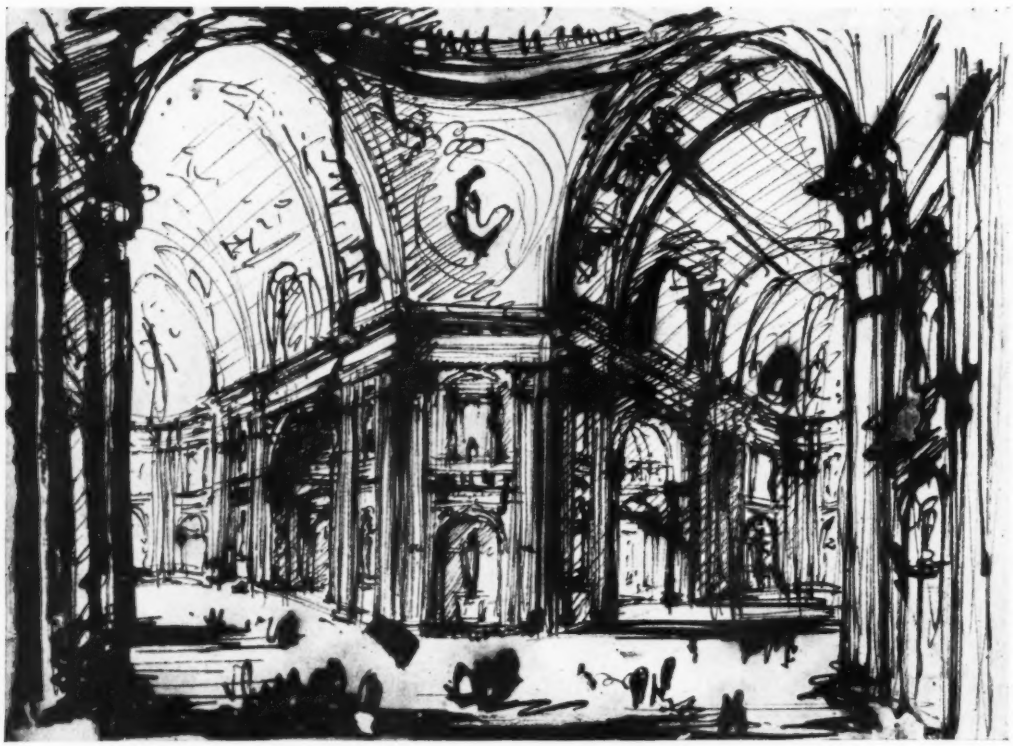
CHRISTIAN BARMAN, *Editor*

The Editor will be glad to receive MS. articles, and also illustrations of current architecture in this country and abroad, with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.



RENDERINGS OF ARCHITECTURE

Selected and annotated by Dr. Tancred Borenius.

XXVI. Giovanni Battista Piranesi (1720-1778).
Interior of a large Edifice.

In commenting upon the first example of Piranesi, reproduced in this series, reference was made to the fact that the extant drawings by Piranesi are none too plentiful. One of the richest and best collections of Piranesi's drawings is the one in the British Museum, and that one received its chief accession as late as 1908, when a series of forty-six examples, formerly belonging to Dr. John Gott, Bishop of Truro, was acquired for it. The brilliant drawing in pen and sepia, here reproduced, is one of those belonging to this series. It shows Piranesi less as a student of the Antique than inspired by the architectural beauties of St. Peter's, several motives of which are here varied with much freedom, yet so as to leave no doubt as to their origin. The few scattered figures only serve to accentuate the vastness of these vaulted and domed halls, and the boldness, swiftness, and vivacity of treatment reminds one—as so often in Piranesi's drawings—of no less an artist than Rembrandt.—[British Museum.]

THE ARCHITECTS' JOURNAL

Wednesday, July 14th, 1926

THE MENACE OF THE MOTOR

It is a commonplace that every mechanical invention can be used either for good or for evil, and its place in civilization is determined by the degree in which it can be brought under proper control and made to serve the interests of the average man. Modern philosophers are apt to lay stress upon the weak points in the doctrines of the great utilitarians of the last century, John Stuart Mill and others, who adopted as their slogan the phrase, "The greatest happiness of the greatest number." The critics have pointed out the spiritual mediocrity of those who regarded such a consummation as the highest object of political endeavour, and have even accused the utilitarians of a definite hostility to the claims of genius. The exceptional cultural conditions required for the development of outstanding talent are not necessarily to be found in a civilization expressly designed to meet the needs of the average man, but although it may be true that in spiritual matters the utilitarian creed is apt to break down it forms a very good working philosophy for the guidance of politicians and administrators. The exceptional person ought not, of course, to have his wings unduly clipped, but those responsible are justified in preventing him from becoming a nuisance to others.

The motorist is to-day still an exceptional person, and he is outnumbered many times by the pedestrians who, though they may enter public conveyances, are not themselves private owners of motor vehicles. Already the motorist is beginning to become a nuisance to the non-motorist, and we are faced with the prospect of this particular trouble becoming very much more acute in the near future. In the big towns especially it has become apparent that the problem of providing parking space for private motor-cars is a very difficult one. Various solutions have been suggested, but before examining them it may be well to keep in our minds some general policy by which we may be guided in framing our practical proposals. It is suggested here that administrators and traffic experts, in coming to their decisions with regard to regulations concerning motor traffic, should not, as they are at present a little too apt to do, regard the motorist as a privileged person, but should feel it incumbent upon them to aim at "The greatest happiness of the greatest number."

It may be remembered that some weeks ago we had occasion to comment in this JOURNAL upon a speech delivered by Sir William Joynson-Hicks, in which he suggested that for the benefit of the tenants of the new Devonshire House a strip of the Green Park should be set aside as parking space for motor-cars. This is elevating motorists into a privileged class, indeed, if on their behalf the public is required to sacrifice a portion of its already insufficient area of recreation ground in the metropolis. Fortunately, this proposal aroused such a storm of protest that it was immediately dropped, but we are still faced with the danger that public squares and other open tracts in our towns may be given over to the use of one particular section of the population without a proper regard being shown to the interests of the remainder.

Writing in the *Sunday Times* of last week, Lord Montagu of Beaulieu suggests as the only solution of the problem that there should be large garages near all congested centres, with several lifts and containing possibly ten to fifteen floors. "In addition," he says, "a number of floors below ground should be dug out to accommodate the maximum number of cars possible compared with the ground space occupied. Any car which had to wait more than five minutes outside a shop should be compelled to go to such a centre to be called for by telephone when needed." He foresees that in 1927 there will be 2,000,000 users of private motor-cars in this country, and that they will cause such congestion of traffic in our great cities that overhead streets will be necessary. The prospect is not a pleasant one, and it appears to us that, instead of encouraging this vast influx of motor-cars into the already crowded streets of our towns by providing special parking facilities for them either by skyscraper erections or otherwise, it would be more in the public interest and eventually in the interest of motorists themselves if regulations were made forbidding them to bring their cars within certain prescribed areas of our towns. The parking spaces could then be provided at the outskirts at certain points from which the motorists could proceed to their destinations in the town in the same manner as non-motorists would be obliged to do in similar circumstances. The wisdom of this regulation becomes immediately obvious if we consider the example of New York, which now suffers acutely from the absence of such control of private motor-cars. In some of the New York streets the congestion of vehicles is so great that it is far quicker to walk than to ride in a car. Let the apostles of speed think it over.

Unless such a check is placed upon this gigantic increase of vehicular traffic civic architecture is destined to suffer grievous injury, for ever more and more streets will be widened, famous buildings will be sacrificed to the greed of the motorist for more road space. Yet it does not follow that motorists themselves would gain satisfaction thereby, for we may find that even after we have spoilt our towns at their bidding, the traffic problem will be just as far from solution as ever.

NEWS AND TOPICS

The news that Sir Charles Ruthen has been compelled to relinquish his honorary appointment of Director of Housing at the Ministry of Health will be received with regret. There can be no doubt that he gave very valuable services at the most critical stage of the Government Housing scheme. Called in by Sir Alfred Mond to help him to reduce the tender prices for houses at a time when these had soared to extravagant heights, a parlour cottage costing well over £1,000, Sir Charles Ruthen performed his work admirably, and the State derived much benefit from his great technical knowledge of building conditions and from his firmness and shrewdness in dealing with contractors. It is well-known that in a few months after the advent of Sir Charles Ruthen to the Ministry of Health tender prices for cottages fell several hundred pounds. In order to achieve this object numerous contracts had to be broken, and there fell to Sir Charles Ruthen the unenviable task of cutting down the housing programmes of many of the local authorities. The truth of the matter was that the building industry could not cope with the erection of so many thousands of cottages at the same time, and as usually happens when demand exceeds the supply, prices rose. It is to Sir Charles Ruthen's credit that in the severe measures he was obliged to take in order to "ration" the local authorities in the number of new houses permitted to them he inspired confidence in the impartiality of his judgments. It is to be hoped that his health will soon recover and that he will be able to render further services in the cause of housing.

* * *

Evidence that public opinion is alive to the danger of the English countryside being spoilt by modern building developments is provided by the conference of representatives of local authorities in South Buckinghamshire and Hertfordshire, presided over by Mr. G. L. Pepler, Chief Town Planning Inspector to the Ministry of Health. The conference was organized by the Institution of Municipal and County Engineers, with the object of establishing a joint town-planning committee for the region which is crossed by the Chiltern Hills, and includes Windsor Castle, Eton College, and Slough, where extensive industrial developments are taking place. Representatives of some twenty local authorities took part in the discussion. Mr. Pepler pointed out that those present had a rich heritage in their keeping, as the region possessed charming country towns and villages and many buildings of historic and architectural interest. More than 500 town-planning schemes are now under way, but regional town planning is also necessary. This, however, requires the co-operation of local authorities. Mr. Pepler gave the welcome news that up to the present as many as thirty-seven joint town-planning committees had been formed, the total area dealt with by them being nearly 6,000,000 acres. Mr. Pepler suggested that it was most necessary to preserve tracts of country for recreation and food production before anything more was done to create or increase land values. He quoted statistics to show that in urban districts the expenditure incurred in widening roads and making improvements had been in the ratio of 90 per cent. for compensation and only 10 per cent. for actual work done, whereas in the country districts 85 per cent. of the cost had been in respect of actual work done and only 15 per cent. for compensation. These figures are highly significant for they show how important it is to plan our roads in the first instance, with an intelligent anticipation of the traffic needs of the future.

* * *

It is now just over a year since the Society of Architects went into voluntary liquidation and began the transfer of its members and property to the R.I.B.A. With the appearance of a little buff-coloured volume entitled *The Society of Architects, 1884-1925*, the obsequies of that lively and useful body may be said to conclude. The present historical account, written by the devoted secretary, Mr. McArthur Butler, though it modestly disclaims its ability to "make the dry bones live," yet appears to me to be one of the most readable things of its kind that I have seen, and when I came to the end of its sixty-nine pages I wished there were as many again to come. The chapter on *Unification, Registration and Amalgamation* proved, as was to be expected, the one of the greatest interest. Moreover, no one reading its balanced and dispassionate sentences would guess that its author was himself one of the principal actors in the drama it sets forth.

* * *

Several contradictory statements have appeared in the Press with regard to the ultimate fate of Eros, the famous statue which for so many years stood sentinel at Piccadilly Circus. The statue, designed by Alfred Gilbert, is instinct with the spirit of the Renaissance, and is, in fact, considered by many to be the most beautiful erected in any public place in England. It has now been definitely settled that this monument is to be replaced at the Circus. The Underground Railway authorities are bound, under the London Electric Railway Act of 1923, to restore to the Circus the Shaftesbury memorial and the statue of Eros, and its exact position has to be agreed upon jointly by the L.C.C. and the Westminster City Council in consultation with the Traffic Advisory Committee and the Underground authorities. Before this stage is reached considerable work still remains to be carried out beneath the Circus by the railway company, and probably another year will elapse before the time is ripe for the various bodies concerned in the question of the replacement of the memorial to consider the best position for Eros. I understand that the new traffic scheme which is to be put into operation at Piccadilly Circus may have an important bearing on the question, and it may be necessary to try a site for the memorial experimentally before arriving at a final decision.

* * *

The problem of what to do with our great English mansions in town and country is an ever-recurring one. Times and manners have so changed that many of these mansions are no longer fitted to be private residences. It remains, then, for public bodies or institutions to acquire them wherever possible and to adapt them for new uses, for the historic interest and the intrinsic architectural beauty of these stately homes well fit them to be regarded as specially worthy of preservation. I have just read the news that the Grosvenor House site is being sold to a London syndicate by the executors of the late Viscount Leverhulme. It is proposed to erect flats on the site with squash racket courts as an adjunct and shops underneath. Grosvenor House, which was bought by the late Lord Leverhulme from the Duke of Westminster in 1924 stands on an island site overlooking Hyde Park. It was built

for the Duke of Gloucester, brother of George III, and was originally called Gloucester House. This fine stucco palace has an attractive entrance courtyard, with a colonnade which cleverly masks the symmetricality of the buildings on either side of the main block. Visitors to the Architecture Club Exhibition of 1924 will recall the noble suite of rooms inside, which formed such an admirable show-place for the exhibits. The original architectural neighbours of Grosvenor House have already gone, and it was surrounded by some of the worst examples of bad-mannered terra-cotta buildings to be seen anywhere in the metropolis. Park Lane and its vicinity will soon become altogether vulgarized unless steps be taken to preserve such architectural beauties as still remain to it.

* * *

There are (says Kipling) nine-and-sixty ways of constructing tribal lays, "And every single one of them is right." But there are still more ways of treating architecture in pictures and drawings, and though they may not all be right, every one is different. Quite a number of these ways are illustrated in the pleasant Summer Exhibition at the Goupil Gallery, from the rich, bold colour effects of Leonard Richmond's "Bridge of Sighs," and Alexander Jamieson's "Le Château, Quimperle," to the exquisite simplicity of the absolute line of Eric Gill's "At Salies de Béarn." I have cultivated the habit of judging a miscellaneous picture show by the amount and quality of the architectural work it contains and this collection certainly is well endowed with work of good class. The kind of thing I like best, because it is honest and sincere, is the contribution by M. Delisle Burns. So often the artful aids of architecture to the picture-maker are treated with but little courtesy, but three drawings shown here are treated with the greatest respect. "Lungarno, Florence," with its bridge houses and its riverside houses, and "Arezzo" with its campanile and adjoining duomo are absolutely architectural in feeling and yet essentially pictorial in character. As if to clinch the argument there is the English scene "The Lock, Camden Town," which with no apparent aid from the picturesque aspect, yet by sheer force of its architectural sincerity, makes one of the finest things in the show. All three of these water-colours are done in heavyish washes with some little body colour—a fine technique. Other good things are by Walter Greaves, Stephen Bone, Sine Mackinnon, Boudin, and Claude Monet.

Arezzo. By M. Delisle Burns.

I have just received a copy of the certificate of membership issued by the Incorporated Association of Architects and Surveyors. The crest of the association is treated architecturally. A view of the Pantheon denotes architecture, the surveyor is denoted by a dumpy level, and the quantity surveyor by a scale or measure. The design of the crest or badge is the work of Mr. R. Stanley Gledhill, F.I.A.A.S., a vice-president of the Association. While not convinced of the need for the multiplication of professional bodies devoted to serving the interests of architects, one may yet feel confident that the new association will do nothing to compromise the unity of the architectural profession which has recently been achieved with so much difficulty, and, of course, the attempt to secure cordial relationship between architects and surveyors is, in itself, a commendable one.

* * *

I have had sent to me an advertisement inserted in a Sunday newspaper by a gentleman who describes himself as the "Architect builder." The advertisement heading is "Building Service," and after the gentleman's name appears a list of types of building which he considers himself competent to design and erect: ideal bungalows, houses, flats, business premises, cinemas, theatres, hotels, banks, etc., alterations, decorations, sanitation, and shop fitting, and then follows the address in an exceedingly respectable and "high class" neighbourhood in the West End of London. We must congratulate the architect builder on the possession of such all-embracing talents, and trust that his activities will meet with such degree of success as they deserve.

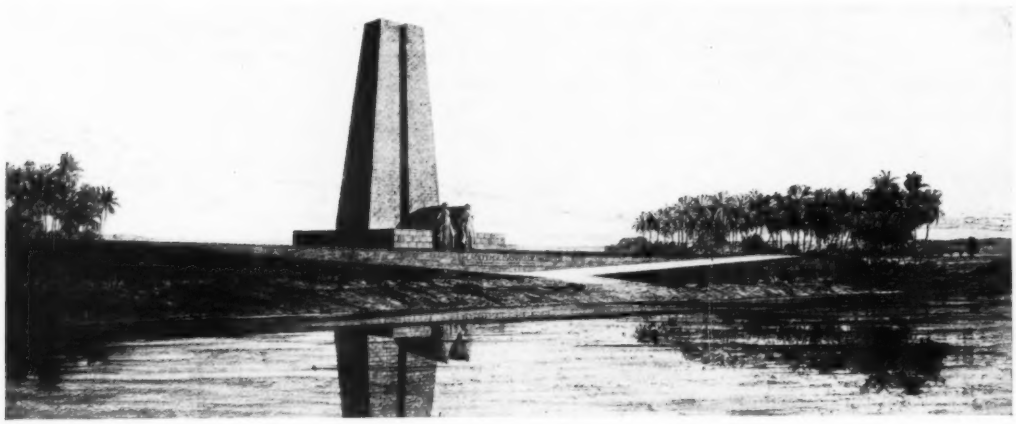
* * *

"Nothing exceeds like excess," said a scoffing parodist of proverbial banalities. Aptly illustrating that perversion comes news of the building of the Book Tower in Detroit. In spite of its name, the Tower has nothing to do with books, although it is to comprise eighty-one stories (873 ft.); whereas the Woolworth building in New York, being a mere dwarf of sixty stories (792 ft.), is now presumably to be classed in the short-story division. Something must be done to curb wanton excess of height: for if it be true that the yard-long neck of the giraffe has been evolved because generations of the species have had to reach up to the palm-tree food-supply, is it an undue stretch of imagination to anticipate that a comparable evolutionary process may ultimately elongate the necks of members of the human species straining to obtain the means of subsistence in the land of the eighty-one-story skyscraper? And how long will it be before the aeroplane supersedes the elevator as a means of ascending to the summit of these stupendous heights?

* * *

Mayan antiquities are rapidly assuming first-rate importance. Dr. Gann, the discoverer of two buried cities in Yucatan, tells, in the *Morning Post*, of a vast unexplored cavern at Loltun, in the walls of which he found sculptured figures of colossal dimensions. There he beheld an enormous chamber, "like the nave of St. Paul's Cathedral, but ten times larger." Evidently Nature ordered the work without much fear of incurring a tremendous item scheduled "To labour in excavating."

ASTRAGAL



THE SUEZ CANAL MEMORIAL

[BY P. MORTON SHAND]

THESE photographs show different aspects of the winning design of a limited competition, organized by the directors of the Suez Canal Company, with the object of commemorating the defence of the canal by the Anglo-French naval and military forces against the Turkish attack in February, 1915. There were no restrictions imposed on the competitors in regard to the nature of their designs, and though an emplacement on the banks of the canal opposite the town of Ismailia had already been provisionally selected by the company, the directors undertook to pay the travelling expenses of the winner so as to enable him to go out to Egypt and decide on the spot, which position offered the greatest advantages. The position originally proposed, where the monument would be plainly visible to all passing shipping, besides being mirrored in the waters of Lake Timsah, was eventually adopted. It may be mentioned in passing that the town of Ismailia is entirely the creation of the canal company, and it was

Memorial commemorating the defence of the Suez Canal at Ismailia. By Michel Roux-Spitz. Above, a view from the canal. Below, a detail of the figures, which represent England and France. By Raymond Delamarre.

largely for this reason that the present site was decided on. The winning design was chosen because it alone, without in any way directly imitating the art of ancient Egypt, evoked its spirit by the very nature and simplicity of the composition, and thus harmonized with the gaunt severity of the desert landscape. The design consists of two great tapering pylons, some 115 feet in height, to symbolize the two continents separated by the Canal which bi-sects the Isthmus of Suez; the Isthmus itself and the canal, dividing Asia and Africa, being symbolized in the fissure dividing the two pylons. At the base of the two pylons are two figures nearly twenty feet high, representing England and France, the armed guardians and defenders of the Canal zone during the war, with their emblems: the British lion and the Gallic cock. They are the work of M. Raymond Delamarre, Grand Prix de Rome. The pylons spring from a long, low terrace, reached by twin ramps with a very gradual slope, that rises from the water's edge. The material chosen was red granite. The design of the terrace was purposely kept within the minimum limits of elevation compatible, in order that the ruddiness of the granite of the pylons shall merge imperceptibly, course by course of masonry, into the tawny sands of the desert that forms their background. Unfortunately, the magnificent red granite of Egypt, such as that found at Assuan, is no longer quarried in the country, and the blocks used will have to be brought ready cut and trimmed from France or Italy.

The architect's conception was that in addition to the actual symbols embodied in the design, these towering masses of granite will, thanks to the torrid Egyptian sun, cast their elongated shadows far out into the desert, which, falling obliquely on one another without obliterating the narrow cleft between them, should produce a particularly impressive effect in a plastic sense.

At least 1,000 cubic metres of granite will be required for the work which, it is expected, will be completed some time in 1928.

Memorial commemorating the defence of the Suez Canal at Ismailia. By Michel Roux-Spitz.

SMOKE: THE MURKY PAST

[BY H. J. BIRNSTINGL]

[With the third reading of the Smoke Abatement Bill pending, the historical and legal aspects of the smoke problem may now fitly be considered.]

COAL is first mentioned in England in the Saxon Chronicle of the Abbey of Peterborough in A.D. 852, although coal cinders have been found in Roman remains showing a much earlier usage. Systematic mining began, according to the Report of the Coal Commission of 1870, about 1180, and very soon afterwards the unpleasant effect of its smoke seems to have been noted, for we find that in 1257 Eleanor, wife of Henry III, was obliged to leave Nottingham Castle for Tutbury in order to escape the smoke of the "sea coles." And in London in 1275 the use of coal was prohibited as being "prejudicial to human health." Nevertheless, towards the end of the reign of Edward I, despite restrictive measures, the use of coal had very much increased owing to the substitution of coal for wood by brewers, dyers, and others. Those who came to London to attend Parliament seem to have found the smoke so particularly obnoxious that they began an agitation which led to a Royal Proclamation in 1306 prohibiting artificers from using coal in their furnaces. This measure, however, proved of little use, and the following year a commission was appointed "to inquire of all such who burnt sea cole in the City, or parts adjoining, and to punish them for the first offence with great fines and ransoms, and upon the second offence to demolish their furnaces." For a time these measures must have been enforced, and there is a record of one man who was tried, condemned and executed for contravening the King's order by burning coal in London. These enactments, it will be observed, refer to coal which was being used for industriai purposes. In 1313, however, it is recorded that the monks of Yarrow Monastery used coal for firing, and a mixture of coal and wood seems to have been quite extensively employed. It was of course the gradual destruction of the forests which led to the ever more extensive use of coal, which increased despite the Royal orders to the contrary. Thus in 1578 the Council of the Company of Brewers offered of their own accord to restrict the breweries in the vicinity of Westminster Palace to the use of wood for the benefit of the Queen who "findeth herselfe greately greved and anoyed with the taste and smoke of the sea coales."

In the next century the anti-pollutionists found a strong adherent to their cause in John Evelyn, Wren's great friend. (It is worth noting, by the way, that St. Paul's was paid for out of a tax levied upon coal.) In 1670 Evelyn wrote his famous "Fumifugium," which is a magnificent indictment against smoke, and its fine invective is as applicable to-day as it was three and a half centuries ago. Evelyn's interest led him to prepare a Bill with the object of mitigating the smoke nuisance but nothing came of it. Earlier in the century Londoners had petitioned Parliament to prohibit the importation of coal from Newcastle on account of the injury which the smoke caused.

During the eighteenth century little appears to have been done until the invention of the steam engine, which brought about a great increase in the use of coal, so that in 1819 a Parliamentary Committee was appointed to inquire how far it may be practicable to "compel persons using steam engines and furnaces in their different works to erect them in a manner less prejudicial to public health and public comfort, and to report their observations to the House." In their report the committee expressed views that have been repeated in all subsequent reports: that excessive smoke is indicative of imperfect combustion, and is, moreover, wasteful; that it is prejudicial to the health and vitality of the community; that it is remediable.

In 1843 another Select Committee was appointed "to inquire into the means and expediency of preventing the nuisance of smoke arising from fires or furnaces." A voluminous report, which contained recommendations for legislation, was the result. Two years later yet another committee was appointed and reported that "opaque smoke" (opaque smoke being defined as smoke which was not transparent at the orifice of the chimney) "issuing from steam-engine chimneys may be so abated as no longer to be a public nuisance." In 1846 and 1855 special reports were made to the Government concerning the smoke nuisance, but no further committee was appointed until 1920 when a Departmental Committee on Smoke and Noxious Vapours Abatement was set up by Dr. Addison, Minister of Health, under the chairmanship of Lord Newton. In the intervening years there were various activities in connection with smoke abatement. As a result of inquiries a section was inserted in the Railway Clauses Consolidation Act of 1845 which required locomotive steam engines to be so constructed as to consume their own smoke. A section was likewise inserted in the Towns Improvement Clauses Act of 1847 which required the furnaces used in factories to be constructed to consume the smoke. The metropolitan area was specially dealt with by Lord Palmerston's Acts of 1853 and 1856. These gave power to the police to enforce provisions against smoke from furnaces used in steam raising, and furnaces in factories, public baths, washhouses, and from steam vessels on the river. Then came the Sanitary Act of 1866, which gave power to the sanitary authorities to take action. But this Act was repealed by the great Public Health Act of 1875, which is the Act at present in use with regard to the smoke nuisance, excepting in London and certain districts covered by local Acts. In London the Acts of '53 and '56 continued in force until the passing of the Public Health (London) Act of 1891 which transferred the powers from the police to the sanitary authorities.

Meanwhile during the latter half of the last century a movement was started which has continued to grow in strength and importance; in 1881 the Kyrle Society and the National Health Society agitated against the growing seriousness of the nuisance, which agitation resulted in the formation of the Smoke Abatement Committee, which later became the Coal Smoke Abatement Society. Lord Newton's Smoke Abatement Bill was introduced in 1914, but was withdrawn upon the understanding that the Local Government Board would appoint a Departmental Committee. This Committee was appointed immediately, but its activity was suspended during the war and it was reappointed, as we have already noted, in 1920. In 1922–23 and '24 Bills were introduced based upon its recommendations, none of which became law. The law as it at present stands is generally realized to be inadequate. The smoke emission from the domestic chimney is absolutely uncontrolled. Factories, workshops, and commercial establishments, are amenable to the Public Health Act of 1875 or the London Public Health Act of 1891.

CURRENT
ARCHITECTURE
SECTION

BANKS AND MODERN ARCHITECTURE: i

[BY H. P. CART DE LAFONTAINE]

To appreciate the qualities or defects of architecture in relation to the needs of modern civilized existence, it is necessary to get down to fundamental causes, and, having ascertained what these imply, to then see how far the essentials of the problem are met by the architectural expression of the problem. If we consider the modern bank from the architectural standpoint, we at once observe that the country branches of a big bank call for a special architectural composition, quite different from that which would be adopted in the head office.

The provincial branch, in a small town should, first of all, give the impression of something rather conservative, unostentatious but well-bred, and having some special character sufficient to distinguish it from other commercial buildings. It should harmonize with the local traditions of the town and yet, at the same time, have a certain individuality—sufficient to indicate its purpose and also to give an unmistakable clue as to the particular bank of which it is a branch. From this it may be inferred that the exterior is of more importance than the interior: this I think is certainly the case in most modern banks, and indicates a change of view from Victorian days when the reverse was generally the case. In the Victorian era, advertisement in its more subtle manisfestations was unknown, hence there was no particular incentive to make the exterior of the local bank attractive; the interior was generally treated in such a way as to give an impression of sober opulence. In our times there is an increasing appreciation of the value of a well-designed elevation, and the interior is generally schemed more from the practical point of view of convenience than from any desire to display the opulence or wealth of the bank.

The bank in a large town or city demands a more formal treatment, and here the plan is of paramount importance; each department must be in the right place and have adequate lighting, and the whole plan must be so simplified that the customer has no difficulty in finding his way to any department with which he may have business to transact. Incidentally the architectural composition should insensibly give the impression of solid

Above, Midland Bank, Henley-on-Thames. By Whinney, Son, and Austen Hall.

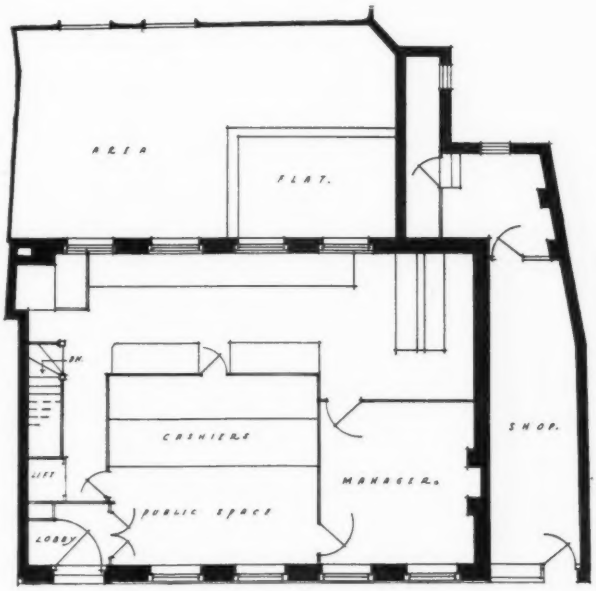
Midland Bank, Cowes. By Whinney, Son, and Austen Hall.

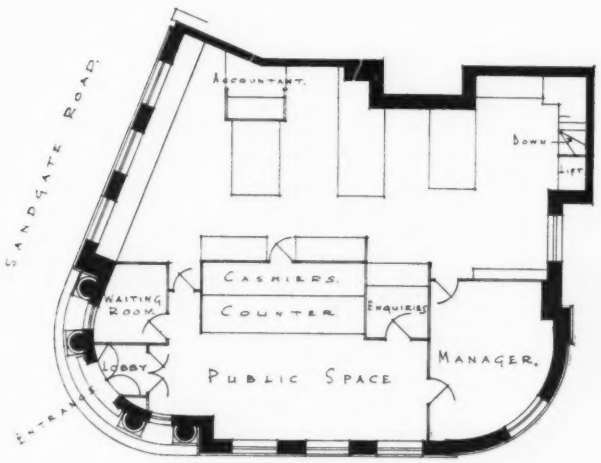
wealth and spaciousness so that a man may take pleasure in visiting his bank and feel that it is worthy of his patronage.

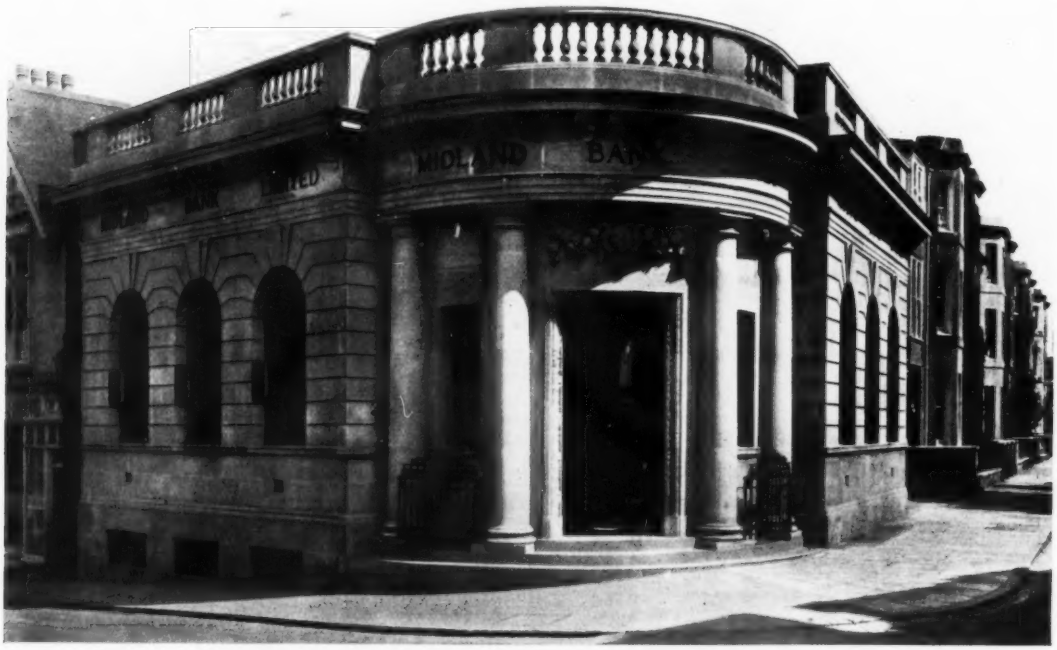
Turning from these general considerations to the branches of the Midland Bank illustrated in these pages, it will be interesting to see how far the architects have conformed to the general principles set out above, and, when these appear not to have been observed, to see the special reasons which have operated. I think it will be agreed that for a branch in a small town the Midland Bank at Henley-on-Thames is an admirable example. Here the composition is a balanced design inspired by work of the eighteenth century, and conveys that impression of solid wealth and refinement which is a characteristic of the banks designed by Messrs. Whinney, Son, and Austen Hall. The street front is very simply

Midland Bank, Hove. By Whinney, Son, and Austen Hall.

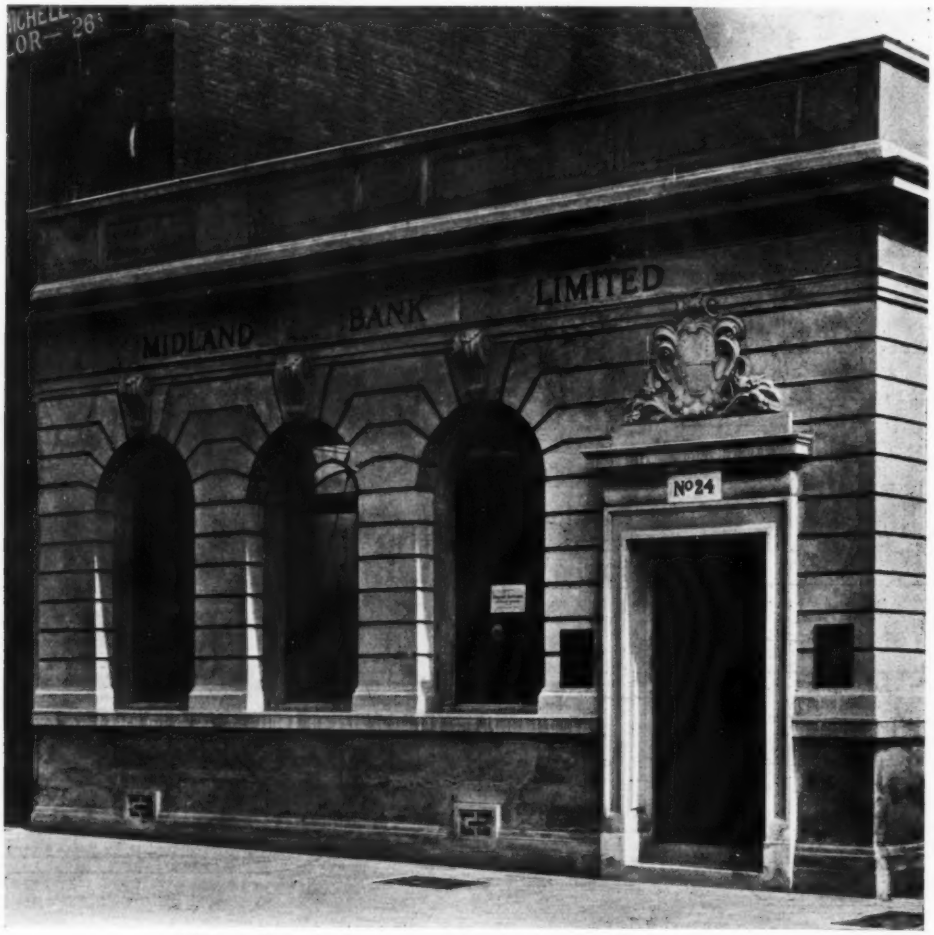
Above, Midland Bank, Farnham. By Whinney, Son, and Austen Hall. Below, left, ground-floor plan. Below, right, ground-floor plan of the Midland Bank, Folkestone. By Whinney, Son, and Austen Hall. The elevation of the Folkestone bank appears on the next page.



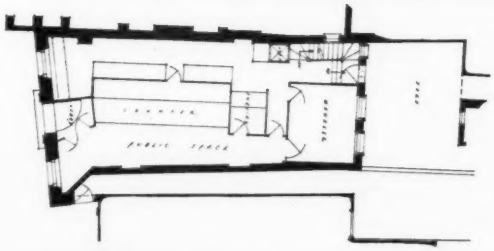




Midland Bank, Folkestone. By Whinney, Son, and Austen Hall.



Midland Bank, Southampton. By Whinney, Son, and Austen Hall.



Midland Bank, Guildford. By Whinney, Son, and Austen Hall. Above, the front. Centre, the ground floor plan.

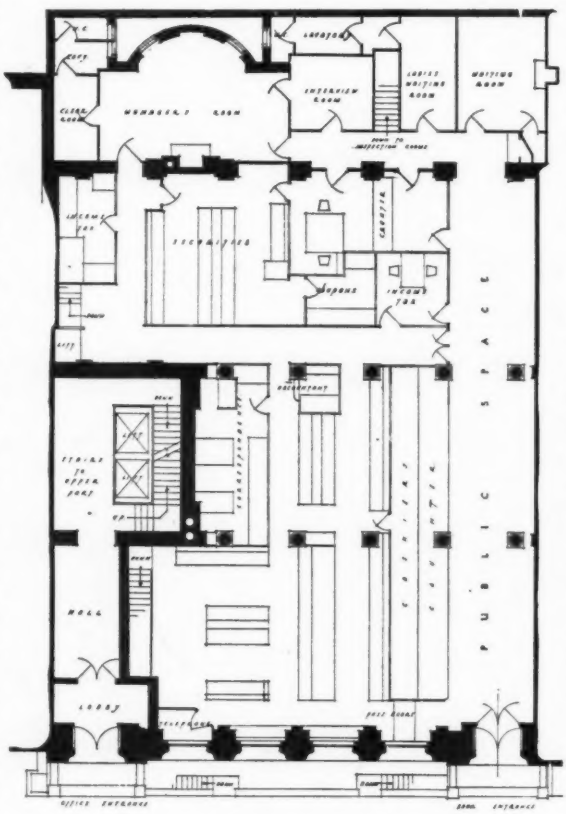
Midland Bank, Tonbridge. By Whinney, Son, and Austen Hall.

treated and depends for its effect on the appropriate use of materials—brick and stone—and the excellent proportions of the door and window openings. The entrance is just sufficiently emphasized to invite one to enter, and the only carved ornament, a well-designed cartouche bearing the arms of the bank, is placed above the centre window and entrance below.

On the next page we see illustrated the banks at Cowes, I.O.W., and Hove. The former is not quite happy in its proportions. The omission of the stone architraves to the windows would have added the requisite note of emphasis to the central doorway, and given a cohesion to this front which is actually lacking. One would also have preferred to see a small hipped roof instead of the rather inadequate line of the coping, and the small stone panels above the windows seem unnecessary. The elevation, in a word, lacks the repose and scale which is a feature of the bank at Hove, or the Farnham branch, illustrated on the next page, where in each case the dominating horizontal lines of the roof and stone bank below the cornice, provide a satisfactory element in the design.

We next come to two branches, at Folkestone and Southampton, of a somewhat different type. Here, one feels that the architect, the late Mr. T. B. Whinney, has somewhat hesitated between the treatment suitable to a small town and the somewhat different design which might be appropriate in a city. The result is somewhat pompous and lacking in proportion. The same criticism may be levelled at the design for the bank at Tonbridge, though Mr. Hall's scheme for the recently built branch at Guildford is quite a pleasant example of sober and well-proportioned design, suitable to the general character of the street and town in which it stands. We now come to the town bank, with the late Mr. Whinney's excellent plan for the Pall Mall branch of the Midland Bank. Here, those points which we discovered to be essential to success in our general survey are well exemplified in a well-ordered plan. The elevation is good in its general proportions, though the generally accepted principle of design is departed from by the arrangement of the three, instead of four, engaged columns on the front which results in a pier instead of an opening in the centre.

The concluding illustration shows Mr. Austen Hall's scheme for a new branch in one of London's northern boroughs; good in proportion, especially as between voids and solids, and sober and restrained in general character. One would have preferred, perhaps, to see a stone base below each of the coupled brick pilasters on each front, but the scheme as a whole is dignified and scholarly.



Midland Bank, Pall Mall. By the late T. B. Whinney. The ground-floor plan.

Following are the names of the contractors and some of the sub-contractors of the banks illustrated :

FOLKESTONE : G. H. Denne and Son, Deal, general contractors, and Wm. Nicholson and Son, fittings contractors. Sub-contractors : Excellence Reinforced Concrete Co., concrete floors; J. Cross, electric wiring; General Electric Co., Ltd., electric fittings; H. H. Martyn & Co., Ltd., fibrous plaster; H. C. Tanner, marble work; Chatwood Safe Co., Ltd., strong-room door.

SOUTHAMPTON : S. Salter, contractor; Harris and Sheldon, Ltd., fittings contractors. Sub-contractors : Excellence Reinforced Concrete Co., concrete work; Charles Smith, Sons & Co., Ltd., electric light fittings, etc.; Norris and Dutton, Ltd., heating; H. C. Tanner, marble work.

HENLEY : G. S. Lewis Bros., contractors. Wm. Nicholson and Son, Ltd., fittings contractors. Sub-contractors : Excellence Reinforced Concrete Co., concrete work; Martyn & Co., fibrous plaster; Sankey Sheldon, steel shelving.

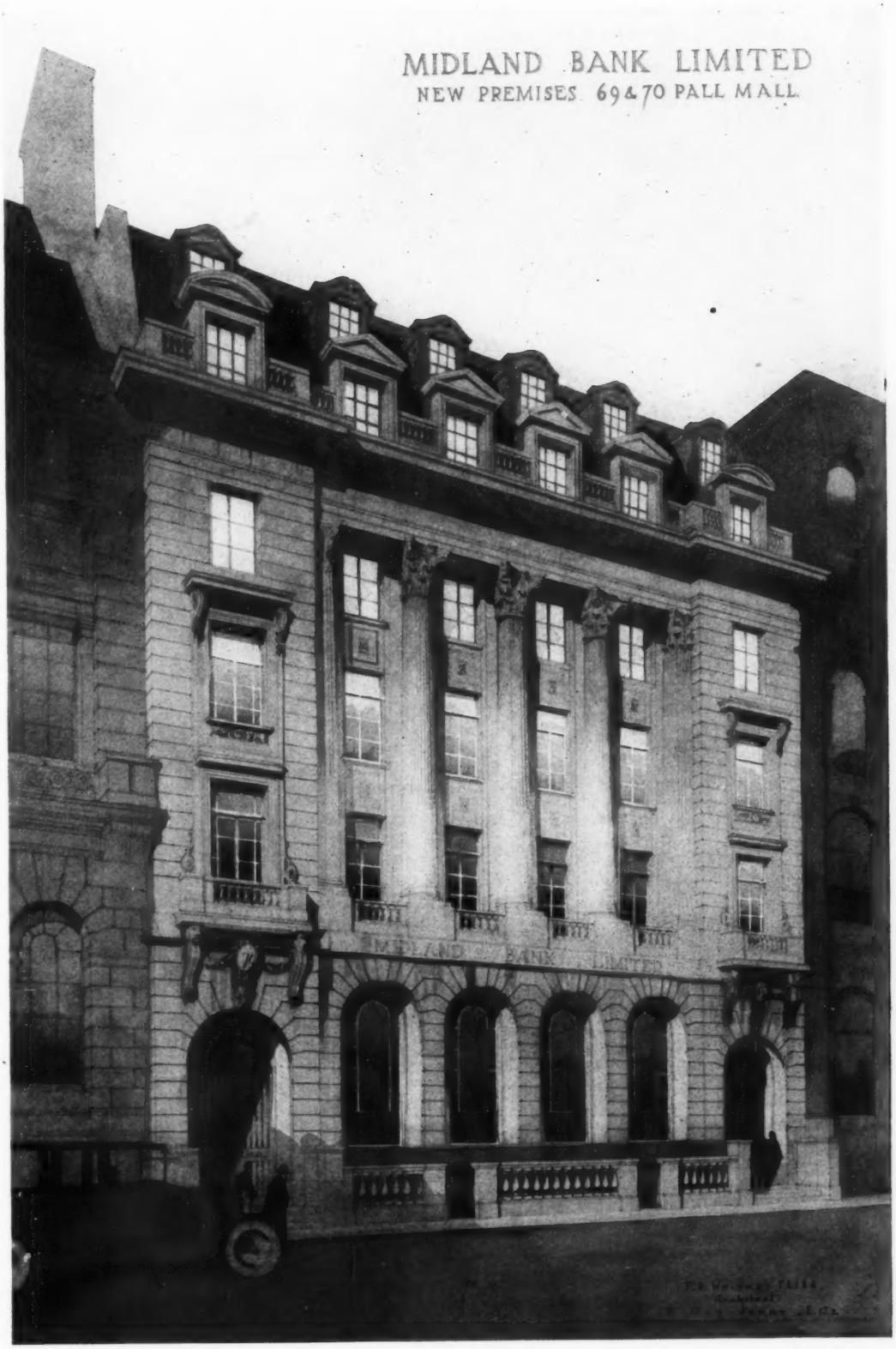
COWES : Wm. Nicholson and Son, Ltd., contractors and fittings contractors. Sub-contractors : Excellence Reinforced Concrete Co., concrete raft; Martyn & Co., Ltd., fibrous plaster; Rosser and Russell, Ltd., heating; Whitehead and Sons, Ltd., marble work; Sankey-Sheldon, steel shelving; Chatwood Safe Co., Ltd., strong-room door.

BEDFORD : Walter Laughton, Bedford, contractor and fittings contractor. Sub-contractors : Leeds Fireclay Co., sanitary fittings; Messrs. Moreland, Hayne & Co., steelwork; Chatwood Safe Co., Ltd., strong-room door.

GUILDFORD : Musselwhite and Son, Basingstoke, contractor. Wm. Nicholson and Son, fittings contractor. Sub-contractors : George Johnson, Ltd., lift; Art Metal Equipment Co., Ltd., steel shelving; Chatwood Safe Co., Ltd., strong-room door.

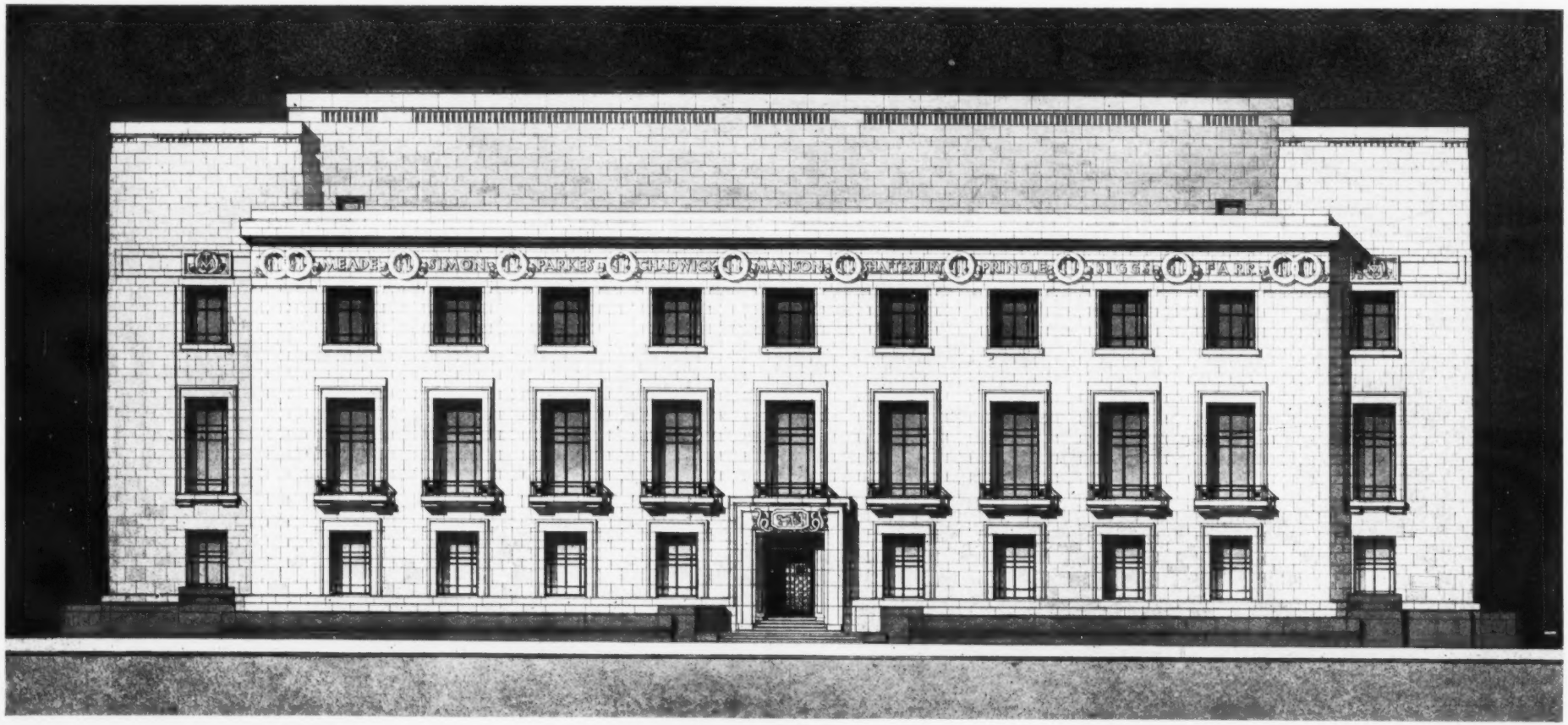
FARNHAM : Mills and Son, Farnham, contractor and fittings contractor. Sub-contractors : Cyril F. Williams, electric wiring; General Electric Co., Ltd., electric fittings. George Johnson, Ltd., lift; H. C. Tanner, marble work; Art Metal Equipment Co., Ltd., steel shelving, etc.; Ratner Safe Co., Ltd., strong-room door.

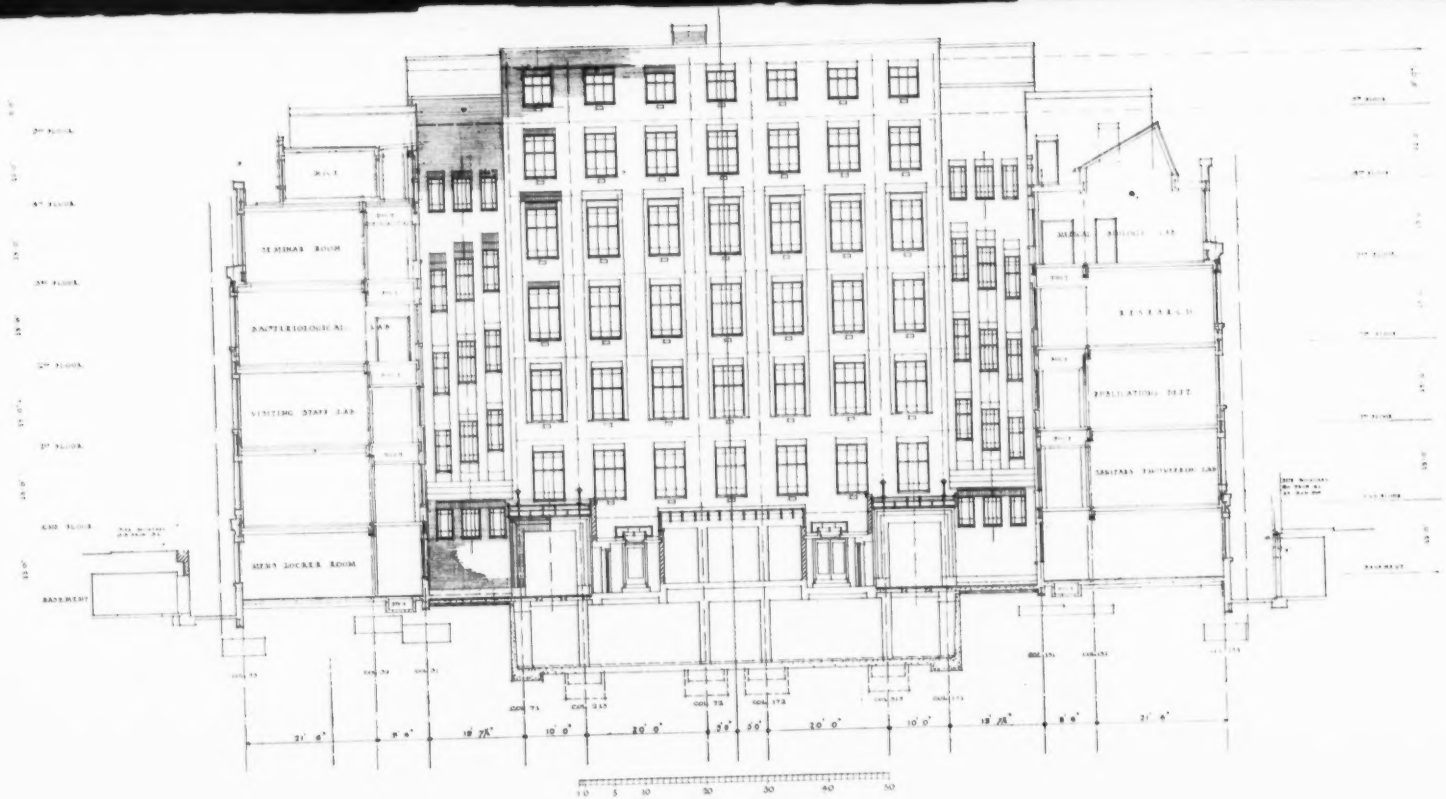
PALL MALL : Hall, Beddall & Co., Ltd., contractor. Wm. Nicholson and Son, Ltd., fittings contractors. F. Tibbenham, Ltd., oak stairs and panelling. Sub-contractors : Bell Bros & Co., Ltd., electric wiring; General Electric Co., Ltd., electric fittings; G. and A. Brown, fibrous plaster; H. White and Sons, heating; Rosser and Russell, Ltd., heating upper part; Burn Bros., Ltd., hot-water system; Express Lift Co., Ltd., lifts; British Reinforced Concrete Engineering Co., Ltd., reinforcement to strong-room, etc.; Art Metal Equipment Co., Ltd., steel lockers; Bigwood Bros., steel shelving; Sankey-Sheldon, steel shelving; Moreland, Hayne & Co., Ltd., steelwork; F. J. Barnes, Ltd., stonework; Chatwood Safe Co., Ltd., strong-room doors; Chubbs and Son, strong-room doors; Sturtevant Engineering Co., Ltd., ventilating plant; Excellence Flooring Co., wood block floor; Fenning & Co., Ltd., granite and Hopton-wood steps.



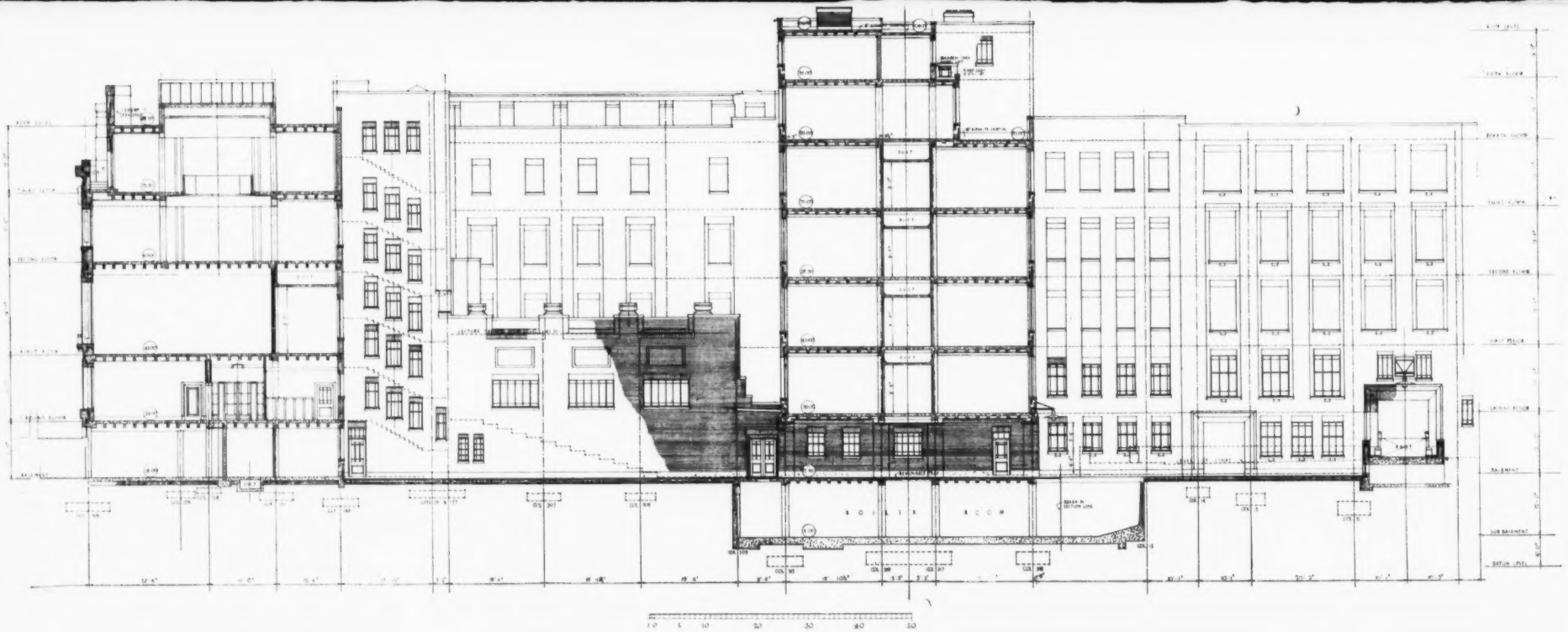
Midland Bank, Pall Mall.
By the late T. B. Whinney.

A suburban branch of the Midland Bank.
By Whinney, Son, and Austen Hall.


MEADE
SIMONE
PARKES
CHILDWICK
MANSOR
PRINGLE

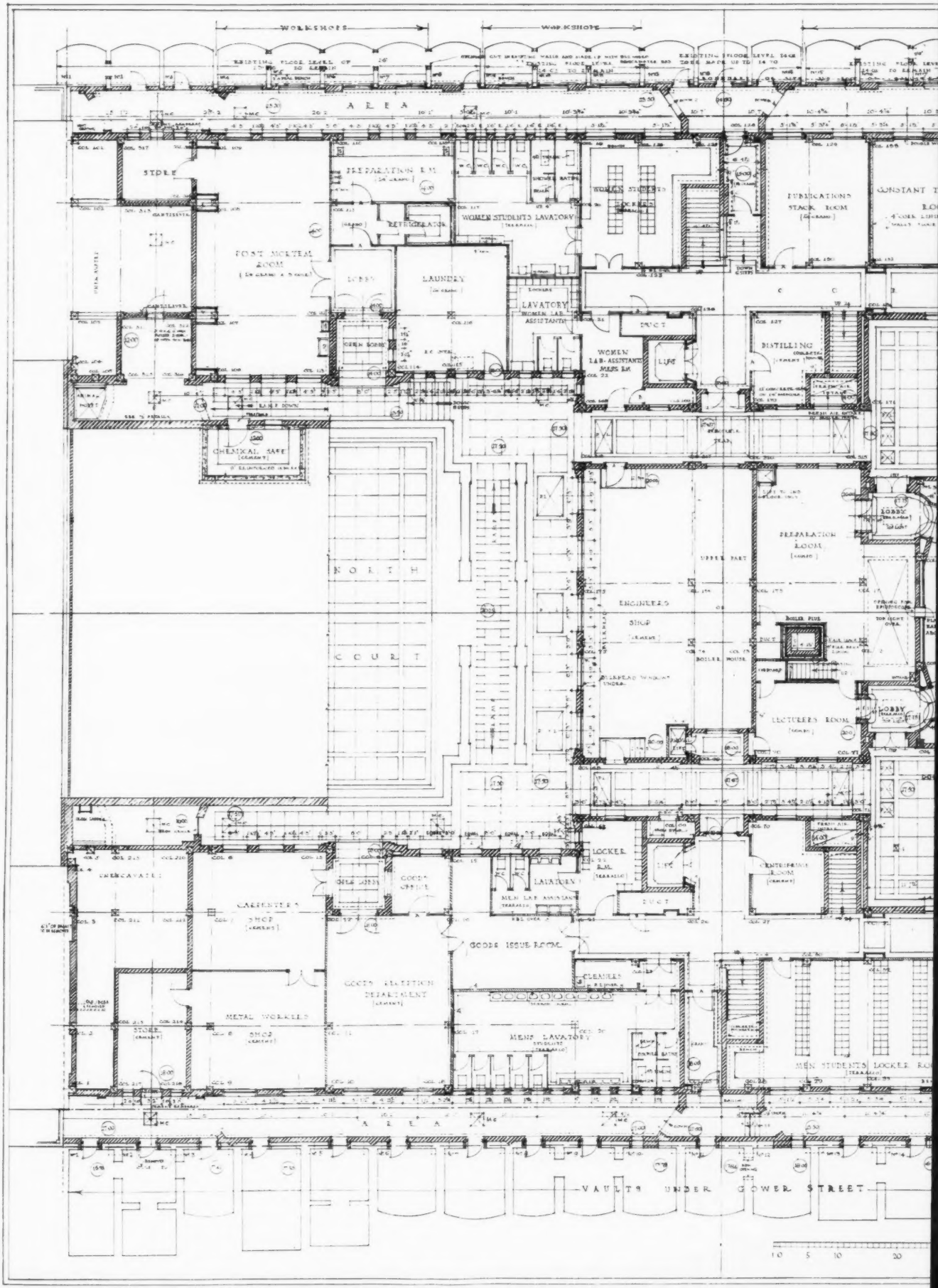


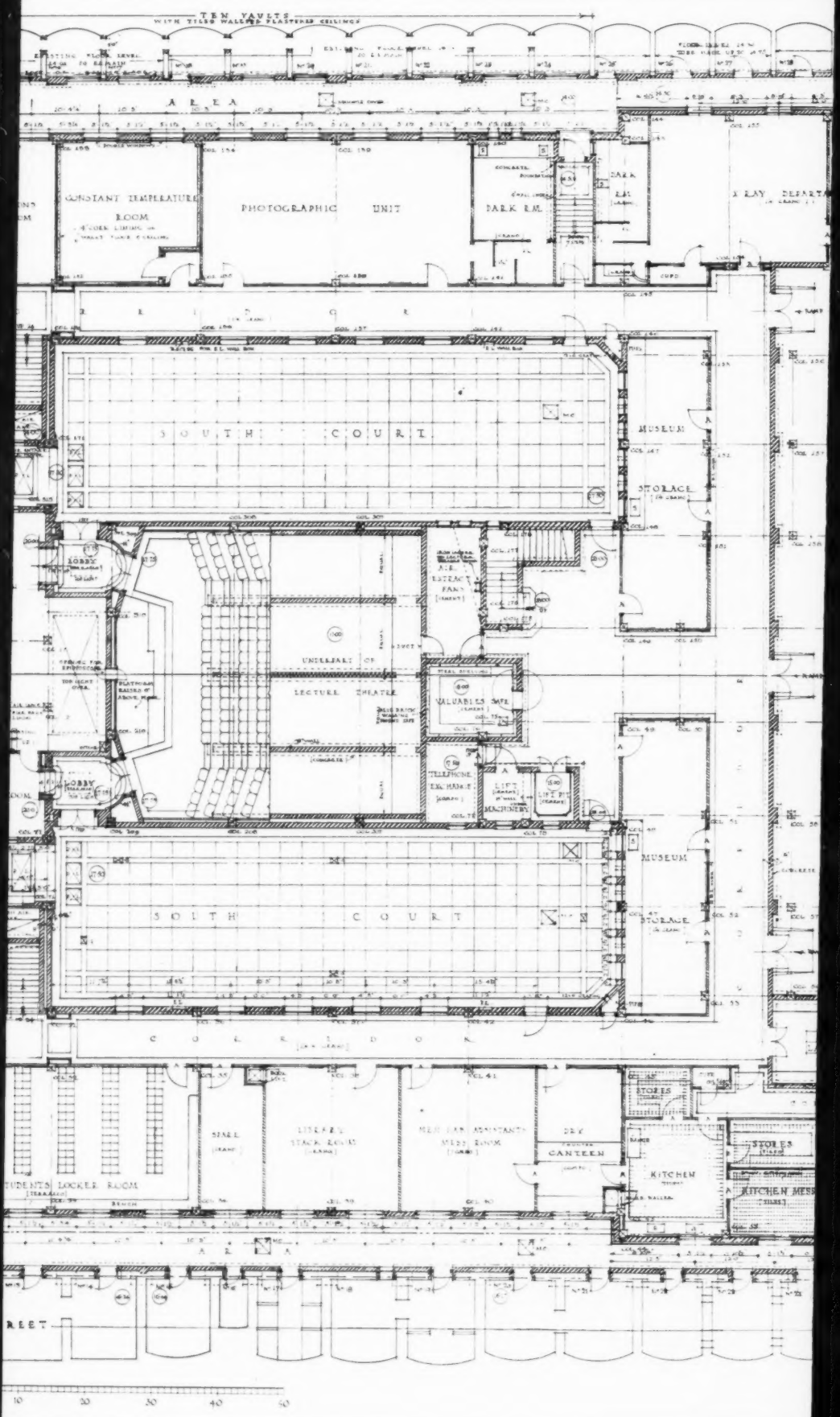
Cross Section on Line CC.



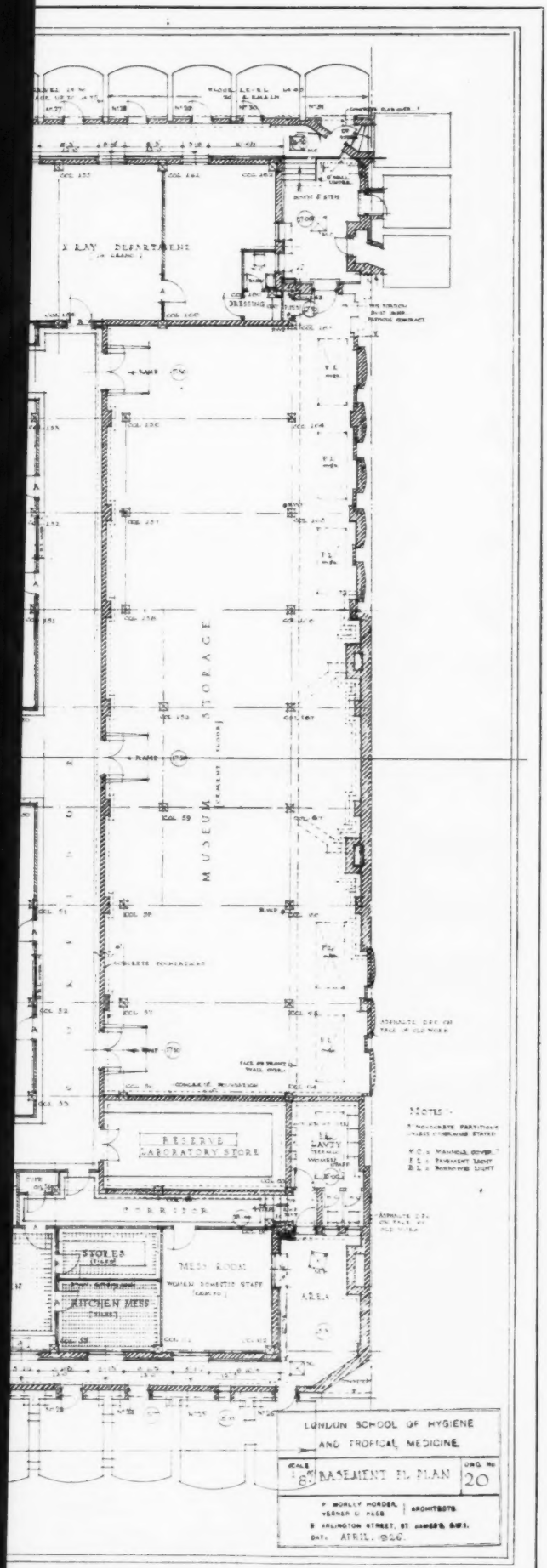
Longitudinal Section on Line BB.

THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE. BY P. MORLEY HORDER AND VERNER O. REES. ABOVE, THE ELEVATION TO KEPPEL STREET. CENTRE, CROSS-SECTION ON LINE CC OF PLAN. BELOW, LONGITUDINAL SECTION ON LINE BB OF PLAN.

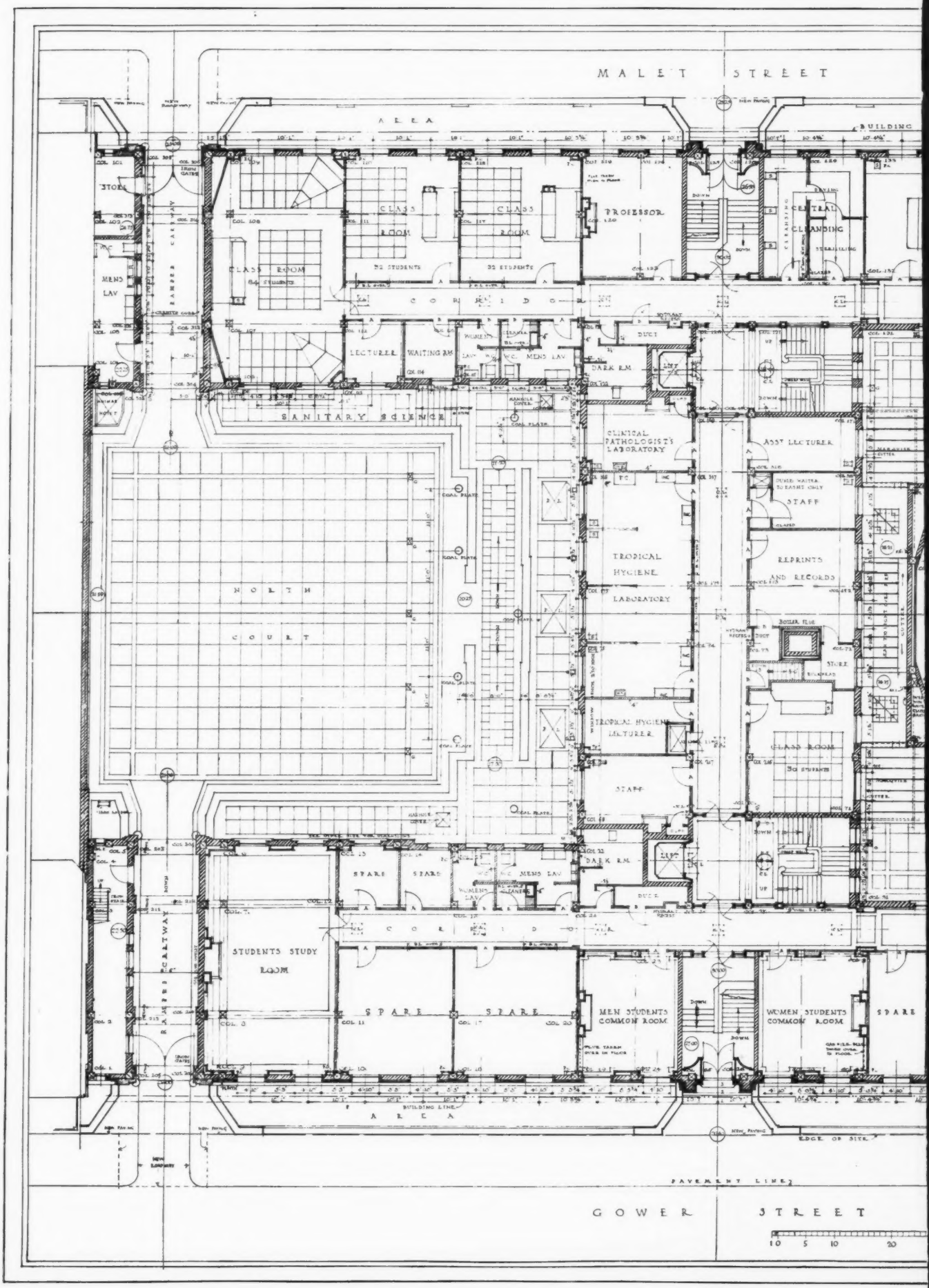

WORKSHOPS
AREA
STORE
PREPARATION RM
REFRIGERATOR
WOMEN STUDENTS LAVATORY
WOMEN STUDENTS
PUBLICATIONS STACK ROOM
POST MORTEM ROOM
LOBBY
LAUNDRY
LAVATORY WOMEN LAB ASSISTANTS
DUCT
WOMEN LAB-ASSISTANTS MESS RM
LIFT
DISTILLING
CHEMICAL SAFE
NORTH
COURT
PREPARATION ROOM
ENGINEERS SHOP
BOILER FLUE
LECTURERS ROOM
LOCKER R.M.
LAVATORY
MEN LAB ASSISTANTS
CENTRIFUGE ROOM
UNEXCAVATED
CARPENTERS SHOP
GOODS OFFICE
GOODS ISSUE ROOM
GOODS RECEPTION DEPARTMENT
CLEANERS
METAL WORKERS
STORE
MENS LAVATORY
MEN STUDENTS LOCKER
VAULTS UNDER GOWER STREET

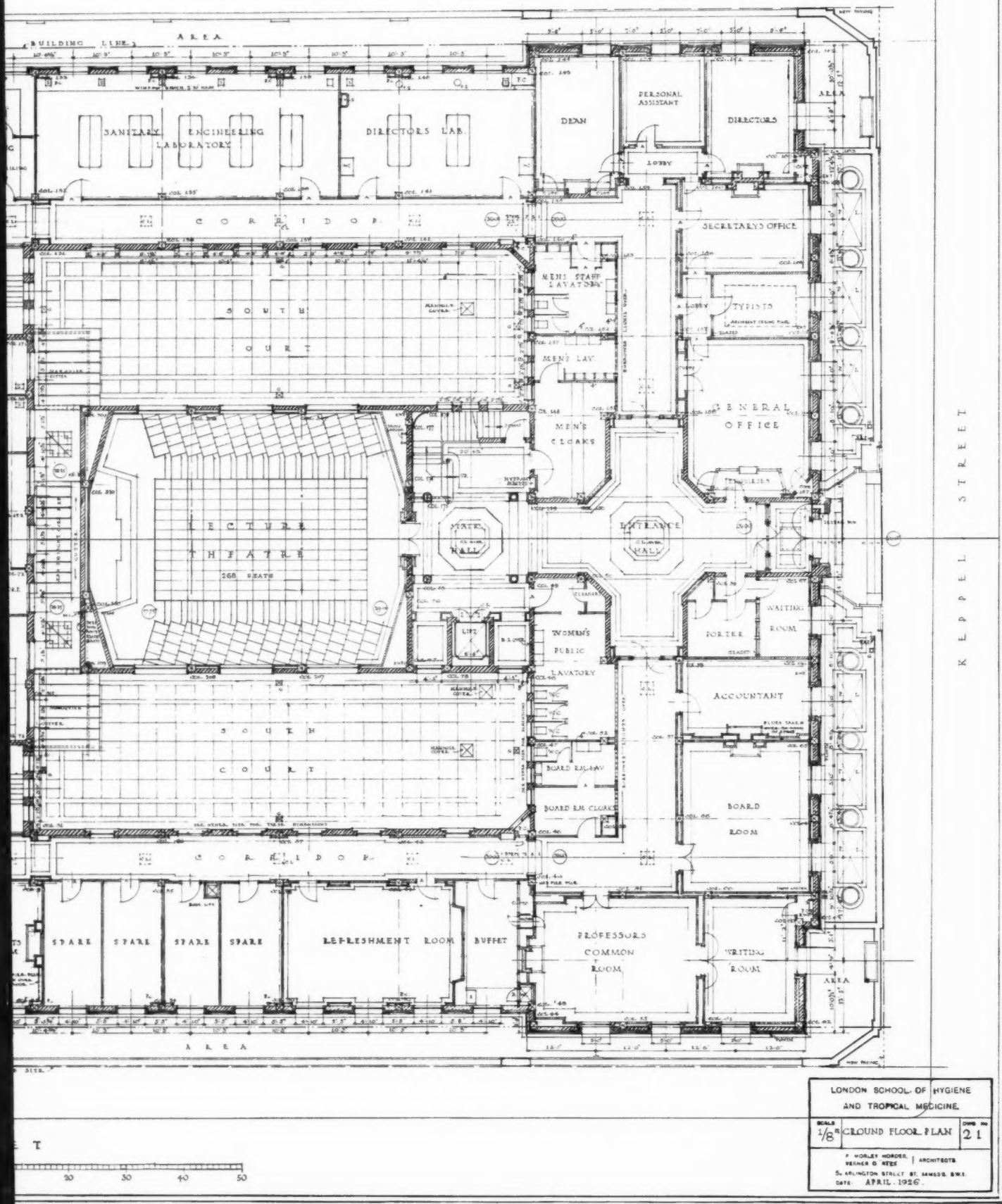


THE LONDON SCHOOL OF HYGIENE AN
LONDON. BY P. MORLEY HORDER AND

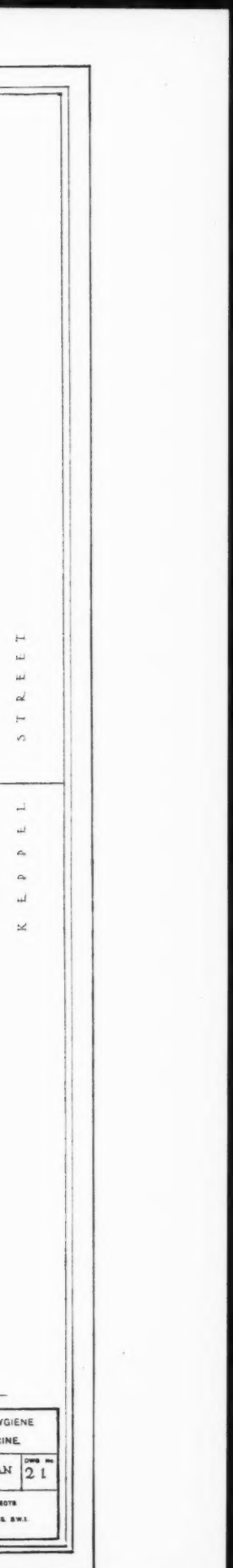


OF HYGIENE AND TROPICAL MEDICINE, GOWER STREET,
Y HORDER AND VERNER O. REES. THE BASEMENT PLAN.


MALET STREET
AREA
BUILDING
STORE
MENS LAV
CLASS ROOM
84 STUDENTS
CLASS ROOM
32 STUDENTS
CLASS ROOM
32 STUDENTS
PROFESSOR
CENTRAL CLEANING
CORRIDO
LECTURER
WAITING RM
W.C.
MENS LAV
DUCT
DARK RM.
SANITARY SCIENCE
CLINICAL PATHOLOGIST'S LABORATORY
ASST LECTURER
STAFF
TROPICAL HYGIENE LABORATORY
REPRINTS AND RECORDS
BOILER FLUE
STORE
TROPICAL HYGIENE LECTURER
STAFF
CLASS ROOM
30 STUDENTS
NORTH COURT
COAL PLATE
MANHOLE COVER
SPARE
SPARE
W.C.
MENS LAV
WOMENS LAV
CLEANERS
DARK RM.
DUCT
CORRIDO
STUDENTS STUDY ROOM
SPARE
SPARE
MEN STUDENTS COMMON ROOM
WOMEN STUDENTS COMMON ROOM
SPARE
RAMPED CARTWAY
BUILDING LINE
AREA
NEW PAVING
EDGE OF SITE
PAVEMENT LINE
GOWER STREET
10 5 10 20



THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, GOWER STREET, LONDON. BY P. MORLEY HORDER AND VERNER O. REES. THE GROUND-FLOOR PLAN.


KEPPEL STREET
YGIENE
INE.
21
STREET,
OR PLAN.

TRIBULATIONS OF EARLY PRACTICE

[BY KARSHISH]

ii: ESSENTIALS OF SUCCESS

EVERY architect of twenty years' standing can readily name half a dozen contemporaries of his student days possessed of energy, enthusiasm, and aptitudes which set them apart among their fellows, who yet, in the larger field of life, have achieved very little or nothing at all. "What's become of Ponderivo?" "Where's old Gubbins now?" "What's Peter Poppy doing, does anybody know?" These are the questions asked, and the answers may be: that Ponderivo, the prolific, is designing shop fittings for a firm of multiple grocers; that Gubbins, the gifted, is growing grey as assistant master and lecturer at a provincial school of architecture, and is represented in his profession by a new wing to the Fair View Hotel at Stuntwangle-on-Sea; and that Peter Poppy, the admired and envied, is ghosting for a firm of architect builders in America. The story is true of each generation, for it is a commonplace of life, and the explanation covers also the reason why the profession contains men in large practice who were unknown as students, who lack general education, are uncultivated and insensitive to the arts, and whose work is a positive degradation of architecture, and a monument to the public ignorance that countenances it. Many of these busy fellows are incompetent to perform the duties they undertake, and they not only have no aspiration to produce fine architecture, but no conception of the nature of such aspiration. Every architect in practice has to acknowledge *confrères* of this sort, who win abundant opportunities and make failures of all of them; and can also name many others of distinguished attainments who would make a devoted success of any work of architecture entrusted to them, and who yet have little or nothing to do. What, then, is the reason of this? Why is it that the capable and conscientious man often remains without opportunity while in many cases the ignorant and untrustworthy holds the field?

The matter deserves attention because to understand it is to understand something of the conditions that await the man who sets up in practice as an architect. The broad fact, then, is that the qualities that equip a man for success in life are very different from those that bring distinction in the studio and the examination hall. A man's erudition, his pre-eminence as a student, his success as a deviser of "compositions," and inventor of visionary Palaces for Potentates, and Tombs for Sultans; his capacity to win prizes and to demolish obstacles set up to test him—the whole faculty, in short, for absorbing facts and ideas and regurgitating them on demand—is not only most inadequate equipment for a career as practitioner, but involves habits of mind inimical to those processes by which buildings are conceived, elaborated, and carried to execution. On the other hand, personal qualities which weigh scarcely at all in student years are radical in life; and if we consider how greatly a man who is deaf, or who has a bad stammer is handicapped when he competes in the world with those who are not so burdened, we shall realize the great disadvantages associated with such defects of character as undue sensitiveness, roughness of manner, tactlessness, a morose, impatient, or sulky temper, tenacity of purpose carried to the point of obstinacy, lack of confidence, of initiative and cheerfulness. I say nothing of moral qualities—courage, self-respect, truthfulness, and sincerity—because no one is aware of shortcomings in these virtues unless he possesses them in a high degree, and because the absence of those qualities does not affect the value of a man's work as an architect, nor the extent of his opportunities. No one can say that the truckler, the opportunist, the prevaricator, the wire-puller, and the man who makes it his business to rub himself like a cat against the legs of those whom it may advantage him to stand well with, courts failure by so doing; and, therefore, it is better to say nothing on the subject except that the world contains parasites who cheat the rules of the game. It is clear we should not esteem integrity of character so highly if integrity of character paid, for in that case there would be no merit in integrity; nor would the world seek, as it does to cast upon its every sordid purpose a complexion of virtue—usually highly cosmetic—if dirty methods were not more profitable than clean ones. It is not pleasant to recognize this fact, but as the purpose of these articles is to give a true picture of the conditions facing the man who starts upon a career of practising architect, the point must be faced. It need hardly be said that in what follows there will be no toleration of any falling away from the standard of the professional code, which code is no more than a formulation of the innate sense of fair dealing and service to the community which is implanted in every wholesome man and woman. There is nothing in the code which is not true to the instinctive, unsophisticated polarity of each of us.

What, then, are the qualities which stultify the promise of the studio and the examination hall? They may be affirmed in two comprehensive terms: *Animal Spirits* and *General Capacity*. From this it may be gathered that promise of success in the profession of architecture is not very different from that governing activities in other callings: these are, indeed, the best assets a man can have when he embarks upon an independent career. By animal spirits is not meant boisterousness, nor even exuberance: it is more powerful when suppressed, contained, and banked up to supply an effortless driving force. Animal spirits supplies energy, enthusiasm, resilience under rebuff, fearlessness, confidence, a latent force before which opposition melts away, resource, and that inimitable charm of redundant vitality which awakens the affection of all men. It gives a man instinctive generosity, a readiness to forget and forgive, offers excuses for mistakes which are generally due to impulsiveness or excess of zeal, and gives him unbounded good humour and a sense of fun.

"Why are you here?" asked the Judge in Chambers of Frank Lockwood.

"Beg pardon, me Lud?"

"What are you here for?"

"One-three-six, me Lud," replied the barrister, glancing at the fee marked at the back of his first brief.

General capacity is the intellectual faculty with which any man's fairy godmother should first endow him. With it he can, by mere application, succeed in any trade or profession; without it, high attainments and long and costly training profit him little. An ordinary practising architect may obtain the services of highly specialized technical attainments far exceeding his own for £10 or £12 a week. Such assistants are often better qualified, in moral character, knowledge, experience, and general education to undertake the duties reposed in their masters and win and hold the confidence of clients, and yet they occupy throughout their lives vicarious posts. After a short acquaintance with them one realizes why this is: they lack general capacity—or let us say they show defects which are incompatible with general capacity; dullness of mind, lack of self-reliance, and of readiness to accept responsibility, want of resource and initiative, and so forth. General capacity consists in mental alertness, quickness to grasp essentials, an insatiable energy in mastering the bearings of affairs, a refusal to be satisfied with anything but the most intimate understanding of a subject or problem, and, particularly, in an active sense of personality and of human motives and springs of action. Here we touch upon social capacity which, from its importance, might well stand as a third separate condition of success in the practice of architecture. By social capacity is not meant the ability to stand coffee-cup in hand in crowded salons, and chatter gaily about nothing at all to strangers, and to remain composed when we push the string of our eye-glass into our mouth and swallow it with our bread and butter. That is only one condition of many kinds of social capacity which include the knack of being, as they say in America, "a good mixer." To be able readily and naturally to take his place and make his individuality felt, and to be

conspicuous and welcomed and popular, in those circles which lie near to his particular interests, tastes, and station in life, is of great importance to the practising architect—particularly in the early stages of his career, for people are more readily interested in and encouraging of a man who is on the threshold of life, than in one who has proved his limitations and whose measure has been taken. The circumstance that the finding of opportunities in social activities is horribly abused by disingenuous natures, does not alter the fact that a natural inclination to the company of his fellow kind is a condition of professional health, and that, without compensating advantages, a young man who shuts himself up with his hobbies, and frequents by-ways of life, and prefers chess to dancing, and reading to bridge will, in the ordinary course be slower to find opportunity than one who does not.

These, then, broadly speaking, are the qualities promising success in the field of architectural practice. But what are we exactly to understand by success? According to a recent authority success depends upon devotion to principles of grab restricted only by expediency and proximity of police. This is a hog's view of a daffodil field; the standard of an inferior mind and still more inferior spirit. We all know it to be entirely false, for a world moved by such sophisticated ambitions would scarcely be human. Success consists in the attainment of aspirations; and aspirations are not concerned with material gain, or there would be no army, navy, craftsmen, artists, scientists, or teachers. The ambition to these callings, and many others, is characteristically an impulse to achievement for the sake of the thing to be done, and is born of that instinct to serve—not to exploit—the community, which lies at the root of communal existence, and in the absence of which humanity would never have climbed down from those trees where, according to the best authorities, it once sat and scratched itself. The reality of his success or failure lies in a man's heart; it is his being; it is not what may appear to others, it cannot be assessed. It may subsist for him in :

> " All the world's coarse thumb
> And finger failed to plumb.
> . . . . . .
> All I could never be,
> All men ignored in me. . . ."

A man can only attain to this awareness of success by being true to his best self. For him to affect tastes foreign to him, company which is uncongenial, pursuits which do not engage his heart is labour doubly wasted. He will never complete himself, his personality will be confounded, his individuality veiled; he will cut himself off from the environment where he could find contentment and occupy one where he can never be at ease and never realize his aspirations. No man can falsify the claims of his birthright and know success.

Towards the end of his career a loan collection of the works of Sir John Millais was exhibited at Burlington House, and the painter had the remarkable experience of viewing on the walls of one gallery the substance of his life's work. He was seen leaving the building with bowed head and the tears running down his cheeks. Why? A lady who knew him well enough to speak to him at such a moment asked him the question, and we know his answer, for she told Holman Hunt, who records the incident in his autobiography.

" To think what I *might* have done ! "

[*To be continued*]

PRESENT-DAY BUILDING CONSTRUCTION: iii

[BY WILLIAM HARVEY]

JOINERY: i: TRAINING THE JOINER

Two distinct influences affect the joiner's craft at the present day, for the introduction of wood-working machinery has implied vast alterations in the normal practice without completely doing away with all the traditional methods adopted by the hand worker. The young joiner has still to look forward to the prospect of earning a living under conditions in which he may find himself called upon to make use alternately of elaborate and highly efficient machine tools on some occasions, and on others to employ hand tools almost exactly resembling those of a past generation. Whether hand or machine tools will be used in any particular case is largely a matter of accessibility. The commercial success of machinery is undoubted, and it is generally a simple question of getting the material to the machine without undue expense of time and labour. The conversion of timber, which lies at the root of all joinery practices, is itself profoundly affected by the introduction of the machine.

Axe and cross-cut saw still fell the tree and lop its branches, but the log is then hauled away and converted into planks or boards by means of the power-driven circular saw, frame saw, or band saw. Whether a cut is made in a short time by a machine or in a longer time by hand would not seem at first sight likely to affect very largely the quality of the resulting product. The question of quality enters in, however, with the discretion which may be exercised by the sawyer in choosing the position for each successive cut. As long as the log was laboriously divided by the slow processes of the saw-pit, it was reasonable, at the end of an hour's sawing, to spend a few minutes in turning the log to obtain the greatest number of radially cut scantlings, boards or planks, for the time spent was small in proportion to the long period absorbed in cutting the timber. Now that the machine performs the cutting in less time

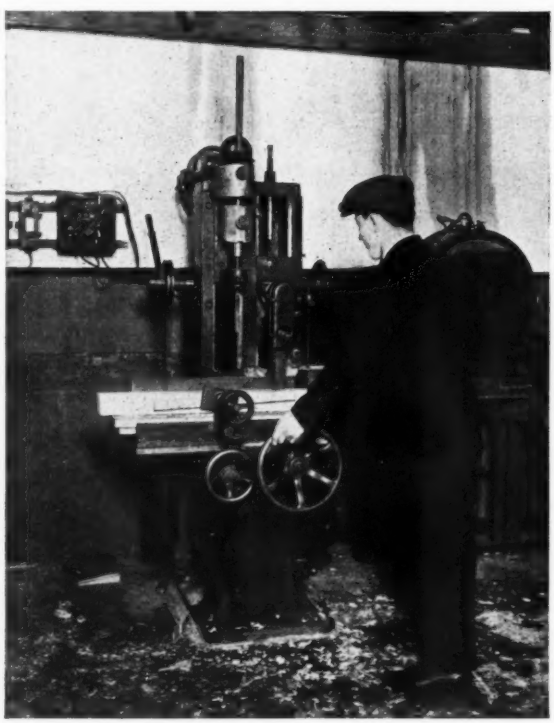
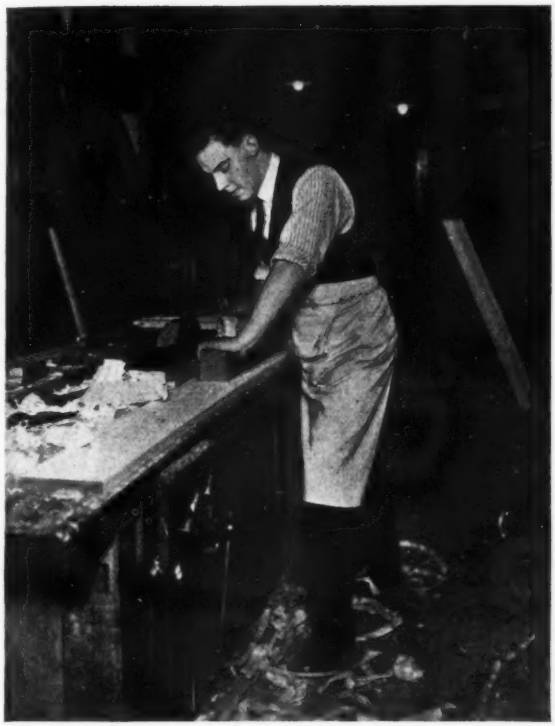
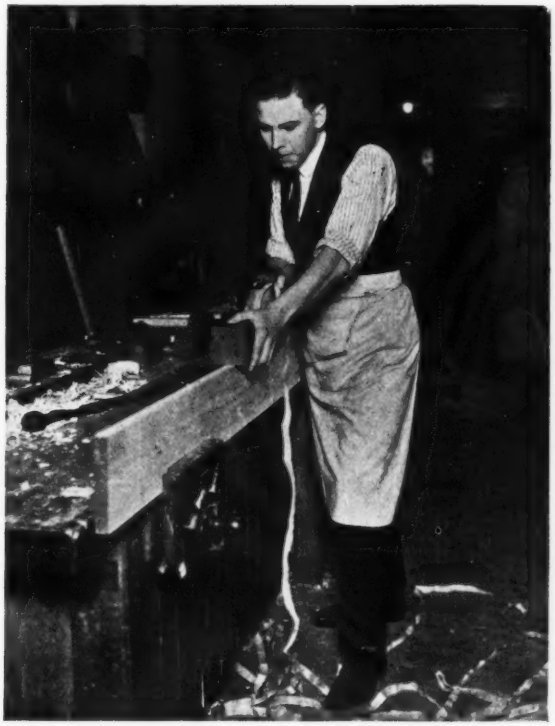


Figure one. The mortising machine with chain tool in action. This cutter leaves the bottom of the mortise rounded unless it penetrates right through the wood. The hollow square chisel on the left is used for making sinkings with flat bottoms.





than it takes to turn the log, the position is reversed, and there is a direct inducement to divide the log into several parallel planks, many of which must necessarily be tangential to the annual rings of the tree, even though such planks are more likely to suffer distortion in shape with changes in their moisture content than those which are cut from the tree in a radial direction. Turning the log to get radial cuts is still practised in connection with figured oak, where the silver grain effect of the medullary rays cannot be obtained by cheaper methods, but a great number of logs are treated to conversion on the basis of the parallel slicing process although much of the stuff so produced will not keep still after making up. Shrinkage and casting are such troublesome factors in connection with modern machine converted timbers that plywood has been invented to supply a machine produced product of reliable character.

The modern student of joinery has to learn to utilize his material in the best way to avoid excessive shrinkage and casting, and to rely upon either plywood or pieces of specially converted stuff where alternate expansion or contraction would prove fatal to his work. Artificial seasoning to a point of low moisture content may do something to make up for the difference between old and new material, but not everything, for it is possible for over-dried wood to absorb moisture again and cause trouble by twisting as it swells just as unseasoned or under-seasoned wood in the old days caused trouble by twisting as it shrunk. Another important change in joinery practice which has been introduced with the machine is consideration for what may be called the mechanical point of view. A good foreman setter-out is not content merely to produce the old traditional shapes by means of his modern machines. Instead of putting so many men with planes and tenon saws to pare and form joints, he deliberately revises the forms and methods of procedure not only in the light of what it is possible to produce with the mechanical appliances at his disposal, but with a view to simplifying the whole construction and adapting methods capable of economic exploitation with the least adjustment of the machinery. If the formation of mitred mouldings should prove expensive, a special cutter is sometimes made to scribe the mouldings on the spindle instead of mitreing them, and the design of the moulding's section is altered, if necessary, to make the process practicable.

At present such substitutions of new methods for old are occasional rather than general. A most important revolution is in progress, but the end has not yet been reached. Manufacturers of articles of joinery for sale have gone further than the joiner who carries out architects' designs in the exploitation of machines and in the adaptation of designs to fit them for machine production, but old forms and old methods are still very much in evidence.

The mortising machine (figure one) and the tenoning machine, which is its complementary

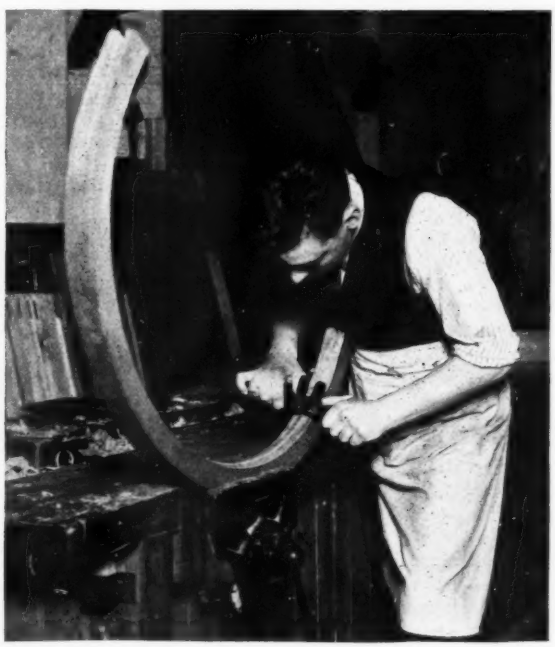
Above, left, figure two. Cleaning the surface of a board with the jack-plane. Above, right, figure three. Shooting an edge with the trying-plane. Below, figure four. An unorthodox use of the trying-plane in cleaning up the surface of work after it has been wedged up.

counterpart, are really concessions to the handworkers' immemorial way of doing things. Pieces of wood may be joined by other means more economically and no less effectively than by tenoning, and in a more logical world circular bore-holes and cylindrical dowels, which can be made entirely by machinery, will doubtless come into fashion. The chain mortising tool seen in operation in the illustration digs out the hole in the rail but leaves it to the joiner to make the clearance for the fox-tail wedges and to clean out and flatten the bottom of the mortise. This may not be the most businesslike state of affairs but it is in accordance with present-day building construction. The vast majority of young joiners have to take things as they find them without even developing the possibilities of the use of the machine so far as they are already carried on in some exceptional up-to-date workshops. They have to look upon the machine almost exclusively as an aid to producing the effects of hand work in a shorter time. Students at the Northern Polytechnic may be seen cutting out material to size on the circular saw or band saw, and carrying it away to work with hand tools on the bench.

Figure two shows a student planing a board in the ancient manner, and taking it out of winding with a jack plane. The method of holding this plane is clearly shown in the photograph. The hammer and screwdriver lying on the bench had just been used in setting the guard-iron fine for the production of a thin shaving, and in tapping the plane-iron into place in the stock. The surface of the wood is reduced to level by removing a succession of the longest, broadest and thinnest shavings possible, and is tested by placing winding strips across the two ends of the board, and then stooping and glancing across the edge of the near one to see whether the upper edge of the far one appears in absolute alinement with it. The winding strips are merely small straight parallel-sided battens about eighteen inches long, of which one edge is left wide enough to support the winding strip when it is placed edge up on the surface of the work.

The operation of shooting the edge of the board is shown in figure three. The large trying-plane is brought into play and a shaving in one unbroken length is removed from the edge in order to leave it straight and smooth. It is also necessary to control the angle of the edge to the face, and this is performed by the good old process of trial and error. If the application of the joiner's square proclaims that the angle between the face and the edge is not yet a right angle the plane is handled once more to better purpose than at first. The method of holding the trying-plane with the tip of the forefinger of the left hand bent under the sole of the plane has become a tradition. It is intended to give the greatest possible control over the plane while it is pushed steadily forward with the right hand. Since the stock of the trying-plane is much larger and heavier than that of the jack-plane its own weight suffices to bear down upon the wood, whereas the palm of the left hand performs this function in the case of the jack-plane. The action of the body and legs is also different in working with the two instruments; vigour is illustrated in figure two, and steady control in figure three. The modern quick-acting iron vice fixed to the bench is one of a pair, the other being hidden behind the student. Its jaws have been provided with wooden linings which act as buffers to prevent the vice bruising work held between its jaws and to save the edges of tools which might accidentally strike the metal and become blunted.

Figure four shows the trying-plane in action on a special occasion. The student has produced a specimen model of the upper part of a door to show the several joints used in framing together its styles, frieze rail, and curved head. The work has been temporarily fitted together and has sprung slightly in wedging up. In actual practice the lipping at the shoulders would probably be reduced with the small smoothing plane seen on the corner of the bench, and finished with a steel scraper, but the heavy trying-plane promising better results in the production of true level surfaces, the work is being performed with it against all the canons of the art. It is in trifling variations of this sort that the transitional nature of modern joinery practice is illustrated. Tradition dies hard, and it was only with difficulty that permission was obtained of the instructor at the school for the publication of what seemed to him an objectionable and unorthodox way of going to work. The little triangular block of wood which projects like a spur from the curved head of the specimen is a piece of oak specially glued on in order to give a purchase to the iron joiners' clamp with which the several



Left, figure five. Using the shoulder plane. An extremely sharp iron and a very fine set are needed in removing a thin uniform shaving from the end grain of the wood to assist the other shoulder to come up in contact with the style. It is the ambition of the good joiner to produce good shoulders without the use of the plane. Right, figure six. "Sticking" an ovolo mould on a circular head on the solid by hand with an iron spokeshave. The direction of the grain of the wood has to be considered, and the joiner faces the other way in moulding the part projecting to the left of the vice.

parts of the framing are pressed tightly into contact with one another. The old-fashioned way of cutting the tenons too long in order that they may not be too short is illustrated on the left-hand side of the photograph while a projecting horn on the top of the meeting style is seen on the right. These details are in accordance with the usual practice, and will be pared down later and planed smooth with the surfaces of the work after the parts have been glued together, and the wedges finally tapped home. Just beside the projecting horn of the style two small blocks of wood have been glued down to the surface of the bench to assist the bench stop in holding the work steady while it is being cleaned up and finished. These blocks and the small glued-on spur on the curved head indicate the painstaking preparation that is found necessary in turning out a carefully finished piece of joinery.

Another piece of student work is shown in figure five, where the splayed shoulder of a specimen of a double tenon joint for the middle rail of an oak door is being made ready for fitting. The shoulders of the tenons have been cut on the splay to fit the diminished style of a glazed door, and a metal shoulder plane is being employed to clean off the burr left by the tenon saw and to pare off any slight excess of material which may prevent the shoulder on the other face from coming in contact with the style. As the piece of wood is small a wooden bench hook is used to support it and prevent it sliding about under the action of the plane. Only the very finest shaving is removed by the plane, which is sharpened to a keen edge as it is required to cut across the end grain of the wood. It is the ambition of every joiner to learn at the end of a long life to cut shoulders so exactly with the saw that no after trimming will be required, but human weakness demands that the student should learn the use of the shoulder plane nevertheless. The use of the saw in cutting out the faces of the tenons is more frequently successful. The tenons being hidden in the mortises, a good practical fit and a surface that is rough enough to hold the glue are all that is required. If the saw fails to run true, the surfaces of the tenons are generally trimmed with a rasp rather than a plane since absolute smoothness is not wanted and the rasp can be pushed between the double-tenons where the plane could not be used. The saw cuts by which the inner faces of the double tenons have been formed happen to have been carried rather too far in the specimen shown in the illustration. They should have been stopped at the haunchion instead of being cut in to the roots of the tenons. The accident is not of great consequence as the strength of the joint is but slightly reduced, and the excess of saw cut does not show when the parts are assembled.

Figure six shows the head of a semi-circular window sash in Honduras mahogany. The head is formed out of two pieces joined at the crown, and an ovolo moulding is being worked on one edge of the stuff with the help of an iron-handled spoke-shave with two equal blades. One blade is out of action when the other is at work, but comes into use when the operator turns to smooth another part of the moulding where the grain of the wood needs humouring by pushing the tool in the opposite direction. As one part of the moulding is brought up to a recognizable stage of perfection the position of the work in the vice is altered and another part is worked upon in turn.

[*To be continued*]

IN PARLIAMENT

[BY OUR PARLIAMENTARY CORRESPONDENT]

Building Operatives and the General Strike

At question time in the House of Commons the interesting point arose as to whether workmen on working-class houses refused to leave their work during the general strike, whereas workmen on better class houses actually did strike. Sir Kingsley Wood, the Parliamentary Secretary to the Ministry of Health, in reply to Commander Williams, said that at Torquay there was no stoppage on houses being erected for the Torquay Town Council under the 1924 Act during the general strike, but in most cases building on houses being erected by private enterprise under the 1923 Act was stopped. It was not possible to give an exact figure as to the number of man-days lost, but it appeared that most builders had men idle for periods varying from six to sixteen days.

Commander Williams then asked why stoppages should have occurred on houses built under the Chamberlain scheme and not on those built under the Wheatley scheme. Mr. T. Williams, a Labour member, inquired whether any such stoppage was not due to the fact that the houses erected under the 1924 Act were for working-class people, whereas the others were for those who never did any work?

Sir Kingsley Wood related that that was a complete misapprehension. That was the first time he had heard such a distinction drawn, and, so far as he knew, there was no necessity for it.

Mr. Clynes asked whether it was not the case that at the beginning of the general strike, the Trade Union Congress leaders expressly appealed to men working on housing schemes not to cease work?

Sir Kingsley Wood said that might well have been so, but, apparently, no notice was taken of the appeal.

The Royal Commission on Thames Bridges

The Government are not yet in a position to make any statement as to the appointment of the Royal Commission on the Thames Bridges, announced the Prime Minister in reply to Col. Gretton. He would bear in mind, however, the fact that time was urgent.

The Hudson Memorial

The Hudson Memorial in Hyde Park was once more the subject of controversy, when Sir William Davison asked the Under Secretary of State for the Home Department, as representing the First Commissioner of Works, whether he had any information to confirm the recent report issued by the Bird Sanctuaries Committee of England to the effect that rare and interesting birds which had previously been observed within the bird sanctuary in Hyde Park had, since the unveiling of the masonry portion of the memorial, entirely ceased to frequent the sanctuary; and whether, by judicious planting or otherwise. he could do anything to restore the sanctuary to its primary purpose as a home and resting place for birds?

Captain Hocking, in an amusing reply, said he understood that there was some difference of opinion among birds as to the merits of the memorial, but the majority had loyally accepted the decision of the First Commissioner of Works that the monument must be retained. It appeared that the minority, including a chiff-chaff, had migrated to other parts of the Park. Four warblers had, however, been seen in the Sanctuary since the unveiling, and it was possible that the young of the migrating birds had taken up their abode at the Sanctuary on the recommendation of their parents!

A Suggested Memorial to Simon de Montfort

Sir Harry Brittain asked the Under Secretary whether, seeing that many eminent men of the past associated with the growth of Parliament were represented on canvas or in stone throughout the Palace of Westminster, he would take into consideration some form of memorial to Simon de Montfort?

Captain Hocking said that as Sir Harry Brittain omitted to draw the attention of the Office of Works to the omission from the estimates of the necessary financial item for the erection of such a memorial, previous to the estimates receiving the approval of the House, the First Commissioner regretted that no funds were now available for the purpose desired. But if anyone was prepared to offer such a memorial, the first Commissioner would be prepared to consider its acceptance.

Housing Progress.

Mr. Chamberlain stated that the total number of houses completed in England and Wales during the year ended March 31, 1926, was 173,426—106,987 with State assistance, and 66,439 without State assistance.

THE COMPETITORS' CLUB

[In this article SENESCHAL *draws attention to the marked improvement that has taken place during the past twenty years in the drafting of clauses with regard to cost of the proposed building in competition conditions. To-day, he states, almost always the requirements are fairly definitely stated, but latitude is generally left as to cost. He points out that this does not imply that the competitor is in any way released from the obligation to design economically. In most cases the decision will be made on the grounds of economy in planning and construction, and only slightly qualified by other considerations.* SENESCHAL *reminds me that he would be glad to consider contributions to this page from any of our readers.—Editor,* A.J.*]*

THE COST LIMIT

It is satisfactory to note the marked improvement that has been effected during the last twenty years or so in the drafting of the clause dealing with the cost of the proposed building in competition conditions. Previously it was quite usual to lay down a definite cost limit, which was often quite inadequate to provide such a building as the other equally definite conditions demanded.

The improvement may be regarded as mainly due to the practice of consulting a professional assessor before issuing the conditions. Formerly the promoters were more inclined to draw up these conditions and issue them to competitors without professional advice, reserving this for the adjudication only. But so many difficulties arose out of this procedure that the pressure put on them to abandon it is now generally effective.

Not the least of these difficulties was the tendency to impose a cost limit based on imperfect information as to what would be reasonable. As may be imagined, it is by no means easy to determine what the cost of a building should be before it has been planned, indeed, it can only be a sketch approximation at the best, and the technical adviser is well aware of this. Not so the layman : how often has an architect been asked to design a house with such and such accommodation not to cost more than, say, £3,000, and when his decision has been that it is impossible, his client's reply is that it oughtn't to be, as his friend so-and-so bought a house of about that size for about that figure, thus disregarding the numerous factors that make for differences in value.

In like manner the estimates of cost for competition purposes were often arrived at on the most inadequate premises, forgetting circumstances of vital import in the matter of time, site, character, and the like. Somebody, somewhere, sometime, put up a building for so much rather like the one we want, therefore ours should cost the same. Luckily, this attitude has been so emphatically discounted that it is only to be met with in remote and backward districts. Probably the war gave it its *coup de grace* by destroying all recent standards of comparison and making it difficult to link up with the old traditional ones. At all events, hard-and-fast limitations of cost are now rarely to be met with in competition conditions.

Almost always the requirements are fairly definitely stated, and more or less latitude is left as to cost. This does not imply that the competitor is in any way released from the obligation to design economically. In nine cases out of ten the decision will be made on the grounds of economy in planning and construction, only very slightly qualified by other considerations, mainly practical; so that it is most important to avoid loose or wasteful planning. Only in cases where the object of the competition is decorative rather than utilitarian do we find that the cost limit is a convenient way of defining the demand. In this case it is not "We want so much, what will it cost us?"—but, "We have so much, what can we get for it?"

Between these two extremes there are occasionally, but not often, intermediate positions, but it is usually pretty clear which is the dominating factor—requirement rather than outlay—and where both are named some latitude is usually given in one or the other. Moreover, there is usually a clause allowing a 5 per cent. or a 10 per cent. margin for the contractor's estimates; 5 per cent. is inappropriate at the present period of variable rates, as it could easily be entirely swallowed up by an advance in these; 10 per cent. does give a reasonable possibility of adjustment. Then, in buildings of an important character, there is some margin as to the manner in which they are finished, in stone as against brick, and marble versus plaster, and the competitor can give his view, in the report, as to the character of the work which the proposed cost will admit of.

Another method of comparing designs is by fixing a price per cubic foot and requiring competitors to estimate their designs on this basis. This would often be quite a reasonable arrangement, as where the promoters are well advised and define the type of building required, they may be quite as well-informed as to the cost per cubic foot as many of the competitors. On the other hand, if this is the case, there is really no occasion to ask for anything beyond an accurate statement of the cubic contents, for the differences in cost between the designs can be arrived at fairly closely by the assessor, who is in a position to decide as to what variations in pricing might be necessitated through the simpler or more elaborate treatment displayed. The relative advantages of these two alternative methods are not such as to demand a strong recommendation in favour of one or the other.

It will be clear from these remarks that the question of cost must largely depend on the character of the competition, and that the only procedure liable to bring about an *impasse* is the definite scheduling of requirements combined with a hard-and-fast limitation of expenditure.

SENESCHAL

COMPETITION CALENDAR

The following competition is announced with the full approval of the R.I.B.A.

Saturday, July 31. Australian National War Memorial, Villers Bretonneux, France. Open to Australians. Particulars from the High Commissioner's Office, Australia House, Strand. Deposit £2 2s.

The conditions of the following competition has been received by the R.I.B.A.

September 30. Cenotaph for Liverpool. Assessor, Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A. Premiums, first, £200; second, £150, provided he is an ex-Service man; third, £100; fourth, £50. The author of the selected design will be paid a commission of 500 guineas, which will include the premium of £200 above-mentioned, and, in addition to preparing all the necessary working drawings and superintending the erection of the work, he will be required to superintend the erection of a full-size wood and plaster model of his design on the site. Particulars from the Town Clerk.

The conditions of the following competitions have not as yet been brought to the notice of the R.I.B.A.

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Sir John Burnet, R.A., British representative on jury of assessors.

No date. Manchester Town Hall Extension. Assessors, Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A.

ANNOUNCEMENTS

The Minister of Health regrets to announce that Sir Charles Ruthen has been compelled by ill health to resign his honorary appointment as Director of Housing in the Ministry. Sir Charles Ruthen has held this appointment since 1921 and has rendered service of very great value to successive Ministers of Health.

The address of Mr. S. Salisbury, A.R.I.B.A., is now 4a Bloomsbury Square, London, W.C.1.

Mr. Robt. J. Beale, A.R.I.B.A., F.S.I., has removed to 59 Oakfield Road, Stroud Green, N.4.

Mr. W. P. Peters, architect, has moved to 125 Vicar Lane, Leeds.

Mr. Philip Tilden has moved his office from 59 Doughty Street to Morley House, 320 Regent Street, W.1.

LITERATURE

THE RENAISSANCE IN ITALY

THE student of history must ever find the keenest delight in those periods which show the dawn of a new light impinging upon men's consciousness, so that mankind is seen amidst the complex reaction of an old and a new order. And this complexity gives a special interest to art no less than to mundane affairs, and so it is that the fifteenth century in Italy must always be one of immense interest to the architectural student, for the changes of the fifteenth century were not so much the acceptance of a new order, but a return to an old. With the spread of Christianity there came about a confusion of art, morality, and literature, and æsthetic appreciations became overlaid. During the mediæval ages there was no coherent architectural influence; San Miniato at Florence, Sant' Ambrogio at Milan, Pisa Cathedral, and St. Mark's at Venice are contemporary churches, though their styles are Lombardic, Romanesque and Byzantine, yet common to them all is the Roman stock from which they sprung, diversely overlaid; during the fifteenth century this overlay is shed, but the shedding is a gradual process. There was no sudden relinquishing of the mediæval mode of thought and expression, and a taking up of the classic tradition at the point where the ancients laid it down. The process of getting back was a gradual one, but it produced some of the most interesting and beautiful buildings in Italy. Brunelleschi's churches at Florence; San Lorenzo, Santo Spirito, and the Pazzi chapel; the Strozzi and the Cancelleria palaces; S. Maria della Grazie at Milan, to mention but a few at random.

Herr Julius Baum has gathered together some five hundred odd photographs of buildings and details of buildings dating from the late fourteenth to the early sixteenth centuries, and the quality of them will be appreciated by those who have travelled in Italy, when it is added that most of them are by Alinari or Brogi. There is also an introduction in which the development of the Renaissance is discussed in its various forms, and considerable attention is given to the various mathematical theories which have been advanced from time to time dealing with the proportion of both plans and elevations. Just as it was the fashion half a century or more ago to confuse art with moral values, so it would appear to be the fashion to-day to confuse art with mathematics. However, those who are interested in these theories will find them briefly and clearly dealt with, assuming always a competency to read German fluently. H. J. B.

Bankunst und Dekorative Plastic der Fruhrenaissance in Italien. By Julius Baum. Julius Hoffmann, Stuttgart.

HOW TO DISTINGUISH PRINTS

The number of books published on the history and the making of prints grows apace, and is indicative of the ever-increasing interest which is taken in this form of art both by artists and by laymen. This book sets out to classify the methods of print-making and identification in a more scientific manner than has hitherto been attempted. It deals with sixteen such methods, but some of these, wood cutting and wood engraving for instance can scarcely be separated, while linoleum cutting must have been surprised to find itself in a book dealing with serious arts.

The editor writes a comprehensive historical note on the inventors and early users of print-making processes. Each of these processes is then dealt with in turn by men, who are, for the most part, well known as skilled practitioners in their art. Mr. E. M. Wilson, whose technique is always sound and reliable, writes on line engraving and mezzotint; Mr. E. W. Charlton on the ordinary bitten etching, illustrating his remarks with a very delightful print of Poole Harbour. Mr. Macnab's illustration of colour etching suffers from defects of reproduction and the conflict of values between the etched lines, and the superimposed colour shows the many pitfalls in the path of him who would try to combine the etching and the colour print. Soft ground etching has an especial appeal to architects as it permits the very quality and the delicate gradations of an original pencil drawing to be reproduced in the print. Mr. Hugh Paton here shows an architectural subject as an example.

The full appreciation of any print can, however, only be obtained when there is personal familiarity with the process of its making. This is not to say that every collector should himself be an engraver or etcher, a mezzotinter or lithographer. But it is nevertheless certain that the peculiar intimacy of the delight in fine prints is only vouchsafed in its fullest degree to those who will, somehow or other, become acquainted with the craftsmanship as well as with the art, of the process. The demonstrations organized by the Print Collectors' Club during the exhibitions of the Royal Society of Painter-Etchers have been of inestimable value in this respect.

An interesting and useful feature of the book under review is the bibliography which is included at the end of each section, a glossarial index concluding the whole. As an introduction to the subject the book should be valuable although one could wish that the portentous amount of margin and tail space had been considerably reduced, and the writers allowed to carry their most interesting but all too brief notes a little further. It is a book which the tyro in prints will enjoy, and the experienced collector not disdain to add to those already on his shelves.

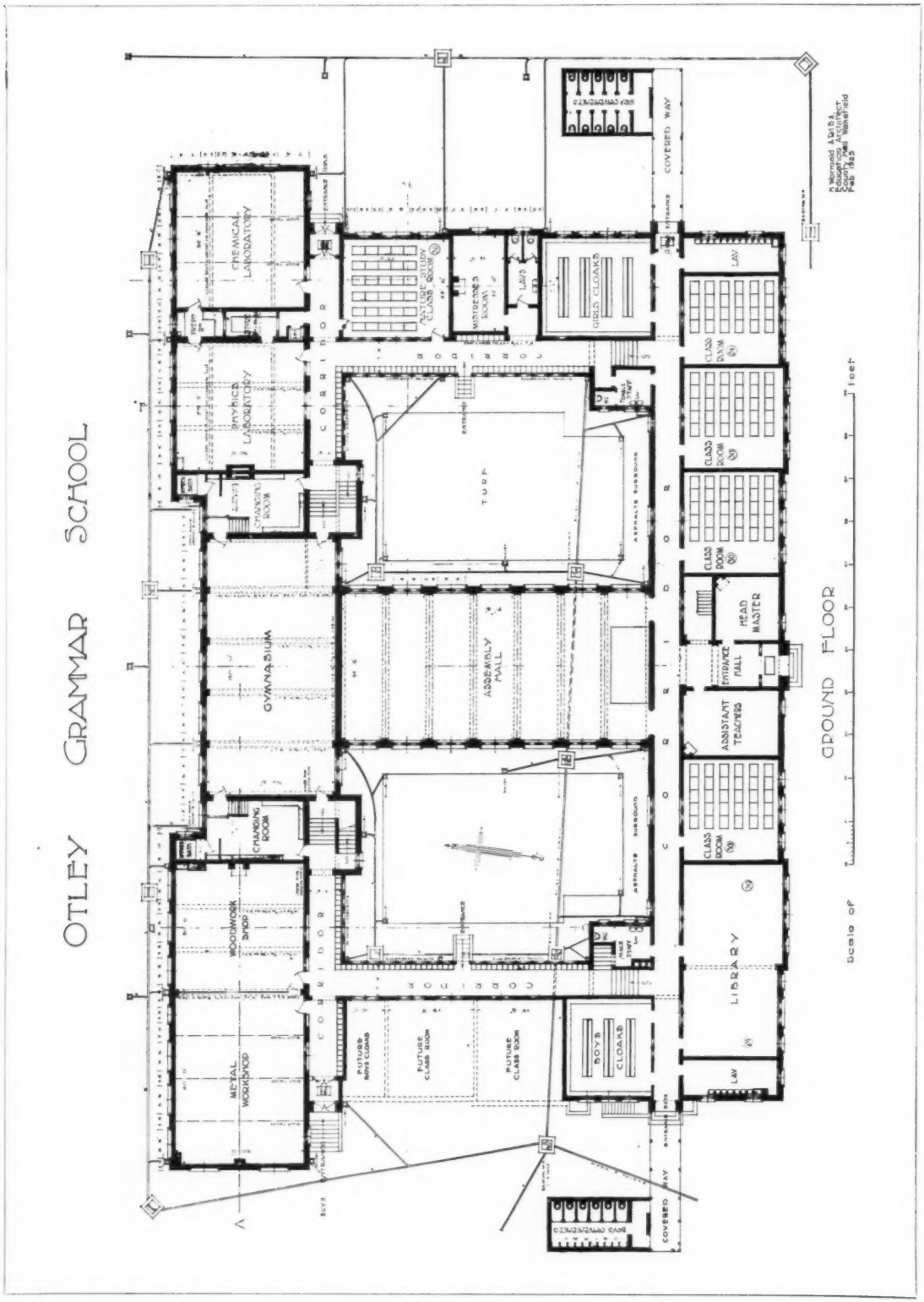
W. H. ANSELL

How to Distinguish Prints. Edited by Hesketh Hubbard, R.B.A. The Print Society. Price 21s. net.

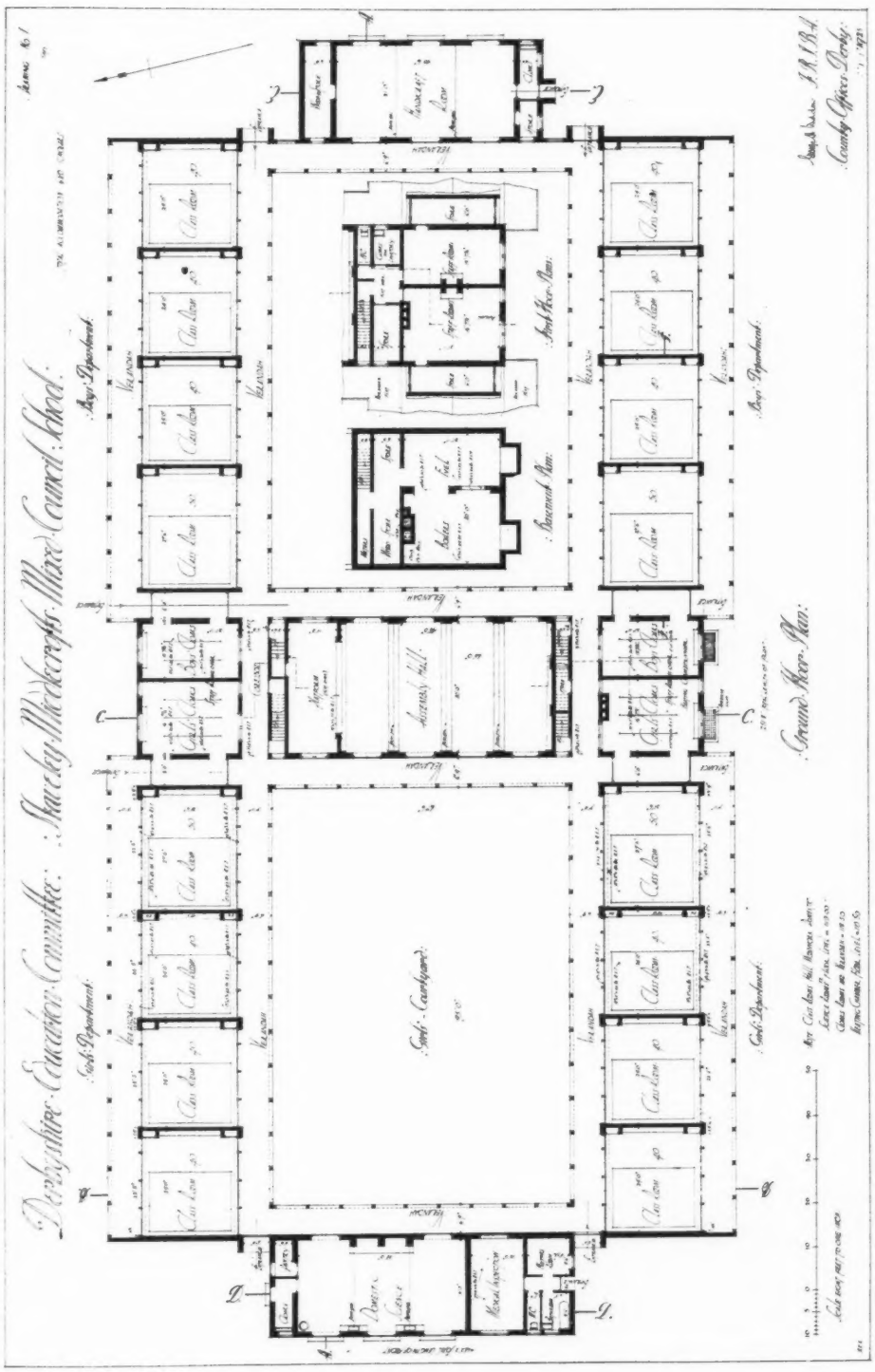
SCHOOL PLANS

The reason why this series of plans has been issued is indicated in the "Foreword," which states that recent plans for schools show marked differences from those of earlier years, to meet the demand for the one-story type of building, and for more free space and more light and air. It having been found that nothing like a complete survey of the subject being accessible an exhibition of designs was arranged in connection with the annual meeting of the Association of Directors and Secretaries for Education in 1925, but as this was only open for a short time it was obvious that a useful purpose would be served by publishing a representative selection with schedules of accommodation and analyses of cost in a convenient and permanent form. In making their selection the committee have been guided less by the relative merit of the plans as by the range of variety it was possible to include. Small rural schools, as well as important city ones, have been included, and a few of the examples have been chosen to show ingenious methods of dealing with difficult sites.

The types selected have been grouped under five headings, namely: Secondary schools, central schools, elementary schools, open-air schools, and school clinics. By far the larger number belong to the first and third of these classes, but several of those placed under the heading "elementary" might with justice have come under the following one, as they are in large measure "open-air" in character. While there is necessarily some degree of uniformity in the standard of hall and classroom accommodation in each grade of school, there are marked differences in the supplementary provision for the arts, sciences, and crafts. These differences account to some extent for the variations in cost per head, but there are other factors contributing to this, such as the local conditions, the character of the site, and the type of construction adopted. As the result of these differences we find that the cost of secondary schools ranges from £70 to £113 *per capita*, and of elementary schools from about £20 to £40. As showing the general change in the character of the education provided for, the newer secondary schools give as much (or more) area to demonstration rooms as to classrooms, while all the larger elementary schools have rooms for domestic science and for handicrafts, and often in addition to these, rooms for art work and other special purposes. In districts without a



Otley Grammar School. By M. Wormald. [*From* School Plans.]



Staveley Middlecrofts Council School, Derbyshire.
By George H. Widdows. [*From* School Plans.]

Wormald. [*From* School Plans.]

special clinic, provision for medical inspection may also be included.

There is also an increasing demand that it should be practicable to carry on the school work in the open air, and the mode of providing for this which is found most economical and convenient is by placing on either side of the classrooms open verandas which can be thrown into it by the glazed folding partitions which take the place of an external wall; thus either one or both sides of the room can be thrown open and the advantages of work under these conditions is gained without the need to transport fittings, desks, etc. The cost of schools of this type seems to be slightly more than that of similar ones on the old lines, but it is probably less than is involved by constructing special open-air accommodation, while it certainly simplifies organization.

One or two of the examples given show special forms of construction aiming at reducing costs, and though something may be done in this direction the difference is not so large as to suggest that there are marked advantages to be gained under normal conditions. More can be effected both in respect of initial expenditure and of economical working by a careful study of planning and construction.

From this point of view the utility of this series of school designs is indubitable, and not only the architect, but all others concerned with the provision of schools under the regulations of the Ministry of Education will find it of value as an indication of present-day standards.

H. V. LANCHESTER

School Plans. Published by the Association of Directors and Secretaries for Education. 15s. post free.

SOCIETIES AND INSTITUTIONS

R.I.B.A. Council Meeting

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

The Conservation of Ancient Monuments and Remains. On the recommendation of the Art Standing Committee a revision of the two official R.I.B.A. documents upon this subject which appear in the Kalendar was approved and ordered to be published.

The Preservation of Old Bridges. On the recommendation of the Art Standing Committee the Board of Architectural Education was requested to invite all recognized schools to encourage their students to measure bridges of architectural or archæological interest.

Mr. Cass Gilbert. The Council sent their congratulations to Mr. Cass Gilbert, Hon. Corresponding Member, on the occasion of his election as President of the National Academy of America.

London Building Acts. The report of the London Building Acts Committee on the revision of the Acts was received by the Council, and it was decided to send a comprehensive statement to the L.C.C. on the subject and to request that body to receive a deputation.

Smoke Prevention. On the recommendation of the Science Standing Committee it was decided to request the L.C.C. to reconsider their decision on the subject of a suggested inquiry into smoke prevention.

The Forestry Commission and the R.I.B.A. Scale of Charges. On the recommendation of the Practice Standing Committee it was decided to forward certain correspondence to the Forestry Commission and to urge that proper fees should be paid and fully qualified architects should be employed.

Hon. Secretary R.I.B.A. for Canada. Mr. Victor Horsburgh, F.R.I.B.A., of Toronto, was appointed Hon. Secretary for Canada in succession to the late Mr. F. S. Baker.

Membership. Mr. Arnold Mitchell was transferred from the list of Retired Fellows to the list of Practising Fellows. Mr. R. C. Jones was reinstated as a Licentiate. The resignation of the following members was accepted with regret :—Messrs. W. A. Gagnon, L.R.I.B.A., H. C. Richardson, A.R.I.B.A., J. O. Harris, L.R.I.B.A., W. P. Schofield, A.R.I.B.A., G. H. Higginbottom, L.R.I.B.A., W. White-Cooper, F.R.I.B.A., S. S. Reay, F.R.I.B.A., H. J. Yorke, L.R.I.B.A.

International Housing and Town Planning Congress, Vienna. Mr. E. C. P. Monson was appointed delegate of the R.I.B.A. to this Congress to be held in Vienna from 14th to 19th September, 1926.

Studentship. On the recommendation of the Board of Architectural Education the following were elected students of the R.I.B.A. :—Barton, H., Bomer, E. D. N., Booth, R. G., Ellis, Mary Feodore, Hill, H. E., Kelsall, J. S., MacManus, F. E. B., Micklethwaite, D. M., Mirams, D. G., Shand, G. S., Sutcliffe, B. I., Walker, S. T.

Membership of the R.I.B.A.

Those who contemplate architecture as a career can obtain no better advice than that given in a pamphlet, just issued by the R.I.B.A., under the title *Membership of the R.I.B.A.* This valuable little work has been produced mainly to show the qualifications necessary for Associateship—in general the entrance class of membership—and the best way in which they can be obtained. It includes a summary of the privileges of membership, a table of the fees and subscriptions, a list of the R.I.B.A. prizes and studentships, and particulars of the examinations to be passed for admission to the Associate class. The R.I.B.A. desire that students within reach of a "recognized" school should avail themselves of the opportunities these institutions afford, and take up the courses provided rather than submit themselves for the examinations without such recognized training. A list of these schools and degree of exemption they afford are given. The frontispiece contains a useful map showing at a glance the distribution of these schools in Great Britain. The pamphlet can be obtained, price 1s. 2d. post free, from the R.I.B.A.

Oxford Memorial to Wren

The Council of the R.I.B.A. have decided to open a subscription list to enable members to contribute to the cost (estimated at £65) of placing a window in the Old Ashmolean building at Oxford as a memorial of Sir Christopher Wren. The design will be Sir Christopher's coat of arms in a cartouche to pair with the Ashmole Memorial Window. Members desiring to subscribe to this object are requested to send cheques or postal orders to the Secretary of the R.I.B.A., 9 Conduit Street, W.1.

The Royal Sanitary Institute

Among the Fellows, Members, and Associates elected at the last meeting of the Royal Sanitary Institute were the following architects : Fellows : Messrs. A. Burr, F.R.I.B.A. (Life Fellow); M. Clarke, F.R.I.B.A.; H. E. Mathews, O.B.E., F.R.I.B.A.; and Sir Charles Ruthen, O.B.E., F.R.I.B.A. Member : Mr. T. Greenfield, A.R.I.B.A.

The Institution of Structural Engineers

The Council announce that they have purchased the house known as 10 Upper Belgrave Street, London, S.W.1, as headquarters for the Institution of Structural Engineers. The offices of the Institution are now removed to that address. The new premises contain a meeting hall, library, ample accommodation for Council, committee meetings, and staff store-rooms, etc. The rooms are now open to members, and the library is open daily from 12 noon until 7 p.m. Members and visitors accompanying them will be able to obtain coffee, etc., in the members' rooms from 1 p.m. to 3 p.m. daily.

The Royal Society of British Sculptors

The Royal Society of British Sculptors have awarded their medal "for the best work of the year by a British sculptor in any way exhibited to the public in London" to Mr. C. S. Jagger, A.R.A., F.R.B.S., for his Artillery Memorial at Hyde Park Corner. Owing to the outstanding quality of this as a work of fine art the medal is to be in gold.

THE LONDON SCHOOL OF TROPICAL MEDICINE

We reproduce on loose plates in this number some of the architects' drawings for the new London School of Hygiene and Tropical Medicine, of which the foundation-stone was laid last week by the Rt. Hon. Neville Chamberlain, the Minister of Health. The site is in Bloomsbury adjacent to that which has been proposed for the London University—to which the new school is affiliated. It is bounded by Malet, Keppel, and Gower Streets. The main entrance is in Keppel Street, and gives immediate access to the administration department, and to the large lecture hall, also to the library and museum on the first, second, and third floors. The remainder of the plan is laid out in the form of the letter H with secondary entrances from Gower and Malet Streets and staircases in the centre bar of the H. The accommodation for the teaching and research departments comprises departments of sanitary science and tropical medicine, bacteriology, chemistry and bio-chemistry, vital statistics and immunology and medical biology, on the first, second, and third floors, of which the plans illustrated will give an idea.

There is extensive provision for animal quarters on the fourth and fifth floors, and there is a large basement for X-ray work, post-mortem of animals, workshops, museum storage, students' lavatories, etc.

Messrs. James Carmichael, Ltd., are the contractors for the foundation work, and Messrs. Archibald Dawnay & Sons for the structural steelwork, from drawings prepared by Mr. C. H. Lobban, D.SC., A.M.I.C.E. Mr. J. F. Kiernan, M.I.C.E., is the consultant engineer for the mechanical services, and Mr. P. Morley Horder and Mr. V. O. Rees are the architects.

TRADE NOTES

In the article on the Library at Armstrong College, Newcastle, published in our issue for June 30, it was stated that the book-stacks were supplied by the Art Metal Construction Company. This is incorrect. The work was carried out by the Art Metal Equipment Co., Ltd., which is now amalgamated with Roneo Limited and was all built in England of British material.

The fireproof flooring of Messrs. Docker Bros., Ltd., which can be obtained in various artistic colours, is one of the most interesting of this firm's many well-known decorative specialities. This flooring is known as Docker's Induroleum fireproof flooring, and consists of the following: Induroleum powder, Induroleum crystals, and water. It has been the aim of the firm to incorporate in this flooring all the necessary qualities which will give lasting and permanent results under all conditions at a reasonable price. The surface, if of steel, to which the Induroleum is to be applied, first receives two coats of red lead paint mixed with varnish and one coat of bituminous paint, to prevent corrosion. If of concrete, the surface is left rough to form a key to hold the coat of flooring, and is not painted before the flooring is applied. If of wood, flat-headed galvanized nails are driven in at frequent intervals, painted as above, and projecting about ¼ in. from the floor to form a key. 37 lb. of Induroleum crystals is dissolved in 3 gal. of water, and this solution is added to 100 lb. of Induroleum powder, stirring it until a smooth uniform paste is obtained. This makes sufficient Induroleum to cover 4½ sq. yd., ½ in. thick. The Induroleum is laid immediately after mixing in the same manner as an ordinary cement plaster floor. When the flooring is sufficiently hard, usually after forty-eight hours, the surface is scraped with a steel scraper, or rubbed down with steel wool, to impart a proper finish to it. After another twenty-four hours two thin coats of genuine boiled linseed oil are applied to bring up the colour and increase the water and weather-resisting properties of the flooring. For offices, houses, hospitals, or any floor where good appearance is desired, the firm recommend the floors should be waxed in place of the oil. As soon as the oil is dry the flooring can be taken into use. During a test made at the firm's Saltley Works, Birmingham, the firm state the Induroleum flooring was laid ½ in. thick on ¼ in. steel plate and supported at cross corners, the opposite corners were then pressed down by hydraulic pressure to the extent of 3 in., and then released without any sign whatever of cracking the Induroleum. Among other specialities of the firm of particular interest to the architect are Premier white enamels, Muroleum flat oil paint for interiors, the sandstone process paints for outside walls and stonework, and Adamant varnish for outside work.

The new ground of the Waygood-Otis Club at Orchard Way, Monks Orchard, Elmers End, was officially opened by Lady Askwith, C.B.E. Before the opening ceremony the chairman (Mr. Henry C. Walker) and directors of the company held a reception; Mrs. D. W. R. Green presented the club flag, and Mrs. C. Clarke a challenge cup for 100 yd. handicap. Lady Askwith then declared the club open, and was accorded a vote of thanks which was moved by Mr. D. W. R. Green, chairman of the Waygood-Otis Club Council. Sports were afterwards held. In the evening the Mayor and Mayoress of Croydon paid a visit to the ground, and were received by the chairman and directors of the company and the officials of the club, the introductory speech being made by Mr. C. H. J. Day, deputy chairman of the Club Council. The prizes were presented by the Mayoress, to whom a vote of thanks was proposed by Mr. S. Kirton, the secretary of the club. Dancing then proceeded. The ground accommodates two cricket pitches, four tennis courts, one bowling-green, and football pitches during the season. A commodious pavilion has been erected, with separate dressing-rooms for members and visitors, and suitable and adequate sanitary accommodation for all, together with cooking appliances.

NEW INVENTIONS

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

LATEST PATENT APPLICATIONS

15517.—Baddiley, J.—Colouring cement, concrete, &c. June 19.
15122.—Caley, E. C.—Apparatus for producing concrete walls, &c. June 16.
15423.—Davis, A. J.—Building construction. June 18.
15120.—Mullins, G. W.—Surfaces of roofs, doors, &c. June 16.
14996.—Thompson, R. M.—Building construction. June 15.

SPECIFICATIONS PUBLISHED

253181.—Nelson, W. E.—Walls and like structures formed of concrete blocks.
252784.—Leyland, A.—Composition for use in buildings and the like.
253222.—Stent, D. H.—Casting concrete walls.
253237.—Kendrick, A. L.—Construction of walls of houses and the like structures.
253318.—Gammell, S. J.—Shuttering for the casting *in situ* of hollow concrete walls.
237277.—Stevens Sound Proofing Co.—Floor constructions.

ABSTRACT PUBLISHED

250672.—Smart, E. F.—Wallsend-on-Tyne, Northumberland.—Walls.

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 eighteen per cent. per annum, less income tax, payable on July 15. The dividend for the corresponding period of 1925 was at the same rate.

THE WEEK'S BUILDING NEWS

Housing at Sidcup

The Sidcup Council is to build forty houses at a cost of £19,000.

New Library for Eastbourne

A library is to be built in Eastbourne at a total cost of £10,000.

New School for Epsom

Epsom is to have a new secondary school for boys.

Enlargement of a Gisburn School

The Gisburn Council school is to be enlarged.

Extension to London Public Baths

Extensions are to take place at Endell Street, W.C., public baths.

More Houses for Lewisham

The erection of 134 council houses at Lewisham is to commence soon.

Luton Housing Scheme

The Luton Council is to erect 254 houses at a total cost of £128,932.

More Houses for Godalming

Forty-four more houses are to be built by the Godalming Town Council.

Housing at Guildford

The Guildford Council is to build 114 more houses at a cost of £59,696.

Selby War Memorial Hospital

The Selby War Memorial Committee is to erect a war memorial hospital, at a cost of between £12,000 and £13,000.

Houses Proposed at St. Helens

The St. Helens Housing Committee proposes to erect 204 houses at Sutton, and on various sites at Parr.

Proposed Leicestershire Sanatorium

The Leicestershire County Council proposes to build a sanatorium at Markfield at a cost of about £80,000.

Housing at St. Thomas

St. Thomas Rural Council is erecting thirty-two houses.

Housing Loan for Tipton

The Tipton District Council has resolved to apply for sanction to a loan for the purchase of land for housing purposes.

Electric Light Sub-Station for St. Pancras

At a cost of £27,500 St. Pancras Council proposes erecting a new electric light sub-station.

Housing Progress at Newcastle

The Housing Committee of the Newcastle Corporation has decided to erect 114 brick houses on the Pendower estate.

Rhodes Memorial at Oxford

The erection of the Rhodes memorial house at Wadham College, Oxford, will cost approximately £90,000.

Housing Sites at Birmingham

Land for 21,661 houses has been acquired by the Corporation of Birmingham, and nearly 7,000 houses are in course of erection.

Plans Approved at Coventry

Plans for ninety-four dwelling-houses has been approved by the Coventry City Council.

Housing at Hemsworth

The Hemsworth District Council proposes to build seventy-six houses at Kinsley, near Pontefract.

L.C.C. Housing Scheme

It was stated at the L.C.C. that 13,500 houses would be erected by the Council during the next two years.

Housing at Eastbourne

The Eastbourne Council is to build sixty houses for the working classes on the Crumbles site.

Housing at Hartlepool

The Ministry of Health has approved the erection of 151 houses on the Rift House estate for the West Hartlepool Council.

Proposed Houses at Doncaster

The Adwick-le-Street (Doncaster) Council is about to erect sixty houses. The estimated cost of the full scheme is nearly £30,000.

Housing at Wandsworth

Plans have been passed by the Wandsworth Council for the erection of ninety-three houses in Woodmansterne Road, Streatham.

A Housing Scheme at Newmarket

The Newmarket Rural District Council has received sanction to borrow £22,755 required for the first year's programme of the new housing scheme.

Alteration of Burslem Town Hall

The Stoke-on-Trent City Corporation has resolved to apply to the Minister o. Health for sanction to a loan for the alteration of the Burslem Old Town Hall.

New Schools for Llay

New elementary schools are about to be opened at the model colliery village of Llay, near Wrexham, to accommodate 520 children. The approximate cost is £20,000.

A New Hospital for Harrogate

The governors of the Harrogate Infirmary are to erect a new hospital to accommodate 100 patients. It is hoped to begin building this summer.

Housing at Rowley Regis

The Rowley Regis Urban Council has decided to proceed with the erection of sixty-two municipal houses at Silverthorne Lane, Cradley Heath.

Dorchester Housing Loan

The Minister of Health has sanctioned a loan for the erection of houses at Maiden Newton for the Dorchester Rural District Council.

Stafford Housing Scheme

Proposals are to be laid before the Stafford Town Council for the erection of sixty-five houses at a total cost of £28,000.

Housing at Barnsley

The Barnsley Corporation is about to erect sixty-eight houses on the Carlton site —twenty-two at £364 per house, forty-six at £420 per house.

A Banbury Housing Scheme

The Banbury Town Council has agreed to a further scheme for the erection of eighty-six new houses on the Easington building estate.

More Houses for Sussex

The Buildings Committee of the Sussex County Council recommends for approval plans for thirty-one houses, including no fewer than twelve in Longland Road.

Proposed Houses at Reigate

The Borough Surveyor of Reigate has been instructed to prepare detailed lay-out and house plans and specifications of houses proposed to be erected on the Ringwood Avenue site.

New Baths for Cheltenham Spa

The Town Council of Cheltenham Spa has given instructions for the preparation of plans for the erection of new medical baths on the Winter Garden site. The cost is estimated at some £30,000.

Huge Rockefeller Grant

The Rockefeller Foundation has made a grant of £454,500 towards the cost of building The Imperial School of Hygiene and Tropical Medicine in Malet Street, Bloomsbury, W.C. The building is illustrated in this issue.

Housing at Hammersmith

The London County Council Housing Committee proposes to erect 100 houses on a portion of the Wormholt estate which the Council is acquiring from the Hammersmith Borough Council.

Housing at Gloucester

The Housing Committee of the Gloucester City Council has considered the erection of forty-two semi-detached houses on land on the south-western side of Tredworth Road and the north-western side of the Great Western Railway.

READERS' QUERIES

THE PRESERVATION OF TEAK

J. P. writes: "Is there any satisfactory method of treating teak which is exposed to the weather, to preserve its natural colour. I inserted a number of dormer windows, all the exposed timbers of which are of teak. The teak was well oiled before being fixed, but the sun has bleached it to a rather pale, unsightly tint. Painting, of course, would not meet the case, as the principal object in using teak was to render painting unnecessary."

So far as I am aware nothing can be done except to trust to time, as measured by decades if not by generations, to effect natural colourization. Possibly, but not certainly, the new "Drytone" process might be effectual, but its use would be an experiment, and the risks of experimenting would have to be run. Of course, teak was an excellent choice of timber from many points of view.

G. A. T. M.

RAVAGES OF THE DEATH-WATCH BEETLE

Reader writes: "I have been asked to advise on the treatment of a comparatively new church roof. It was constructed forty years ago in yellow pine, and now shows serious signs of attack by the death-watch beetle. Can you give me the address of the makers of the solution for spraying timber and of the necessary spraying apparatus?"

Messrs. Hope Products, 104 High Holborn, W.C.1, make a solution for spraying timber against insect infestation, and they can probably suggest the most suitable apparatus for use with it. Messrs. Holder, Harriden & Co., Nobel House, 35 Nobel Street, Falcon Square, E.C.2, supplied the ten-gallon containers of virex alloy used by the late Professor Maxwell Lefroy at Westminster Hall. The insecticide he finally adopted was obtained from Messrs. Heppell's Insectox Laboratories, 2 and 6 Eden Street, Hampstead Road, N.W. The professor emphasized the fact that, though he was confident that spraying would be beneficial, it was still in the experimental stage, and periodical careful inspection should be made to ascertain whether the timber became reinfested in the course of years.

W. H.

The Editor welcomes readers' enquiries on all matters connected, directly or indirectly, with architectural practice. These enquiries 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. The only thing we ask is that diagrams should be clearly and legibly drawn out and lettered in black ink.—Ed. A.J.

VENTILATING A DOCTOR'S CONSULTING ROOM

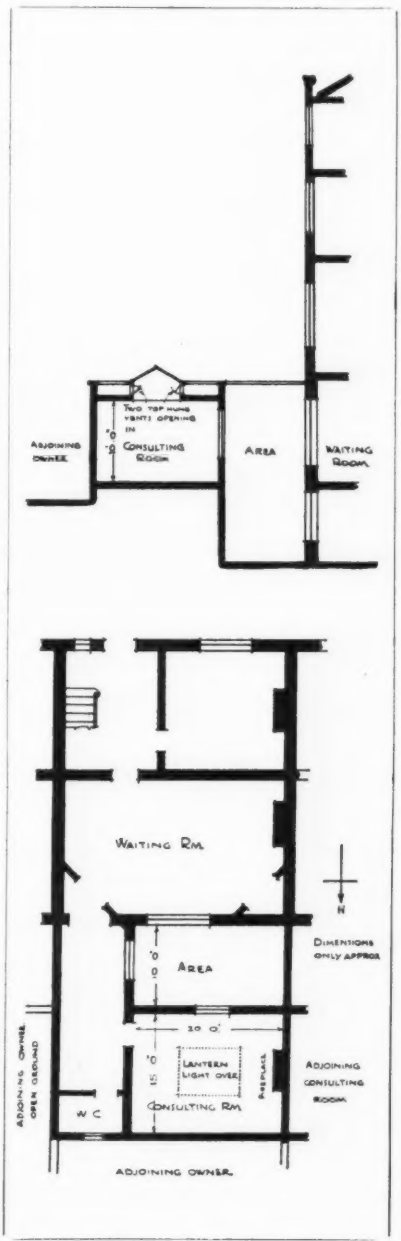
F. B. writes: "A doctor has asked my advice on the question of ventilating his consulting room. The room is situated behind a four or five-story building and is flanked on each side by similar buildings all along the street. It is arranged as shown on the accompanying sketch. It is necessary to maintain a temperature of from sixty-five to seventy degrees. The heating is accomplished by means of an ordinary coal fire, the flue of which is carried up the back elevation of the main building in an iron flue pipe. Light is obtained from a lantern light, which has two opening lights as indicated, but this has little or no effect on the ventilation. It is not known whether fresh air inlets or vents could be made on the north side as this wall abuts on to the adjoining owner's property, which may be a building or open space."

The difficulty of ventilating the consulting room is complicated by the necessity of maintaining a temperature as high as sixty-five to seventy degrees, by means of an ordinary coal fire. If it is considered absolutely necessary that this kind of heating apparatus should be employed its combustion may be improved without reducing the temperature of the room by the provision of an air duct, or air ducts, from the area to the sides of the grate and opening into the space below the fire bars. Other fresh air ducts from the area can be made to pass over the fire with openings to discharge the warmed air into the room, or a special coal-burning heating and ventilating grate provided with these appliances may be installed. If the difficulty of adequate ventilating implies, as it usually does, that the fire is smoky when fully stoked up to maintain the high temperature, a metal canopy may be required to reduce the area and height of the fireplace opening. The draught in the chimney would probably be improved by pugging the iron flue pipe with non-conducting material such as is used for retaining heat in steam pipes or cold in pipes conveying liquids at a low temperature and thus avoiding the sudden cooling of the column of smoke as it leaves the consulting room and passes above the flat roof.

Another method of improving the heating and ventilating of the room would be to install a fireplace provided with a hot water boiler and run a circuit of hot water pipes around the ceiling under the lantern-light with a radiator under the window in the wall next the area. A ventilating inlet grating behind the radiator would admit fresh air which would be warmed in passing between the tubes of the radiator. The application of warmth to the incoming air would cause it to rise and so would stimulate circulation throughout the consulting room. Movement in the warm and partially used air contained in a room is recognized by certain authorities as possessing some of the health-giving and refreshing properties of fresh air, and an electric fan would help to keep air from stagnating when, for any reason, the windows and ventilators have to be kept closed or nearly closed. The fan might be installed in one end of the lantern light where it could be used either to produce a circulation of air in the room, or, by opening a shutter or pane communicating with the external air, to extract foul air as occasion demands.

Ventilating openings through party walls into the property of adjoining owners are hardly practicable although there are cases where they have been permitted and others where they have been made by stealth. It should be possible to produce an adequately ventilated room without troubling the neighbours or obtaining special and unusual concessions from them.

W. H.



RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₁	Abergavenny	Do.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W.Counties	1 8	1 3½
A₃	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W.Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W.Counties	1 8	1 3½
B₃	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W Counties	1 8	1 3½
A₂	Atherstone	Mid. Counties	1 6½	1 2
B₃	Aylesbury ..	S. Counties	1 4½	1 0½
B	BATH ..	S.W.Counties	1 6	1 1½
B₃	Banbury ..	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 2½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W.Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₃	Basingstoke	S.W. Counties	1 4½	1 0½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₃	Bewdley ..	Mid.Counties	1 6½	1 2
B₃	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W.Counties	†1 9	1 3½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W.Counties	1 8	1 3½
A	Blackpool	N.W.Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₃	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W.Counties	1 8	1 3½
A₃	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
A	Bradford ..	Yorkshire	1 8	1 3½
A₃	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse ..	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₃	Brixham ..	S.W. Counties	1 4½	1 0½
A₃	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W.Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid Counties	1 7	1 2½
A	Bury ..	N.W.Counties	1 8	1 3½
A₃	Buxton ..	N.W.Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₃	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W.Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon ..	N.W.Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford ..	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
B	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W.Counties	1 8	1 3½
A	Chesterfield	Mid Counties	‡1 8	1 3½
B₃	Chichester..	S. Counties	1 4½	1 0½
A	Chorley ..	N.W.Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W.Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester..	E. Counties	1 5½	1 1½
A	Colne ..	N.W.Counties	1 8	1 3½
B₁	Colwyn Bay	N.W.Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₃	Crewe ..	N.W.Counties	1 6½	1 2
A₃	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W.Counties	1 8	1 3½
B₃	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W.Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster ..	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W.Counties	1 4	1 0½
A₃	Driffield ..	Yorks	1 6½	1 2
A₃	Droitwich..	Mid. Counties	1 6½	1 2
A₂	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EAST-BOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₃	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W.Counties	1 8	1 3½
B₃	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W.Counties	1 8	1 3½
B₃	Frome ..	S.W.Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester..	S.W.Counties	1 6	1 1½
A₂	Goole ..	Yorkshire	1 7	1 2½
B₁	Gosport ..	S. Counties	1 5½	1 1½
A₃	Grantham..	Mid. Counties	1 6½	1 2
A₂	Gravesend..	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX..	Yorkshire	1 8	1 3½
A₁	Hanley ..	Mid. Counties	1 7½	1 2½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₃	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S.W.Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W.Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

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 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₂	Kendal ..	N.W. Counties	1 5	1 1
B₂	Keswick ..	N.W.Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A₃	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 5	1 1
A₁	LANCASTER	N.W.Counties	1 7½	1 2
A₃	Leamington	Mid. Counties	1 6½	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₃	Lewes ..	S. Counties	1 4½	1 0½
A₃	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W.Counties	‖1 9	1 3½
B	Llandudno	N.W.Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12–15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W.Counties	1 7½	1 2½
B	Maidstone ..	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₃	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₃	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₃	NANTWICH	N.W.Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E.Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W.Counties	1 8	1 3½
A₃	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₃	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	¶1 8	1 3½
A	Pontefract..	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W.Counties	1 8	1 3½
A	QUEENSFERRY	N.W.Counties	1 8	1 3½
B	READING..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₃	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₃	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W.Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W.Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₃	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₃	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens..	N.W.Counties	1 8	1 3½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₃	Shrewsbury	Mid. Counties	1 6½	1 2
A	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	S. Counties	1 6	1 1½
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W.Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W.Counties	1 8	1 3½
A	Stockton-on Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W.Counties	1 5½	1 1½
A	Sunderland ..	N.E. Coast	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W.Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W.Counties	1 7	1 2½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₂	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W.Counties	1 8	1 3½
A₃	Warwick ..	Mid. Counties	1 6½	1 2
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₃	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W.Counties	1 8	1 3½
A	Wigan ..	N.W.Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₃	Worcester ..	Mid. Counties	1 6½	1 2
A	Worksop ..	Yorkshire	1 8	1 3½
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

* Plasterers, 1*s.* 9*d.*

† Carpenters and Painters, 1*s.* 8½*d.*

‡ Plumbers, 1*s.* 9*d.*

§ Painters, 1*s.* 6*d.*

‖ Carpenters and Plasterers, 1*s.* 8½*d.*

¶ Painters, 1*s.* 7*d.*

PRICES CURRENT

EXCAVATOR AND CONCRETOR

EXCAVATOR, 1s. 4½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; NAVVY, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	15	6
Screened ballast or gravel, add 10 per cent. per yd.			
Clinker, breeze, etc., prices according to locality.			
Portland cement, per ton	£2	19	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	2	4
SPREAD and level, including wheeling, per yd.	0	2	4
PLANKING, per ft. sup.	0	0	5
DO. over 10 ft. deep, add for each 5 ft. depth 30 per cent.			
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 lintols, etc., per ft. cube	0	1	6

DRAINER

LABOURER, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; BRICKLAYER, 1s. 9½d. *per hour*; PLUMBER, 1s. 9½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

Stoneware pipes, tested quality, 4 in., per yd.	£0	1	3
DO. 6 *in., per yd.*	0	2	8
DO. 9 *in., per yd.*	0	3	6
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0	6	9
DO. 6 *in., per yd.*	0	9	2
Portland cement and sand, see "Excavator" above.			
Lead for caulking, per cwt.	£2	5	6
Gaskin, per lb.	0	0	5½

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft. 0 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	9	0
DO. 6 in., per ft.	0	11	0

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

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

BRICKLAYER

BRICKLAYER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

London stocks, per M.	£4	19	0
Flettons, per M.	3	0	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	21	10	0
DO. *headers, per M.*	21	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	12	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.			
FACINGS, FAIR, per ft. sup. extra	£0	0	2
DO. Red Rubbers, gauged and set in putty, per ft. extra	0	4	6
DO. salt, white or ivory glazed, per ft. sup. extra	0	5	6
TUCK POINTING, per ft. sup. extra	0	0	10
WEATHER POINTING, per ft. sup. extra	0	0	3
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
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, ¾ 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

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

MASON

MASON, 1s. 9½d. *per hour*; DO. *fixer*, 1s. 10½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

Portland Stone:			
Whitbed, per ft. cube	£0	5	3
Basebed, per ft. cube	0	5	4
Bath stone, per ft. cube	0	3	9
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

SLATER AND TILER

SLATER, 1s. 9½d. *per hour*; TILER, 1s. 9½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; LABOURER 1s. 4½d. *per hour.*

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

Slates, 1st quality, per M:			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
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. gauge, 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
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, 1s 9½d. *per hour*; JOINER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*

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

7×3, per std.	£23	0	0
11×4, per std.	33	0	0
Memel or Equal. Slightly less than foregoing.			
Flooring, P.E., 1-in., per sq.	£1	5	0
DO. *T. and G., 1 in., per sq.*	1	5	0
Planed Boards, 1 in.×11 in., per std.	33	0	0
Wainscot oak, per ft. sup. of 1 in.	0	2	0
Mahogany, per ft. sup. of 1 in.	0	2	0
DO. *Cuba, per ft. sup. of 1 in.*	0	3	0
Teak, per ft. sup. of 1 in.	0	3	0
DO., *ft. cube*	0	15	0
FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5	9
DO. framed in floors, roofs, etc., per ft. cube	0	6	3
DO., framed in trusses, etc., including ironwork, per ft. cube	0	7	3

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.	3	10	0
SLATE BATTENING, per sq.	0	18	6

PRICES CURRENT; *continued.*

CARPENTER AND JOINER: *continued.*

DEAL GUTTER BOARD, 1 in., on firring, per sq.	£3	5	0
MOULDED CASEMENTS, 1¼ in., in 4 sqs., glazing beads and hung, per ft. sup.	0	3	0
DO., DO., 2 in., per ft. sup.	0	3	3
DEAL cased frames, oak sills, 2 in. d.h. sashes, brass-faced pulleys, etc., per ft. sup.	0	4	0
DOORS, 4 pan. sq. b.s., 2 in., per ft. sup.	0	3	6
DO., DO., DO., 1½ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1¼ in., per ft. sup.	0	3	3
If in oak multiply 3 times.			
If in mahogany multiply 3 times.			
If in teak multiply 3 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone:			
Deal, 1 in., per yd. sup., average	0	10	0
DO., 1¼ in., per yd., sup., average	0	12	0
DO., DO., 1¼ in. maple blocks	0	15	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1¼ in. tread, fixed, per ft. sup.	0	3	6
2 in. deal strings, fixed, per ft. sup.	0	3	9

PLUMBER

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

Lead, milled sheet, per cwt.	£2	2	0
DO. *drawn pipes, per cwt.*	2	3	6
DO. *soil pipe, per cwt.*	2	5	6
DO. *scrap, per cwt.*	1	9	6
Copper, sheet, per lb.	0	1	1
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	5
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	1
DO. *4 in. per yd.*	0	5	0
R.W.P., 2½ in., per yd.	0	2	0
DO. *3 in., per yd.*	0	2	5
DO. *4 in., per yd.*	0	3	3
Gutter, 4 in. H.R., per yd.	0	1	5
DO. *4 in. O.G., per yd.*	0	1	9
MILLED LEAD and labour in gutters, flashings, etc.	3	9	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	1
DO. ¾ in., per ft.	0	2	5
DO. 1 in., per ft.	0	3	3
DO. 1¼ in., per ft.	0	4	6
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
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.	0	2	5
DO. 3 in., per ft.	0	2	10
DO. 4 in., per ft.	0	3	3
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	7
DO. O.G., 4 in., per ft.	0	2	10
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	7	0
DO 3 in., per ft.	0	6	0
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS only, with all joints	1	18	0
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. 4½d. *per hour.*

Chalk lime, per ton	£2	11	0
Hair, per cwt.	0	18	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	8
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
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
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	5
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. 8½d. *per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	6
DO. 26 oz.	0	0	7½
Cathedral white, per ft.	0	0	6½
Polished plate, British ¼ in., up to 2 ft. sup.	0	2	0
DO. *3ft. sup.*	0	2	6
DO. *7 ft. sup.*	0	3	6
DO. *25 ft. sup.*	0	4	0
DO. *100 ft. sup.*	0	4	6
Rough plate, ⅛ in.	0	0	6
DO. *¼ in., per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	16	0
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	6
Glazing only, polished plate, 6½d. to 8d. per ft., according to size.			

DECORATOR

PAINTER, 1s. 8½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; FRENCH POLISHER, 1s. 9d. *per hour*; PAPERHANGER, 1s. 8½d. *per hour.*

Genuine white lead, per cwt.	£3	0	0
Linseed oil, raw, per gall.	0	3	10
DO., *boiled, per gall.*	0	4	1
Turpentine, per gall.	0	6	0
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	4	0
Distemper, washable, in ordinary colours, per cwt., and up	2	0	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4
Single gold leaf (transferable), per book	0	1	11
Varnish copal, per gall. and up	0	18	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	1	0	0
French polish, per gall.	0	19	0
Ready mixed paints, per gall. and up	0	10	6
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
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

SMITH

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

Mild steel in British standard sections, per ton	£12	10	0
Sheet steel:			
Flat sheets, black, per ton	19	0	0
Do., Galvd., per ton	23	0	0
Corrugated sheets, galvd., per ton	23	0	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
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

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, 5/32 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, 5/32 in. punched per M. grey	17	0	0
DO., *red*	19	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.			
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.			
Plywood			
3 m/m alder, per ft. sup.	0	0	2
4½ m/m amer. white, per ft. sup.	0	0	3½
⅜ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½

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