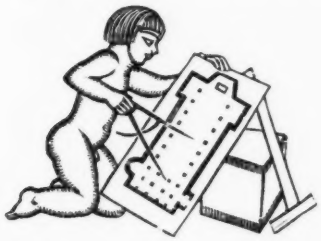
THE ARCHITECTS' JOURNAL



THE ARCHITECTS' JOURNAL
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There are clear signs that brick, which has for some time been a luxury in domestic building, is once more coming into its own in the urban street picture, whence it has so ruthlessly been expelled. A number of distinguished modern brick façades have been brought together and will be published next week with a critical article by that reputed connoisseur, Mr. Nathaniel Lloyd

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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.

xiii. Bernardo Bellotto (1720-1780).
View of the Liechtenstein Palace, Vienna

Bernardo Bellotto was the nephew and pupil of Antonio Canale, called Canaletto ; " and "—as George Vertue, in 1749, remarked in one of his notebooks—" this young stripling by degrees came on forward in his profession on being taken notice of for his improvements he was calld Cannaleti the Young, but in time getting some degree of merit, he being puffd up disobliged his uncle, who turned him adrift." By the time Vertue made this note, Bellotto had already ceased to live in Italy, and was settled in Dresden, where, in 1748, he had become Court Painter to the Elector of Saxony. In 1759-60, the Seven Years' War caused Bellotto to leave Dresden and go to Vienna ; and it is to this phase of his career that in all probability should be assigned two delightful views of the Liechtenstein Palace at Vienna, of which this is one.—[Vienna, Liechtenstein Collection.]

THE ARCHITECTS' JOURNAL

Wednesday, March 31, 1926

THE ANTI-PROFITEERING BILL

THE Building Materials Bill, originally introduced into the House of Commons by Mr. Wheatley, is becoming a hardy annual. It was produced again a few days ago, but was rejected by 196 votes to 98. The discussion on this measure, however, contained many points of interest to both architects and builders. In view of the many half truths in the non-technical Press with regard to this Bill, it will be useful first to explain what the Bill really attempts. It was drafted by Sir Patrick Hastings, the Attorney-General to the Labour Government, who proudly claimed its authorship on July 27, 1924, and said that if it was passed there would be " written on the wall the first letters of Socialism."

It leaves the initiative for action against alleged profiteers to the Minister of Health who, if he considers that prices are unreasonable, has then to report his views to the President of the Board of Trade. There is no suggestion in the Bill as to whether an unfortunate Minister of Health, dealing with an extremely complicated issue, is to have any committee to advise him whether prices are actually excessive.

The President of the Board of Trade then takes over the responsibility. If he thinks that prices are " unreasonably high "—far too vague a phrase—the Bill proposes to give him powers to take drastic steps. The president would, under the Bill, have power to fix building prices himself, and to prohibit or restrict the imposition of conditions of supply or charging or seeking to charge prices in excess of the maximum prices fixed for the order. According to the Labour Attorney-General in his explanation of the Bill, " any person who charged too much would be tried, and if convicted, sent to prison."

Another clause gives the two Ministers of State power, under certain circumstances, to take possession of building stocks and the business of any particular manufacturer. The State then would control certain businesses, and thus nationalization would be introduced by degrees. The proposals are clearly drastic and even punitive, and it is little wonder that even those who are extremely suspicious with regard to existing building prices consider that the Bill is impracticable, and in fact is largely political window dressing. Administratively to divide the responsibility between two Ministers is clumsy and difficult.

At the same time the recent debate in the House brought out certain issues that deserve more investigation. The case as presented by Labour speakers was that the cost-of-living index figure is seventy-five above the pre-war cost of living, but that building materials are between 94 and 96 per cent. above pre-war prices. Commander Kenworthy gave some details of profits made by particular companies. He stated, for example, that the profits of the London Brick Company in 1923 were approximately £139,000; in 1924, £221,000; and in 1925, £297,277; that last year the Maidenhead Brick Company paid a dividend of 37½ per cent.; and the Sussex Brick Company, in 1923, gave a bonus of 100 per cent. on the capital. Mr. Viant said Messrs. Burt, Bolton and Heywood paid 10 per cent. in 1925, and gave a 50 per cent. bonus in 1919; Eastwood's, 15 per cent. in 1925; and Glenboig, a fire-clay company, 20 per cent. These figures are taken from the official parliamentary report. They are quoted in order to give some idea of the case for the Bill. This case, in a nutshell, was that building material prices have kept up when they should have fallen, because of the rings that have been formed, and the artificial restrictions that have been put on the natural movement of prices.

One of the best speeches in reply was made by Lt.-Col. Gadie, who made the extremely apposite point that the Bill gave no control over articles imported into this country, and that joists and floor-timbers used for houses are mostly made in America, in Norway, or in Sweden.

Sir Kingsley Wood, replying for the Government, gave a number of interesting facts to show that on the whole manufacturers of building materials had kept the bargain which they made with Mr. Wheatley in regard to prices. It will be remembered that the Labour Minister of Health laid it down—whether wisely or not is a matter of opinion—that the prices ruling on January 1, 1924, should be regarded as reasonable. The manufacturers then agreed that they would not alter prices, except in so far as this might be necessary owing to increased or decreased costs over which they had no control. Since then materials have not generally advanced in price except in the cases of certain classes of bricks, light castings, and lead.

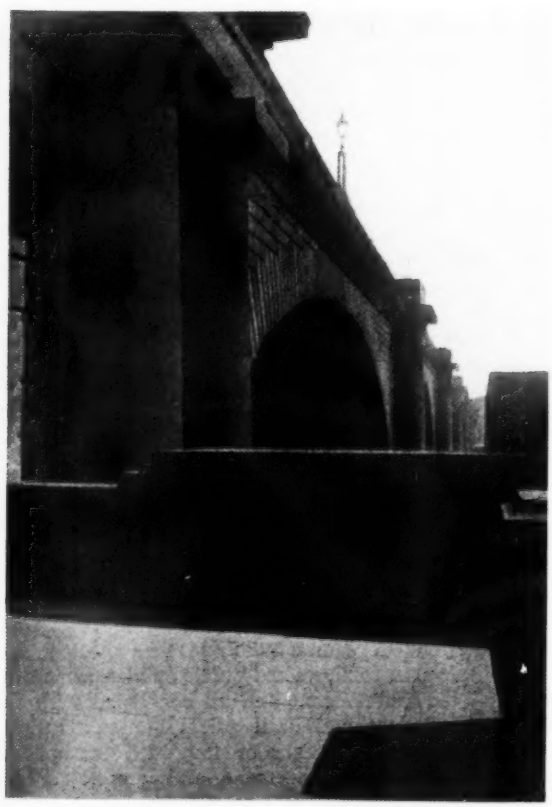
The debate ranged over a very wide field. The unprejudiced observer must, however, feel that both parties were somewhat guilty of window dressing. Sir Kingsley Wood and the other Government speakers clung rather pathetically to the bargain made by Mr. Wheatley that prices ruling in January, 1924, were reasonable. It would appear, too, that in view of the urgency the Committee on Building Prices might well be a little more active and searching in their inquiry. No report has been published since last July. Surely there is no reason why consideration should not be given to the question as to whether the prices ruling in January, 1924, might not now be reduced. A little light thrown on this subject might well have as astonishing an effect as did some of the revelations of the Food Council. House building is far too costly, and Labour speakers certainly voiced public opinion when they urged that the Government and all concerned with the industry should not rest until prices are substantially reduced, probably by means of improved methods of manufacture, better management, and greater output per man.

NEWS AND TOPICS

The Improvements Committee of the London County Council have proposed that a competition should be instituted for the design of a new Waterloo Bridge. The question has been referred to the Royal Fine Art Commission, who, while continuing to deplore the removal of the existing bridge, have, nevertheless, expressed their readiness to give all possible assistance to the Council in the consideration of the steps which should be taken to secure a satisfactory design. The Improvements Committee state that "the high æsthetic value attached to the existing bridge, its position and its relation to adjacent and more distant buildings, such as Somerset House and St. Paul's Cathedral demand that every effort shall be made by the Council to ensure that the new bridge to be erected shall be a worthy successor to the old." The opinion was expressed that the conditions for the competition should be limited to the very minimum, so as to allow the fullest scope to taste, invention, and resource. It is suggested that the competition be limited to British subjects, and that there should be four assessors, Mr. G. W. Humphreys, the Council's chief engineer, the President of the Institution of Civil Engineers, and the President of the Royal Institute of British Architects.

* * *

Mr. Yerbury's photograph of Waterloo Bridge, which is made the frontispiece to the recent volume by Mr. Howard Robertson, *Architecture Explained* (Ernest Benn, Limited, 7/6 net), is the finest impression of the bridge I have seen.



The great arches going out over the river, the very world of weight of solid stonework—these are indeed eternities and verities, and I refuse to believe that a body of men who will be dead in a few years can sweep them away.

* * *

In the extremely interesting series of essays which the *Daily Express* has recently been publishing on the subject of "Your Child's Career," is included an essay on "What Architecture Offers," by Sir Reginald Blomfield, R.A., who explains to the public certain facts about the architectural profession, which particularly need to be emphasized at the present moment. He points out that under existing conditions the prospects of architecture as an opening for young people are far from promising. Money is scarce, building is too costly, and there are far too many architects for the work to go round. The R.I.B.A., since the amalgamation of the Society of Architects, numbers some 8,000 members in Great Britain alone, and outside the qualified ranks of the Institute there are practitioners who combine "architecture" with their other avocations and produce the appalling buildings up and down the country, which are most unfairly laid to the charge of properly trained architects. Sir Reginald Blomfield would discourage from entering the profession applicants who have nothing else to recommend them than "a slight turn for drawing," and he advises parents and guardians that it is useless entering a boy or girl for architecture unless they show unusual aptitude for design, so far as it is possible to give evidence of this in early youth.

* * *

Sir Reginald Blomfield expresses a certain uneasiness with regard to the architectural schools, which, in his opinion, are responsible for unduly swelling the ranks of the profession. He points out that the schools naturally seek to increase their numbers; prospectuses are issued showing the advantages offered, and they undoubtedly do their best for their students. But certain consequences almost inevitably follow on the systematic organization of the schools. Students are entered too early. In order to anticipate by three or four years the course of technical training, they are taken away from their general education just at the time when they ought to be beginning to realize what they are doing. "The result is that they remain half-educated for years, if not for the rest of their lives, for it is difficult to make up the leeway lost by shutting down of general education, and what may be gained in accumulated technical knowledge in no way compensates for an imperfectly developed mind." The difficulty is to determine what kind of "general education" is most likely to aid a future architectural student. History and literature are, of course, to be commended, while mathematical studies are helpful to those who wish to specialize in the constructional side of building. It must be remarked, however, that æsthetic philosophy (and this is what presumably Sir Reginald Blomfield would have his ideal student possess) is acquired by those who study not history, literature, or mathematics in particular, but æsthetic philosophy.

* * *

The great leaders of the Gothic revival, for instance, had a wide knowledge of history and literature, but this did not necessarily make them acquainted with the principles of architecture. These principles, when once arrived at, can be taught not only in the universities, but in the architectural schools as well, and may even be found capable

of communication in their essentials to intelligent youths who have no ambition themselves to enter the architectural profession. While it is true that a philosophical intelligence is more likely to be developed in a man of twenty-five than in a boy of sixteen, the only excuse for delaying entry to the architectural profession until the later period is that such philosophical intelligence shall in point of fact have been inculcated at the seminary of general education. What the embryo architect needs, before entering on his technical training, is not merely general knowledge, but an acquaintance with the sociological and æsthetic aspects of architecture itself.

* * *

It seems the Hon. John Collier is profoundly depressed by the " deliberate cult of ugliness " by the rising generation. He deplores the " modern craze for abnormality," and cites Mr. Huxley to confound, in his character of a " modern," a tendency which Mr. Collier labels a vulgar and decadent fashion invented by the critics. He even hints at racial decadence as the result of admiration for " an unhealthy type of woman." Really ! Does he think that the public is ever likely to accept the subjective art of to-day as a guide to canons of objective beauty ? Granted that expressionism can cloak a multitude of artistic vacuities, surely its avowed want of objective significance is a safeguard such as did not exist against the legion of pot-boilers of thirty years ago. There always were a hundred quacks to one creative artist; with luck, there always will be, for it is in the monstrous regiment of banality that the spirit of revolt is nurtured, not in the bread-getting fadaises of the critics. Has Mr. Collier forgotten Whistler and Ruskin ? The pendulum would swing for all that the pundit could say, and its very swing was life. But Mr. Collier evidently does not like pendulums; he is still an unrepentant Darwinist conceiving artistic evolution as a quietly flowing stream, of an unchanging H_2O. Fortunately, it is nothing like that; the history of art is a succession of epochal brain-storms; a Giotto reacts from a Margaritone, a Rembrandt from a Raphael, their mental processes generically different in each age. Would Mr. Collier deny this generation the right to react from his ?

* * *

" The winning of the first prize is the first result of an experiment in collaboration between Mr. Webber, Mr. Granger, and myself," said Mr. J. R. Leathart, who was successful in the Liverpool College building competition. " Mr. Webber, who is the youngest of the three of us, being only thirty years of age, came to us with a suggestion that if a few young architects got together and entered all the suitable competitions they would stand a very good chance of success as the result of putting their best into their work and discarding unsuitable ideas. This is our first effort. Mr. Webber, in association with Mr. Granger and myself, had entered another set of drawings in this competition, but these were not placed. As the scheme for which I am mainly responsible has been accepted I shall, by arrangement with my associates, have the last word on any doubtful point. If Mr. Webber's design had been successful, entered as in association with Mr. Granger and myself, he would have had the last word."

* * *

Good progress is being made with the building of the next section of Liverpool Cathedral. It is stated that during the last four months as much work has been completed in the preparation of the new foundations as in eighteen months before the most modern methods and appliances were utilized. In order to get down to the solid hard stone capable of carrying safely such a heavy structure, it has been necessary to dig down in some cases to a depth of 54 ft. In order to complete the foundations for the sections already built, 70,000 tons of earth were removed, and 26,000 tons of cement concrete placed in position. Work is at present proceeding for the building of the great central space and the two western towers. The central space will be a square, measuring 72 ft. on each side. The stone vault above will be octagonal in plan, with the shorter side resting on arches across the corners of the central space. The western transepts are to be a repetition of the eastern transept already built. An important feature of the central space is to be the pulpit, for Sir Giles Gilbert Scott has specially planned out this part of the Cathedral with a view of accommodating larger congregations within easy distance of the preacher than in any medieval churches. The pulpit is to be placed against one of the piers of one of the two transverse arches. These are among the largest Gothic arches ever designed, with a span of 63 ft., and a height from floor to apex of 108 ft. " I have tried to design a cathedral which will make men feel that they want to pray," the architect is reported once to have said.

* * *

Although Miss Wilkinson's motion for the second reading of the Factories Bill was defeated (March 26) by 184 votes to 109, the debate on it produced ample evidence that all parties in the House of Commons are convinced of the necessity for the legislation it foreshadowed. It was not disputed that the Factory Acts ought to be consolidated to make them reasonably plain and workable, and Sir William Joynson-Hicks, in expressing his sympathy with the principle of the Measure, mentioned that in drafting a Bill for the Government he hoped to relieve the Home Office of some of its burdens. What exactly he intends is not clear, but evidently if factories are to be constructed and conducted with due regard to the health, safety, and general welfare of their inmates, Home Office inspection must not be unduly relaxed. A great reform in factory design being of comparatively recent origin, the high standard set in, for instance, the " daylight " factories must be carefully maintained. More architects should be employed to ensure that there is no serious departure from the ideals that the new type of factory promotes and exemplifies. That a well-designed factory or workshop is a potent stimulus to efficiency and economy is so commonplace a truism that I hesitate to insist on it as a constant factor of the factory problem.

* * *

A building attributed to Vanbrugh, and noteworthy for its intrinsic merits, was sold last week. This was Britwell House, in Oxfordshire, with an ornamented plaster ceiling, and some respectable old chimneypieces. Of the oft-times very interesting features of the less well-known houses most of us would remain unaware until the auctioneers' announcements reveal their whereabouts, or until—unhappy thought—they achieve a lurid notoriety through a destructive fire. This particular Britwell House—there is, or was, another in Bucks—is near Bensington, to which place, once upon a time, when on a walking tour, I vainly asked the way because illiterate natives knew it only as " Benson," and did not recognize the name unsyncopated,

and thought that so strange a wildfowl must necessarily find a roosting-place elsewhere ! But, " O thou monster Ignorance, how deformed thou art ! "

* * *

Pineapples and edible peas ! I have always had an amused feeling that the former were a passionate taste with Wren, the latter with his henchman Grinling Gibbons. Wren's partiality or proclivity is recalled almost hilariously in a newspaper account of the restoration of the " King's Beasts " to the pinnacles of the Chapel of St. George at Windsor. It appears that the King's Beasts had been set up by Bray some two hundred years before Wren found it necessary to advise their removal lest they should fall. He recommended the Chapter to substitute stone pine-apples, but this advice was not followed, beyond removal of the dangerous Beasts. It is evident from most of his work that the pineapple had a strong fascination for the good Christopher, even as had the everlasting cockle-shell for Inigo Jones. These great men must needs be indulged in their little whims and weaknesses lest they grow unhappy, and I doubt not that Wren was inconsolable at the failure of the Chapter to accord him his customary " rare and refreshing fruit."

* * *

That venerable couple of ancient houses facing the Law Courts have just been renovated. This is surely a sign that they are to gladden our eyes yet a little longer, for in face of impending doom the expense would not have seemed worth while. Except in a fraudulent sense, " doing-up " does not precede " doing-down." Exactly how old these houses are I should like to ascertain definitely. At a venture, I should assign them to the early seventeenth century, with superficial modifications, as, for instance, of the window-frames. Plaster-faced, and having slightly overhanging upper stories, the houses are markedly of the type popularly recognized as " Elizabethan." Many houses like them, but probably older, disappeared when Holywell Street and Wych Street made way for Aldwych, and when, more recently, Cloth Fair, in Smithfield, lost its chief insignia of antiquity. I understand that within one of these old Strand houses the *London Mercury* is now edited, and I could fancy that their present neat and appropriate shop-fronts owe something to Mr. J. C. Squire's connoisseurship. He certainly takes high rank as a " Kernooser ": in witness whereof the kindred spirits of Wren, Chambers, Gibbs, and the brothers Adam, haunting the Strand as the wonted arena of their mundane activities, will some fine night ascend Mr. Squire's creaking staircase to protest in a body—or, rather, out of a body—against the untoward perpetuation of a type of building they had thought to have consigned to limbo, superseding it with a mode that was at once more ancient and more modern. Mr. Squire will plead that his house is at least a genuine antique, not a sham like the mock-medieval Law Courts over the way !

* * *

It should be mentioned in connection with my note in last week's issue on Mr. John Rothenstein's collection of portraits by Mr. William Rothenstein, and from which the portrait of Mr. Geoffrey Scott was taken, that the book is published by Messrs. Chapman and Hall at six guineas.

The deputation representing the R.I.B.A., the London Society, and other bodies interested in town-planning, that was received by the Minister of Health last week, brought a stage nearer the preparation of a regional plan for London and the Home Counties. Some of the speeches, notably that made by Professor Abercrombie and Mr. Chubb on behalf of the Open Spaces Society, were admirable. The Minister of Health was somewhat platitudinous, but showed very clearly his sincere sympathy with the aims expressed by the deputation. He has, however, to consider the views of local authorities who, even in London, are notoriously parochially minded. The discussion never touched bed-rock, although Mr. Chamberlain hinted pretty clearly that finance must govern the preparation of plans. I understand that £16,000 per annum, provided for five years, would be amply sufficient to pay for the cost of the necessary research work and the preparation of an outlined plan for the area of the London and Home Counties Traffic Advisory Committee. This sum would only cost the produce of one twentieth of a penny rate if subscribed by all the local authorities concerned. Another alternative is that some millionaire should guarantee the £80,000 needed and possibly immortalize his name as being responsible for the replanning of the capital of the Empire. The outcome of last week's deputation is likely to be another conference at which it is to be hoped the £ s. d. of the situation will be considered.

* * *

To discover ancient cities half-buried beneath tropical vegetation is a task which romantically-minded architects would gladly undertake were they not committed to a more prosaic existence. It has been left, however, to Mr. Gann, the famous explorer, to tell us about the architectural wonders of Yucatan, Central America. Along the east coast of Yucatan live the Santa Cruz Indians, presumably the direct descendants of the ancient Mayas who erected magnificent temples and palaces. Many of these are almost intact and covered with wonderful, painted stucco representing figures of gods and men and devils and religious ceremonies. The great ruined Maya city of Yulemm is surrounded by a wall of which the top is broad and flat, apparently designed to accommodate large forces of spearmen and archers, and at each corner of the wall stand small watch-towers. When the country was clear of forest these walls and towers must have commanded a magnificent prospect over cultivated fields. Near this city is the vast cave of Loltum, which is probably the largest cavern in the world. To explore this takes several days, and needs a flashlight apparatus with petrol, mantle and hurricane lamps, and long ropes and ladders. Here we have the most primitive form of architecture, where, indeed, some of the decorative effects are provided by Nature herself. This cave is entered by great well-like holes in the earth through which one descends by ladders from ledge to ledge arriving in immense rocky chambers whose floors are covered with stalagmites and cave earth, and from whose lofty roof depend vast stalactites. The explorer speaks of vast catacombs where silence is almost palpable, and relates how his feet " made no noise on the soft cave earth, and one was almost afraid to raise one's voice, which reverberated round the great stone chambers, and was thrown back in a thousand mocking echoes from the rocky walls."

ASTRAGAL

CICERO AND HIS ARCHITECTS

BY FRANK GRANGER

CICERO was in effect prime minister of the republic of Rome on two occasions: the first in 63 B.C., when he put down the conspiracy of Catiline, the second for a short time after the murder of Cæsar in 44 B.C. By the happiest of accidents a thousand letters of his correspondence have come down, mostly written by him, including also a hundred addressed to him. We thus have a fairly complete picture of Roman life from the inside; and, indeed, for the period between the two dates given it is possible to trace a fairly complete sketch of things from the architectural standpoint as it appears to the architect himself. The result is not without a bearing on things to-day.

Cicero was quite sound on the first principle of all: that the amateur who boasts that he is the architect of a bad building is to be believed. But the reason for this statement, which was probably in Cicero's mind when he made it, is not at first sight so acceptable. Medicine, architecture, and education are well enough, he writes to his son, for persons to whose station in life they are suitable. The resemblance between the Roman and the British temper, about which much has been said, comes out here in a characteristic way. Science receives but slight respect in comparison with the opinions of the uninformed. It might even be advanced that in this respect our own nation goes one better. Our own deep-rooted preference for quacks above the regular practitioners in medicine and of the amateur architect (the members of the local governing bodies now combine with the speculative builders in this capacity) above the trained expert, goes along with the rampaging of the public over the whole educational field. We have seen the public gloating over the unfortunate sculptor in the case of Rima, and the London County Council deciding against the survival of Waterloo Bridge to the music of their own applause. Amphion charmed the stones of Thebes to their place by his strains. The symphonists of the County Council do the other thing.

Will it be believed that Cicero carefully refrains from passing judgment on the masterpieces of Greek sculpture in his great speech against Verres, who had plundered Sicily of its works of art? Will it be believed that the reason he gives for his reticence is that he did not know enough about the matter? Will it be believed that he never once passes judgment on the style of a building and confines himself to matters on which he had practical experience, oratory for example? Such modesty may well call a halt to the popular criticism of works of art.

Hence when we approach the study of Cicero's relation to his architects we have to clear our minds by consulting the practice of antiquity. We can come farther down on our way to the present. The amateur architect is a comparatively late phenomenon, although, as we learn from Cicero, there were isolated cases in the practice of his day. But these were too few to affect the authority of the Greek masters whom Cicero employed. The reason for this acceptance of the current architectural forms was probably because of their simplicity, and also because they were treated as a background for sculpture, mosaic, and painting.

Moreover, the apartments which specially characterized the town and country houses of the time, the gymnasia, the libraries, the colonnades, were of Greek origin, and bore Greek names. Hence the employment of Greek architects and the deference to their opinion.

Cicero employed Cyrus at Tusculum, a freedman of Vettius. Vettius in turn was an agent of Cicero's. Cyrus made the windows overlooking the flower gardens too small to please either Cicero or his friend Atticus. Cicero was met by the reply that views of flower gardens through broad windows were not so pleasant. And the architect backed up his opinion (in the approved fashion of an expert) by scientific formulæ, in this case of optics.

G. G. Scott, in *Gothic Architecture, Secular and Domestic*, suggests, indeed, that the window was regarded as an intruder by classical architects generally. This is an exaggeration.

Ovid, in his *Metamorphoses*, where, of course, in a fable expense was no object, speaks of high roofs and broad windows. But the real reason for small windows was probably the fear of burglars, or, on a larger scale, armed forces. The town mansions and the country houses of wealthy Romans were often made capable of sustaining a siege.

Cyrus was also employed by Cicero's brother Quintus, and by Clodius. For Clodius he built a magnificent villa at Tusculum, which was subsequently a residence of the emperor, Tiberius. Cyrus died in the town house of Clodius, 52 B.C. He was succeeded in his practice by Chrysippus, his freedman. Cicero employed him in various ways, to report on a villa Cicero thought of buying, or, again, to report on some shops of Cicero's at Puteoli, which seem to have been damaged by an earthquake. The architect, indeed, was employed by the Romans for commissions which are now delegated to engineers, and by his wide experience figured often as an agent generally. This was true of Chrysippus. But architects often failed to keep pace with the eagerness of their clients. Cluatius was commissioned to make plans and models for the chapel which Cicero wished to build to commemorate the memory of his daughter Tullia. We learn that Cicero was dissatisfied with Cluatius's delays, and asked Atticus to hurry him up.

The most striking feature of ancient architectural practice was the emphasis laid upon the day-book commentarium, in which the progress of the building was entered. Philotimus kept such a one for Cicero. Vitruvius had access to a large number of such commentaries relating to the most famous Greek buildings, and drew upon them for his treatise. As we turn over the pages of Vitruvius we enter into the architectural undertakings of Cicero, his elder contemporary. And we gain some notion of the important part played by our profession in the Attic revival at Rome, of which Cicero may be regarded as the leader.

SMOKE

BY H. J. BIRNSTINGL

iii: INDUSTRIAL SMOKE

It was pointed out in the last article that the bulk of the smoke nuisance is due to the domestic fire, and particularly to the kitchen range. This fact is often levelled against those who seek to persuade manufacturers to adopt methods of smoke abatement; nevertheless, a very marked decrease is continually taking place in industrial smoke emission, and most manufacturers show willingness to endeavour to abate the nuisance. In this connection the evidence collected by Mrs. Cloudesley Brereton, in collaboration with Mr. Ian MacDonald Horobin, in a paper read at the 1925 annual conference of the Royal Institute of Public Health, is interesting. Some forty leading firms in over twenty different industries were circularized and invited to express their views on the abatement of industrial smoke, and concerning the replies one of the authors writes : " From the great majority of those to whom I wrote I have been favoured with replies not merely expressing a general approval of efforts to reduce the smoke nuisance, but setting forth with great care and at great length the possibilities of reducing smoke emission in their several industries. . . . ."

One of the questions asked in the circular letter was : " Would it immediately/ultimately increase your firm's costs to abolish smoke ? " Few firms replied definitely in the negative to this question, but of these one wrote : " We have found that the elimination of smoke has cost no extra money, the greater efficiency of the apparatus quite covering the extra cost involved in installing the new plant." Another firm wrote : " The decrease of smoke in the majority of cases would coincide with a decrease in cost." The majority of writers, however, adopted a different attitude. They maintained that the word " abolish " was too strong, that a *slight* appearance of smoke is necessary to many industries.

Yet while most of them seem to admit that much smoke emission is indicative of waste, and that there are many available remedies, the installation of which would effect economy in fuel consumption, they hesitate to embark upon the expenditure of the extra capital which such installation must incur. Nevertheless, those firms which have adopted smoke abatement measures are unanimous in their approval. The explanation seems to be that in much of the existing plant it is impossible to effect improvement without scrapping it altogether. Granted, however, that with certain existing plant there are difficulties in the way of effecting improvement, there would seem to be no justifiable reason for permitting new plant to be installed which is not comparatively smoke-free.

Appendix A of the final report of the 1921 Committee on Smoke and Noxious Vapours Abatement deals with the position in Germany. There is no national legislation equivalent to our Public Health Act dealing with excessive smoke emission, yet the measures adopted would seem to be a great deal more efficient than our own. They are threefold. First, permission must be obtained from the police authorities before a boiler or furnace may be erected, and the technical examination of the plant is entrusted to boiler associations. These associations consist of users of boilers, who appoint a technical staff to advise upon safety and efficiency. In granting the right to install a boiler or furnace the authorities lay down certain conditions, which may include the kind of fuel which may be used and the age of the stoker. Secondly, any proposal to erect a new boiler or furnace must be advertised in the neighbourhood, and any objections to the proposal are considered by the authorities. Thirdly, before the war the appointment of smoke inspectors had begun.

The Appendix then deals with the prevailing conditions in 1921; that these must be very much better than those obtaining in England can, perhaps, best be judged from the following remarks : " The most superficial investigation of this district of Germany discloses an extraordinary contrast between such great industrial towns as Dusseldorf and Cologne, on the one hand, and any comparable British towns on the other. The former are pleasant and agreeable places of residence, and the best proof of their amenity is that even the richest citizens continue to live within the city boundaries, a practice which has long been abandoned in British manufacturing towns." And again : " As has already been explained, this cannot be solely attributed to official action, but is mainly due :

1. To the almost complete absence of domestic smoke.

Manchester Docks smothered in the smoke cloud. The annual damage caused to Manchester and Salford by smoke has been estimated at £1,000,000.

2. To the more general use of gas in factories, and the great attention paid by manufacturers to efficient use of coal.

3. To the foresight shown in the planning of towns, more especially with reference to the future expansion of their industries."

Broadly speaking, it would seem that improvement is to be looked for in two directions. First, by the use of other sources of power: oil, gas, and electricity. Second, by increasing the efficiency of coal-consuming plant, particularly in connection with stoking.

Manchester Docks after the wind has cleared the air.

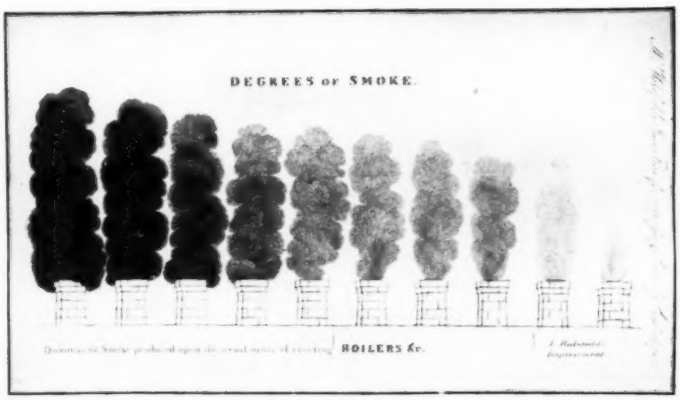
The opinion of manufacturers as to the extent to which the various alternative sources of power offer solution to the problem varies considerably, but there is little doubt that the improvement of London's atmospheric conditions, which has already been noted, is due, in no little degree, to the use of alternative methods of steam-raising. The following large buildings, which, if they cannot properly be classed as industrial, cannot either be classed as domestic, and so thay may legitimately be dealt with here, are equipped with oil plant for steam-raising: the Savoy Hotel, the Regent Palace Hotel, Adelaide House, Bush House, the Coliseum, Messrs. Debenham and Freebody, Messrs. Selfridges, Messrs. John Barker & Co., Messrs. Harvey Nichols & Co., Canada Life Assurance Co., the Prudential Assurance Co., Messrs. Lyons' Corner House, and Cadby Hall. If, in all new buildings of this kind, control were exercised by the authorities over the kind of plant which it was proposed to install, with a view to the reduction of smoke emission, still further improvements in the atmospheric conditions in the metropolis would soon be discernible. The safety of the community in connection with buildings is safeguarded by by-laws and building Acts; there would seem to be no reason why a logical extension of such measures to include the general health of the community at large should be resented, especially when it is remembered that the interest of the public and of the individual building-owner are not only not inimical, but rather are they coincident.

Among the questions asked in the circular letter sent out by Mrs. Cloudesley Brereton and Mr. Ian MacDonald Horobin was the following: "Can and should anything be done to improve manual stoking by instruction, such as is given in parts of Germany?" The general opinion seemed to be emphatically in favour of such steps. Evidence was given before the Smoke Abatement Committee in 1921 by stokers, who stated that they would welcome such instruction. Here and there classes have been held under the auspices of municipalities, smoke abatement societies, or private firms, which seem to have met with every success, indicating that, at any rate, mitigation of the evil is to be sought along these lines, which entail no revolutionary procedure and no great outlay. But even instruction is useless if those acquiring it are unwilling to apply it. "The average stoker is not particularly anxious to avoid smoke, and, unless carefully supervised, will adopt the lazy man's way and stoke in large quantities, with the result that the chimney will periodically emit black smoke." This is the view of one of the circularized manufacturers. This responsibility for efficient stoking, however, must rest, for the most part, with the employer, and methods could be devised, and have been devised in many places, to encourage right stoking and prevent wasteful and harmful smoke emission. Seeing that in this matter the interests of the public and the manufacturer are identical, since excessive smoke invariably denotes fuel waste, it is, perhaps, surprising that greater trouble is not taken to improve stoking methods. One prolific cause of smoke emission is due to the forcing of boilers of inadequate power, and this may sometimes arise owing to lack of the necessary room for expansion in crowded manufacturing districts. Nevertheless, as Commander W. F. Caborne, Hon, Sec. of the Royal Meteorological Society, said in a paper read at the International Smoke Abatement Exhibition in 1912, the issue of much smoke from the shafts of manufactories and other commercial buildings does not necessarily indicate, as is sometimes erroneously asserted, great industrial prosperity, but rather carelessness, ignorance, and waste by man, or inefficiency in the appliances employed.

An interesting suggestion was put forward in a letter to Mrs. Cloudesley Brereton by Mr. Richard Pease, director of Messrs. Pease and Partners, a firm engaged in various large industries, to the effect that: "Should the public authorities be wholly satisfied that there is sufficient general benefit, monetary or otherwise, to be gained by the acceleration of smoke abatement, it would appear that some encouragement should be given to industries concerned—in the form, perhaps, of a revision of rates, which might be shared with those householders who are prepared to forego coal fires." This is a proposition which is surely worth the most serious consideration. It should not be difficult to discover the approximate proportion of the rates which are expended in big cities to subsidize coal emission; thus, as smoke abatement increased, rates would decrease, and the difference would be available for the suggested remission. Moreover, the saving to the individual ratepayer in diminished laundry expenditure, in less-frequent house decoration and repairs, in increased health and diminished doctors' and chemists' bills, would set free further sums of money. Unfortunately, it is well-nigh impossible to find representatives of either local or central government whose views are sufficiently broad to comprehend anything but the most elementary economics.

During the coal strike of 1921 almost every London and provincial newspaper published articles or made comments

upon the changed conditions of their towns, and a most interesting collection of these has been made by Lady Betty L. Melville. In a few days unsuspected beauties were revealed, beauties of sun and sky, beauties of landscape, and beauties of architecture, health and vigour returned, and the death-rate immediately dropped. The Leeds Medical Officer of Health is quoted in the *Yorkshire Evening Post* of June 7, 1921, as saying: "the lifting of the smoke-cloud is putting several years on the life of every citizen in Leeds. And every child born at the present time is starting off with a far better chance of survival than the child born under the ordinary smoke conditions."



A diagram prepared in 1819 showing the quantity of smoke produced upon the usual mode of erecting boilers, etc., and Mr. Wakefield's suggestion for suppressing smoke by combustion.

It was, in fact, as if three-fourths of the inhabitants of the United Kingdom had escaped from a dingy prison and saw, perhaps, for the first time, or after a lapse of many years, the beauty of the world. And then, after a brief, delicious respite, the pall descends once more as "normal" conditions are restored. One day, perhaps, with less dramatic suddenness, the pall will lift never to descend. Indeed, the process has already begun. Let us all endeavour to expedite it.

PHILIPPINE HOUSING AND GOVERNMENT

BY OSBERT BURDETT

If you rashly undertake to govern any other people, particularly a people with habits and a civilization different from your own, you must first understand their ruling motives. One of the revealing bits of evidence that will first obtrude itself on your arrival in their country is their architecture. When, therefore, we follow Miss Mayo in her account of the Philippines,* which have proved fearsome islands to their American imperialist annexators, whatever our own profession may be we first inquire, if we are wise, into their dwellings. Our immediate reward is to learn, or be reminded, that native architecture in the Philippines is still in the primitive stage of housing.

The foundational fact in Miss Mayo's observations can best be conveyed in her own words:

> The barrio, like the village, is mainly composed of one- or two-roomed shacks, whose walls and roofs are made of screens of woven grass or palm leaves neatly lashed upon slender bamboo frames. The shacks, whose life is from two to three years, are single-storied, and stand high on stilts. This arrangement not only keeps them relatively dry, in rain time, but also gives an open storage place beneath. . . .
>
> No sanitation exists, and the invariable pig, although ultimately eaten, is maintained primarily to serve for the non-existent closet. No other provision is made either for sewage disposal or for the pig's support. His hip-bones almost cut through his skin. He is always starving. His hunger, in the intervals of his duties, often drives him into the highway, which he clogs . . . he is the adjunct of every home, and is to be found as certainly in the skirts of the City of Manila as throughout the provinces. Anywhere from five to fifteen persons, adult and children, may inhabit these one- or two-room dwellings.

The architect, turned statesman and having to legislate for the three divisions of the natives known collectively as the "Filipinos," if he has been properly grounded in the foundations of political theory from the philosophic reasoning of Aristotle to the paradoxical extreme of Rousseau, and if, further, he has been personally versed in the art of handling an amateur building committee, will have the basic information that he needs in these housing conditions. Once these have been mastered, and Miss Mayo is as lucid as she seems informed, the social structure of 94 per cent. *tao*, or peasantry, and 6 per cent. *cacique*, or "moneyed boss," is almost an inference. If the architect is an American, and it was for her fellow-countrymen that Miss Mayo wrote first, he will feel thoroughly at home in this arrangement. If he happens to be an Englishman of to-day, he will hardly notice the difference between Filipino and modern industrial social structure.

Not all Englishmen, however, are architects, but all, whether architects or not, have to be taxed in pocket, if not (more helpfully) in brains, for the solution of Imperial problems. What confronts America in little, in the Philippines, confronts us on a complicated scale in India, in Egypt, in South Africa, and in the Commonwealth in which these units have also to be reconciled. The problem of British rule in India, or of the native races in South Africa, or the whites in Kenya, is but part of the problem which the inter-relation of the Dependencies involves. That is the reason why to read this book is an elementary and, therefore, important education in statesmanship; and why, I suppose, Messrs. Faber and Gwyer have brought the book across the sea to English readers. So far as a layman can judge, it is well-informed, lucid, vivid, and impartial. It can be recommended to all intelligent enough to understand their concern in deceptively marginal questions of Empire; that collective household wherein even a palace is top story and no more. Miss Mayo's informing volume teaches us lessons that we learn without knowing that we are learning: a valuable book.

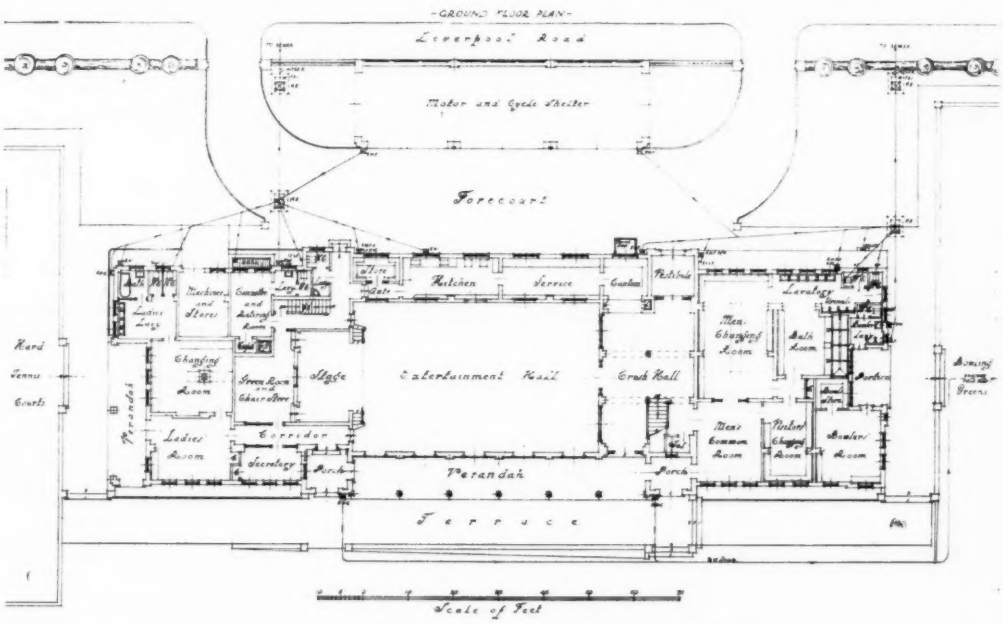
* *The Isles of Fear*. By Katherine Mayo, with a Preface by Lionel Curtis. Faber and Gwyer. Price 15s.

CURRENT
ARCHITECTURE
SECTION

SPORTS PAVILIONS

BY GORDON HEMM

THE scheme now on foot to secure national playing fields in all the great centres of activity has increased considerably the interest of the public in the sports pavilion. Industrial firms now realize that outdoor amusements are essential in the interest of their employees; and they are sparing no expense to secure the most suitable land, and to obtain expert advice in the lay-outs of the sites, and in the erection of appropriate pavilions. Sports pavilions offer fine opportunities for the production of a type of architecture that is full of dignity, with quiet contrasts of colour that will harmonize with the spacious greens around. Such designs call for a treatment of plain wall surfaces, broken where necessary by interesting motifs of a Georgian character. The attractive small windows, refined doors, loggias supported by slender columns, and further relieved by elegant balusters and balustrading, are elements always

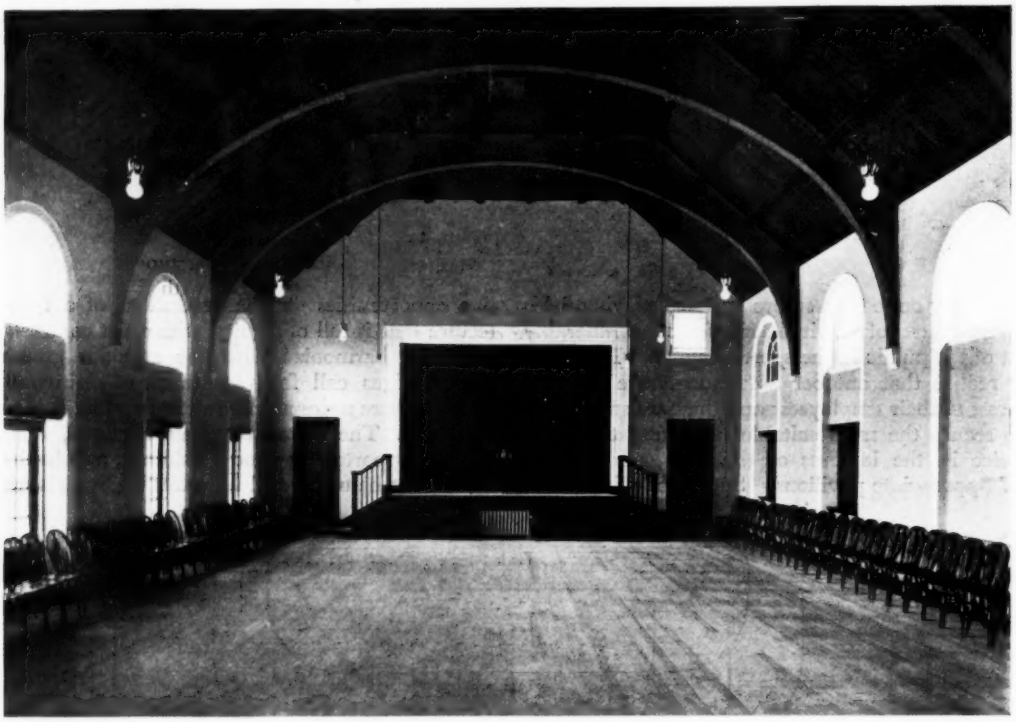


Sports pavilion and Entertainment hall at Widnes. By Shepheard and Bower. Above, the south front. Below, the ground-floor plan.

D

to be desired. Much interest can be infused into all types of buildings by the way in which the roofs are designed, and by the quality of the textures used to cover them. This is especially the case in a sports pavilion, where the large surfaces, if handled broadly, will give the particular character called for in such structures. Few other forms of architecture could be more telling than the pavilion when its design results in the low-spreading kind of building. In America we find most of the golf and country clubs planned to give this effect, and it would be impossible to imagine anything more charming than these accentuated horizontal shapes, which seem to form part of Nature. The accommodation embodied in a sports pavilion naturally varies according to the games played. A large club will probably include tennis, with hard and grass courts, bowling-greens, Rugby and association football, hockey and a cricket field. For a complete organization of this kind an open-air swimming pool must be added to the list, although this attractive feature is not often found in many sports grounds. In some of the latest buildings the accommodation provided includes apartments other than those used specifically for the games played. The incorporation of a large entertainment hall, with crush hall adjoining, in one of the most recent schemes is certainly an innovation. A well-designed amusement hall with stage has been found to be a valuable addition to a club, and during winter months it can be used for plays, dances, whist drives, concerts, lectures, and other purposes.

In the sports pavilion carried out at Widnes by Messrs. Shepheard and Bower, the entertainment hall forms the dominating factor of the design. The architects in designing this hall have made the most out of an economical problem. Five windows open out on to a veranda, which, in summer, is used as an open-air café. The interior effect is very happy, and the long lines of the window architraves, terminated by the semicircular arches, give dignity to the walls. A feature of the roof is the steel trusses spanning the full width of the hall. Instead of the accustomed open lattice framing, the principals are treated as one unbroken surface, with the result that a note of strength takes the place of what otherwise would have resulted in an architectural weakness. A painted, boarded ceiling, fixed to exposed purlins, produces a rich contrast with the plainer wall below. The platform is a dignified ending to a dignified hall, and the simple lines of the balustrade and the stage surrounds are the outcome of careful detailing. On each side of the hall are grouped the sports rooms for male and female, respectively. The former comprises men's common and changing-rooms, bath and lavatory conveniences, and the latter includes ladies' room with changing quarters, and one bathroom off the lavatory. On the east side is the bowlers' room, which faces the bowling-greens. The architects have wisely kept the bowlers' room independent from the rest of the accommodation. Committee, retiring, green, and secretary's rooms are planned to the rear of the stage, and close to the hall. Prominent on the upper floor is the billiard-room, which, together with the gallery, occupy the eastern portion of the plan. The caretaker's apartments, conveniently arranged, feature the other side. The adaptation of simple Georgian elements accounts for the refined look of the exterior, and the long spreading effect gives the right character required of the subject. The only features that might seem to affect the proportions of the building are the gable windows at each end of the long, sloping roof. The roof is covered with large asbestos pantiles, variegated in colour, which is singularly rich in general massing. Although large in size, these tiles do not appear out of scale with the rest of



Sports pavilion at Widnes: the entertainment hall.

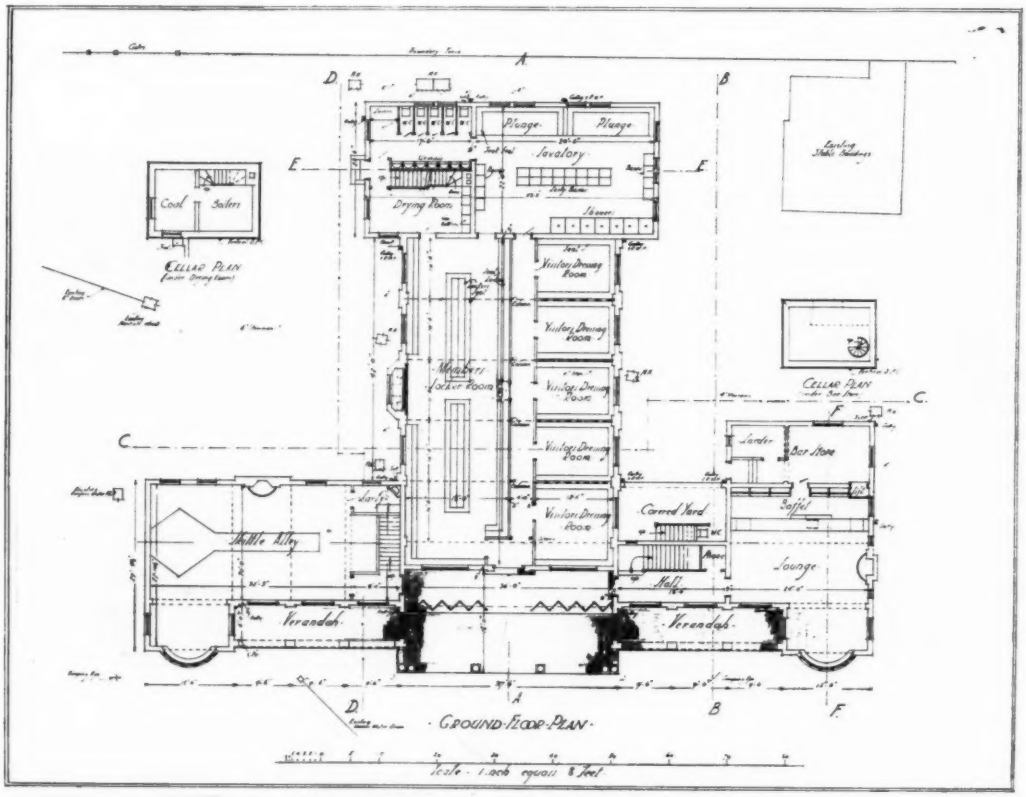
the architecture, as the big unbroken roof areas reduce in effect their size. All the rainwater goods are of asbestos. The main hall has been laid with narrow pitch-pine boards, and the square joists give the spring so essential for dancing.

The sports pavilion at Braintree, by Mr. Vincent Harris, is a building of moderate dimensions, with elevations quite distinctive and charming. A long colonnaded veranda gives access through three French windows to a central tea-room and lounge, with a well-planned bar and its adjuncts at the rear. A single opening on each side of these windows prevents monotony of the wall plane. The customary dressing-rooms, etc., are planned to the best advantage, and all are of good shape and well lighted. It is refreshing to look upon such elevations, for they embody the very essence of refinement and good taste. The clock tower, the crowning feature of the design, expresses its purpose in a delightful manner. It gives just the correct emphasis required of the subject, and its outline is a pleasant relief to the long, unbroken line of the ridge. Dormer windows lend a picturesqueness to most types of roofs, and in this building they are introduced with telling effect. They are restrained in design, yet in harmony with the rest of the architecture. Built-up brick columns have become a very popular motif where a rustic treatment is desired. Mr. Harris evidently prefers them to the wood, but perhaps

Glasgow University Sports Pavilion. By James H. Honeyman. Above, the main front. Below, plans of basement and ground floors.

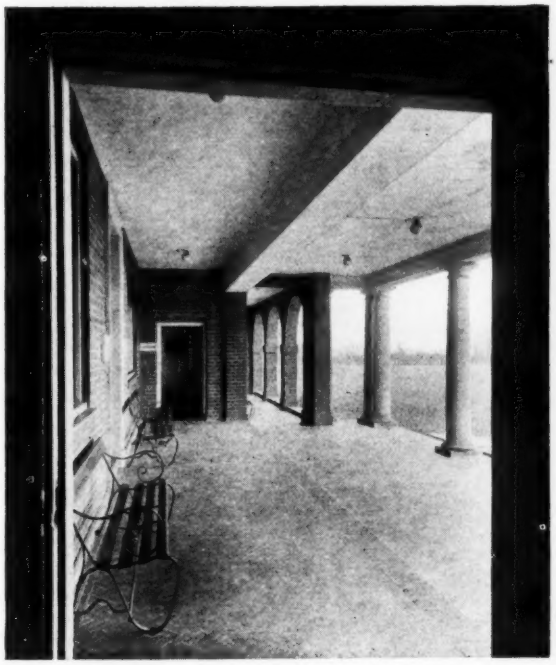
a greater contrast might have been obtained against the brick background had he adopted timber supports. These, moulded on Doric column lines and painted white, would have corresponded with the white frames of the dormer windows.

There is an element in the planning of the Lloyds Bank Sports Pavilion at Beckenham which likens it to Messrs. Shepheard and Bower's Pavilion at Widnes. It is the spacious club-room on the first floor, and Mr. E. A. Stone, the architect of the building, has very wisely placed a stage at one end and a buffet at the other, so that the room can be used for entertainments. Balconies are a standard part of all structures connected with sport. The treatment of these architectural accessories is of vital importance, but how often do we find good elevations made commonplace through the careless detailing of balcony surrounds. Happily in this front there is no such defect, for the balcony becomes a valuable asset to the design in general. The ground and upper plans accommodate for all that is required of a typical sports club. Externally the chief architectural interest centres around the elevation looking on to the main greens. At first this front gives one the



The Westminster Bank Sports Pavilion, Norbury. By E. A. Stone. Above, the main front. Below, the ground-floor plan.

impression that it is, perhaps, rather too weighty, but after a thorough scrutiny of the general view this feeling disappears. It is the solid brick piers dominating the wings that appear a little too heavy, and seem perhaps to form rather an abrupt contrast with the other motifs. The importance of the club-room has been emphasized outwardly by the size of the windows. Very graceful is the veranda, with its background of French windows, containing numerous small-paned glass, which light the ground-floor rooms. The composition of the roof is well conceived to give strength to the skyline, and this feature is an important element to the success of the design. There is an interesting fireplace, forming a conspicuous feature in the billiard-room. It is built up of tiles and standard bricks, and is broadly handled, thus giving distinction to the room. Three courses of tiles with projecting nibs to the lowest course suggesting a cornice, is an unusual feature. This delicate enrichment accords admirably with the interior detailing.

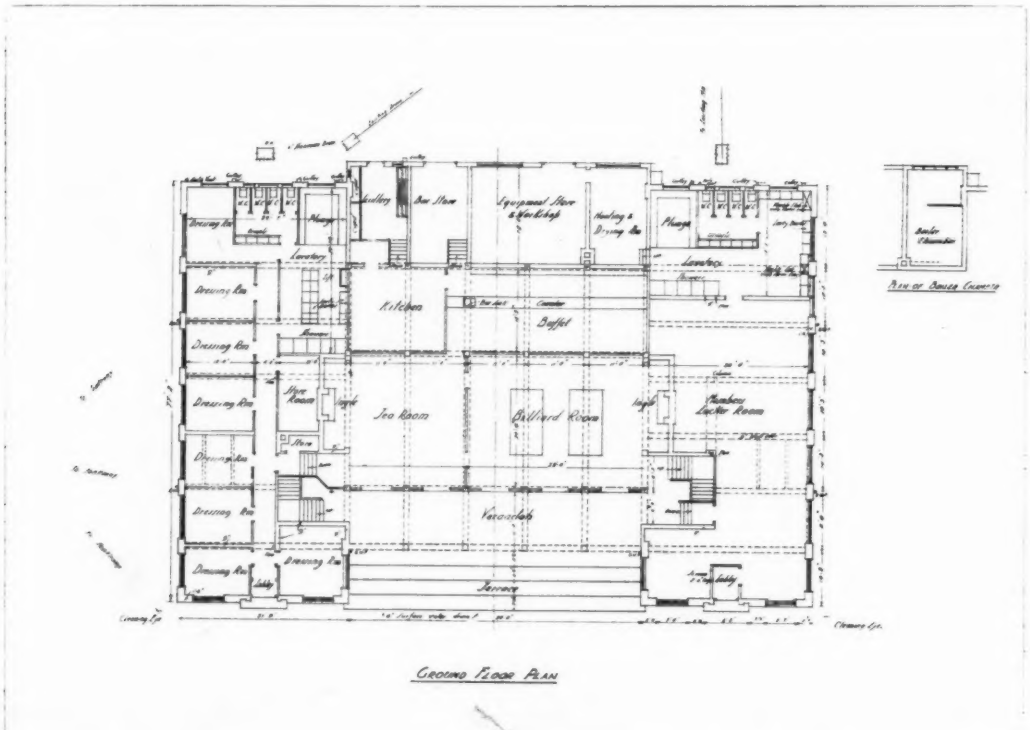


The Civil Service Sports pavilion at Chiswick, also designed by Mr. E. A. Stone, is a structure of considerable pretentions. It accommodates the full requirements for the organized games played throughout the seasons. A marked feature of the planning is the importance given to the size and equipment of the lavatory, as seen by the space and position it occupies in relation to the rest of the contents. Two large plunge-baths are an attractive item of the equipment, while the numerous shower-baths should be a welcome asset to the club members and their visitors. Externally there is a certain restraint, pleasingly carried throughout, but the various parts might perhaps be thought overcrowded. It might seem also that the two stories running the full length of the structure, with the repetition of large voids, closely spaced, tend to affect the appearance of the building. However, the lightness and gaiety about the exterior make it pleasing.

The design of a University sports pavilion often possesses æsthetic qualities, which lift it well above the planes of commonplace architecture Mr. James H. Honeyman, in

The Westminster Bank Sports Pavilion. Above, the veranda. Below, the first-floor tea-room and tennis court.

the Glasgow University sports pavilion, has conceived a building which is distinctive in design, and is planned with due regard to directness and convenience. It is splendidly equipped with dressing-rooms and lavatories, which occupy a greater proportion of the ground floor and semi-basement. On the former floor the lounge and spacious entrance hall dominate the fore of the building, and over is a tea-room with an open balcony upon which refreshments can be partaken of during sunny weather. In the elevations one is glad to see an appreciation of simple wall surfaces, which characterize the main front. The gable centralizing this front is a very happy architectural motif, and adds a strong light and shade where necessary, thus relieving the stucco walls. A flight of steps forming the approach to any type of building always lends dignity to a façade. Here is an illustration of such a treatment, handled simply



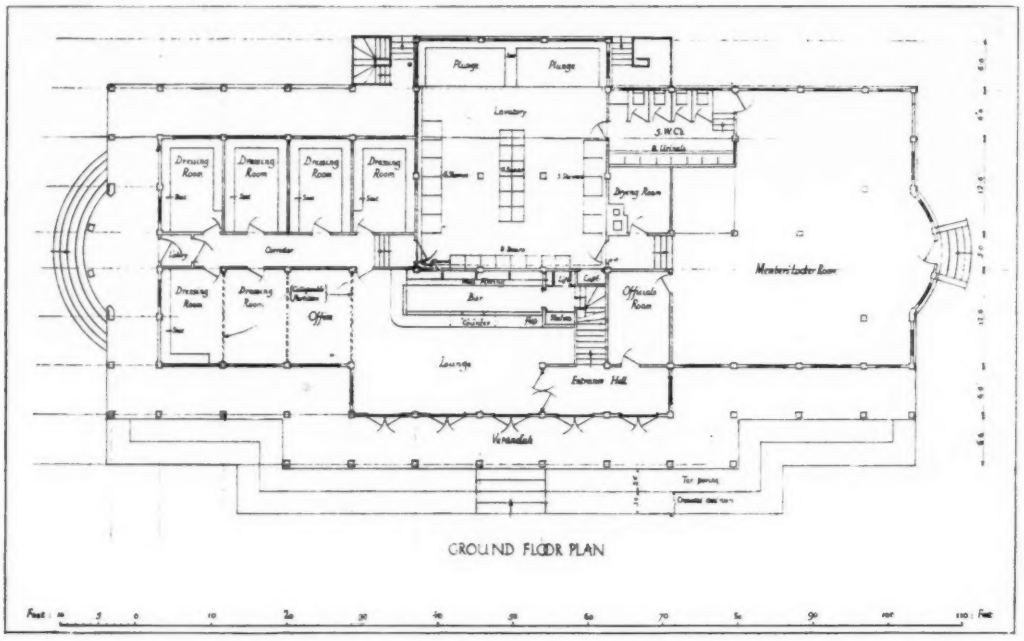
Lloyds Bank Sports Pavilion at Beckenham, Kent. By E. A. Stone. Above, the main front. Below, the ground-floor plan.

Lloyds Bank Sports Pavilion. Above, the billiard-room fireplace. Below, the first-floor club-room.

and broadly. It contributes successfully to the building up of the fine central mass. The side elevations are, perhaps, not quite so interesting, but as they do not face the premier aspect of the ground, this is somewhat accounted for.

The Manchester Ship Canal Company's pavilion is planned on compact lines, and is located on the outskirts of the great industrial area known as Trafford Park. The settings in this locality are obviously less appealing than one would desire for a sports pavilion. Mr. Harry S. Fairhurst's design suffers from the loss of fine natural surroundings, as the illustration shows. The elevations are quiet and restful, with pleasing proportions. Perhaps the square supports to the veranda might have appeared better with slender columns and an entablature over. The long series of dormer windows lighting the caretaker's quarters give a note of the picturesque to the composition. The two segmental arches denoting the centre of this elevation vary the continuous lines of the dormer window cornice. In this scheme the club-rooms are grouped on the ground floor. The tea-room and smoke-room are adjacent, and are divided by a movable partition, but both have direct access to the loggia by French windows. The usual lockers, cloak-rooms, and dressing-rooms for both sexes, form part of this workable plan.

The Cranleigh School pavilion, by Messrs. Masters and Dear, although small in size, is a delightful little building. Its outward effect is very charming. The masses are broken at the right place, with just that variation to make the design telling. The texture of the pantile roof in contrast with the stucco walls could not be happier. I do not think anything could be more striking as a harmonious treatment than this combination, for which the rich greens of Nature are certainly an ideal setting.



The Civil Service Sports Pavilion at Chiswick. By E. A. Stone. Above, the main front. Below, the ground-floor plan.

Messrs. Heiton and McKay's pavilion at Kirkcaldy differs in elevational character from the types previously described. It is effective in its general form, but the character of the exterior might perhaps have been improved by the addition of architectural embellishments. The plan embodies a series of well-balanced rooms, with nicely-shaped staircase landings. Changing and bathrooms are features of the ground floor. The social room on the first floor is large enough to form a pleasant rendezvous, especially during the winter months. A balcony space to the fore is a valuable addition in connection with this room, and for accommodating spectators during the sports matches of various kinds.

Mr. E. A. Stone's pavilion for the Westminster Bank Sports Club at Norbury is somewhat reminiscent of a classic villa as regards the elevational concepts. The outward grouping is the result of a change from the orthodox correlation of the different sports rooms. These have been so arranged as to produce an outline resembling the letter T inverted. Projecting wings at the extremity of the horizontal arm mark the termination of the front elevation. A tea-room on the first floor is located transversely with the long spread of the front. The area of this room is so large that it becomes an emphatic element of the exterior. It is featured by three round arched windows, which signify the importance of this spacious room. The massing of the pantile roof calls for comment. How stately the centre pile looks in conjunction with the lower spreading wings on each side. The motifs are well arranged on the ground floor, and there is a satisfactory change from the column motif to the brick arcading. Space forbids a description of this interesting plan, but the illustration will indicate the variety of its contents.

The Civil Service Sports Pavilion. The tea room.

The contractors and sub-contractors for the sports pavilions illustrated in the preceding pages were as follows:

Sports pavilion and Entertainment Hall, Liverpool Road, Widnes, Lancs, for The United Alkali Co., Ltd., of Liverpool (page 485). The general contractor was Mr. Thomas Sadler, of Widnes, and the general foreman was Mr. J. Boden. The contract price was £11,900, the price per foot cube being 1s. 2d. Sub-contractors: Thos. Faldo & Co., Ltd., asphalt; The British Reinforced Concrete Engineering Co., Ltd., B.R.C. reinforcement; Blakeley & Co. (Liverpool), Ltd., roof trusses; Bell's Poilite and Everite Co., Ltd., asbestos "Russet" pantiles, asbestos rainwater gutters, and down-pipes, etc.; Rowse & Co., Rowfectar floor; Killick and Cochran, ventilation and low-pressure hot water; E. A. Clarke, Ltd., grates and mantels; J. Stott & Co., Ltd., gas fixtures; Electrical Dept., United Alkali Co., Ltd., electric wiring and electric light fixtures; Griffiths, Sons and Cromwell, hot-water service and plumbing; Rowe Bros., sanitary fittings; Quiggin Bros., door and window furniture; J. B. Johnson & Co., Ltd., plaster and decorative plaster; George Lowe and Sons, W.I. staircase balustrades; the general contractor, joinery; Pioneer, Liverpool, furniture; The Express Lift Co., Ltd., lifts; The Synchronome Co., Ltd., electric clocks. The clock surround was the work of Mr. H. Tyson Smith, sculptor.

Sports Pavilion at Westerlands, Glasgow, for the Glasgow University Athletic Club (page 487). The general contractors were Messrs. Robert Rogerson & Co., and the clerk of works was Mr. T. S. Hunter. The contract price was £15,000. The price per foot cube was 1s. 2⅓d., and the price per foot square £1 3s., including fees, furnishings, etc., and £780 for entrance

gates and a concrete road. Sub-contractors: Caithness Pavement, dampcourses; Limmer and Trinidad Lake Asphalt Co., Ltd., flat roofs; British Reinforced Concrete Co., reinforced concrete; Helliwell & Co., casements, patent glazing, and window furniture; J. L. Saunders & Co., central heating; Fraser and Borthwick, electric wiring; Archd. Low and Sons, plumbing; Shanks & Co., sanitary fittings; Donald Livingstone and Son, plaster; D. M. Tyre, metalwork; William Lightbody, joinery; A. Gardner and Son, furniture; Synchronome Electric Clock Co., clocks; William Kelman & Co., Ltd., roof tiling and roughcast; Malloch, Ltd., glaziers; William Douglas and Sons, painters. Rosemary roof tiles were used and Ideal boilers were installed.

Sports Pavilion in Stamford Street, Norbury, for the Westminster Bank (page 488). The general contractors were Messrs. F. and H. F. Higgs, Ltd., Station Works, Hinton Road, Loughborough Junction, who were also responsible for the plumbing and joinery. The general foreman was Mr. H. Turton. Sub-contractors: Engert and Rolfe, Ltd., asphalt; Ames and Finnis, bricks and Lambardie roof tiles; Adamite Co., Atlas White cement for exterior; H. Young & Co., structural steel; Joseph F. Ebner, wood-block and patent flooring; B. Finch & Co., central heating and sanitary fittings; Bratt Colbran & Co., stoves, grates, and mantels; A. Dean & Co., electric wiring and electric light fixtures; Ewart and Son, Ltd., ventilation; A. E. Davis, Ltd.,

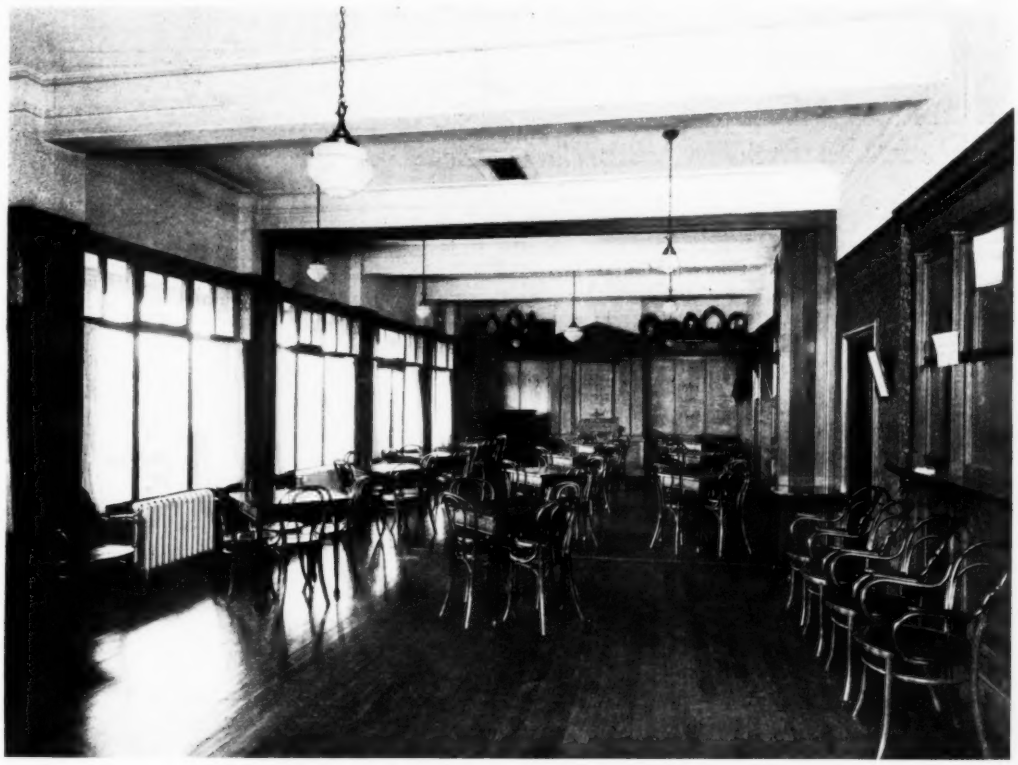
Sports pavilion at Stretford for the Manchester Ship Canal Company. By Harry S. Fairhurst. Above, the main front. Below, plans of the ground and first floors.

door and window furniture; Henry Hope and Sons, steel sashes; Medway Safety Lift Co., Ltd., lifts.

Sports Pavilion in Copers Cope Road, Beckenham, Kent, for Lloyds Bank, Ltd. (page 490). The general contractors were Messrs. Sabey and Son, who were also responsible for the plumbing and joinery. The clerk of works was Mr. W. J. Lawrence, and the general foreman Mr. W. J. Read. Sub-contractors: Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; East Sussex Brick and Tile Co., bricks; Young & Co., structural steel; Ames and Finnis, tiles; Joseph F. Ebner, wood-block and patent flooring; Henry Hope and Sons, Ltd., steel sashes and central heating; G. Matthews, Ltd., stoves and mantels; Duncan, Watson & Co., electric wiring and electric light fixtures; Ewart and Son, Ltd., ventilation; B. Finch & Co., sanitary fittings; A. E. Davis, Ltd., door and window furniture; Medway Safety Lift Co., Ltd., lifts; Kendal and Dent, turret clocks. Ceresit waterproofing materials were used.

Pavilion in Kendal Road, Stretford, Manchester, for the Manchester Ship Canal Co. (page 494). The general contractors were Messrs. Wm. Thorpe and Son. Sub-contractors: Elliott, Ellis & Co., central heating; Well-Fire and Foundry Co., Ltd., grates; J. Lightfoot, electric wiring; Shanks & Co., sanitary fittings; A. F. Ramsay & Co., door furniture; W. Arbuckle and Sons, Ltd., panelling; Art Metal Equipment Co., metal furniture; J. Lenegan, carving.

Pavilion and Recreation Ground, Priory Park, Kirkcaldy, for Messrs. Michael Nairn & Co., Ltd. (page 496). The clerk of works was Mr. W. Brown. Sub-contractors: David Wilkie, demolition, excavation, foundations, erection of Hy-rib roofs, Wemyss brickwork, Cullaloe freestone, and structural steel; Wm. Briggs & Co., Ltd., dampcourses; Scottish Speedwell Co., Ltd., asphalt; J. Lawson and Son, Marseilles tiles and roofing felt; A. S. Wright & Co., glass; Mackenzie and Moncer, Ltd., central heating; Gray and Son and Barnet and Morton, Ltd.,



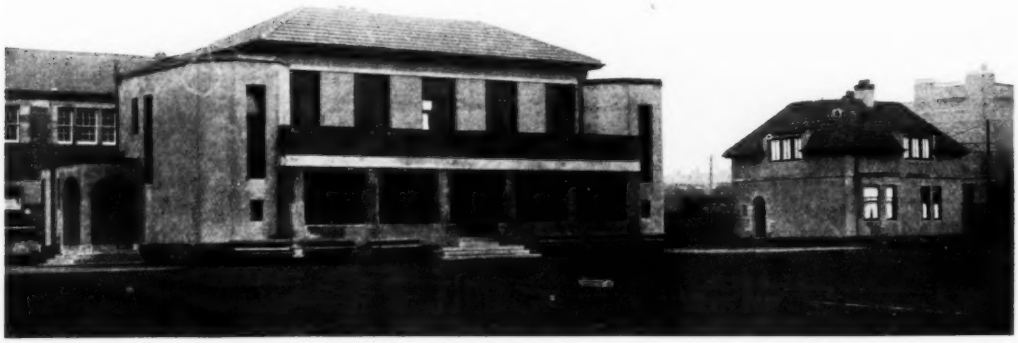
The Manchester Ship Canal Company's Pavilion: the tea-room.

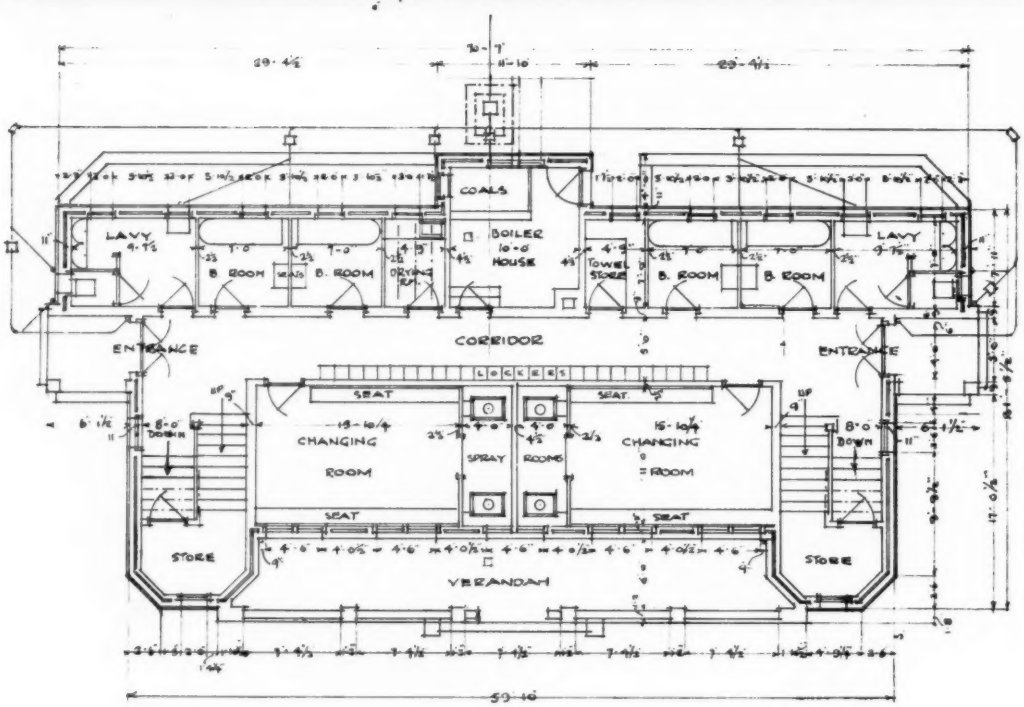
Sports Pavilion at Duke's Meadows, Chiswick, for the Civil Service Sports Association (page 492). The general contractors were Messrs. H. Somerford and Son, who also executed the plumbing. The general foreman was Mr. J. Westbrook. Sub-contractors: Lewis Rugg & Co., reinforced concrete; J. H. Sankey & Co., Ltd., hollow walling tiles; Adamite Co., Atlas White cement for exterior; H. Young & Co., structural steel; Ames and Finnis, "Horse-shoe" roof tiles; Edward Evans and Son, patent flooring; B. Finch & Co., Ltd., central heating and sanitary fittings; Bratt Colbran & Co., stoves, grates, and mantels; Cecil Cooper & Co., Ltd., electric wiring and electric light fixtures; A. E. Davis, Ltd., door and window furniture; Henry Hope and Sons, Ltd., steel sashes; Wilmer and Sons, Ltd., iron staircases; E. J. and A. T. Bradford, foundation stones; C. W. A. Banks, interior tiling; Medway Safety Lift Co., Ltd., lifts; Kendal and Dent, turret clock. Pudlo waterproofing material was used.

grates; Municipal Gas Department, gas fixtures and gasfitting; David Tod, Ltd., water heater; W. C. Martin & Co., electric wiring and electric light fixtures; W. Nicoll and Sons, plumbing and sanitary fittings; Barnet and Morton, Ltd., door furniture; Wm. Anderson, plaster; Rodger and Grieve, joinery; Allan and Sons, tiling; Maxwell M. Hart, garden furniture and shrubs and trees.

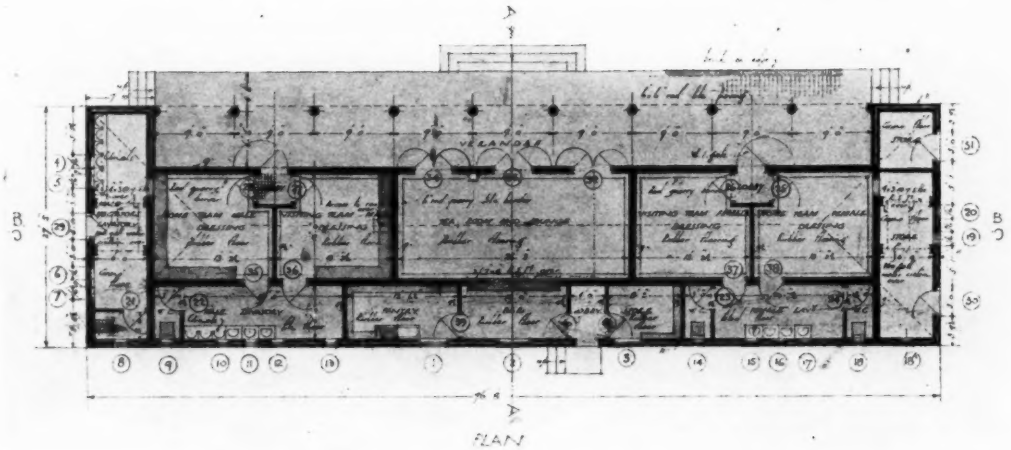
Sports Pavilion and Groundman's Cottage, Braintree (page 497). The general contractors were Messrs. Wicks, of Braintree, and the clerk of works was Mr. G. L. Culverwell.

School Pavilion at Cranleigh School, Surrey. R. C. Winslow, Bursar, for The Old Cranleighan Society (page 498). The general contractors were Messrs. Chapman, Lowry and Puttick, Ltd., of Grayshott, Hindhead, Surrey. The contract price was £2,445, and the actual cost £2,403 11s. 11d. Sub-contractors: The Air-Vent Heater Co., Ltd., hot-water installation; Portsmouth Water Fittings Co. (1914), Ltd., sanitary fittings.

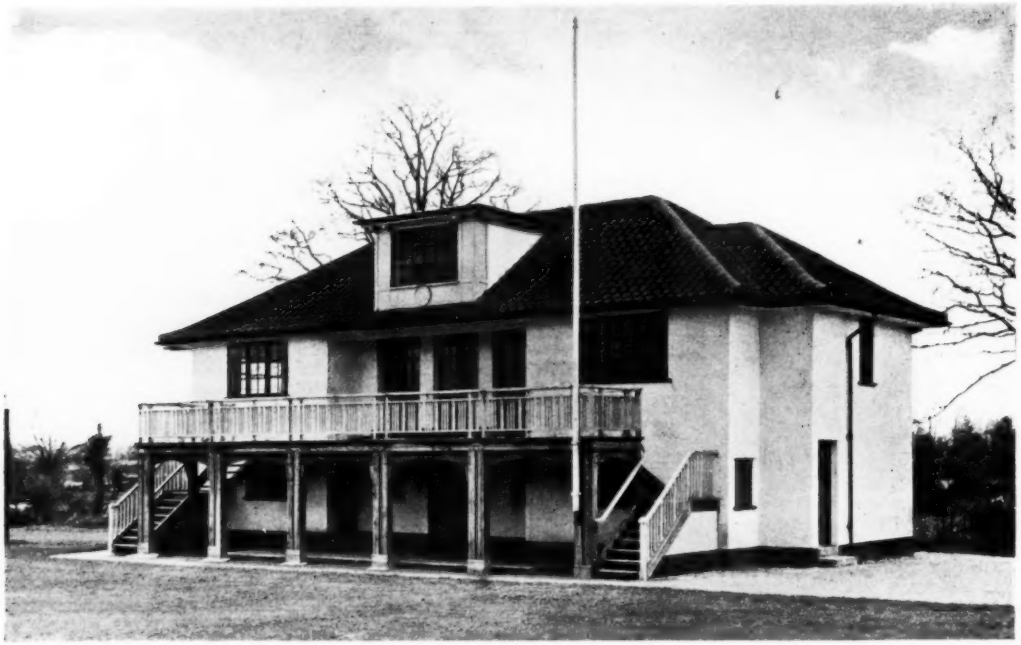


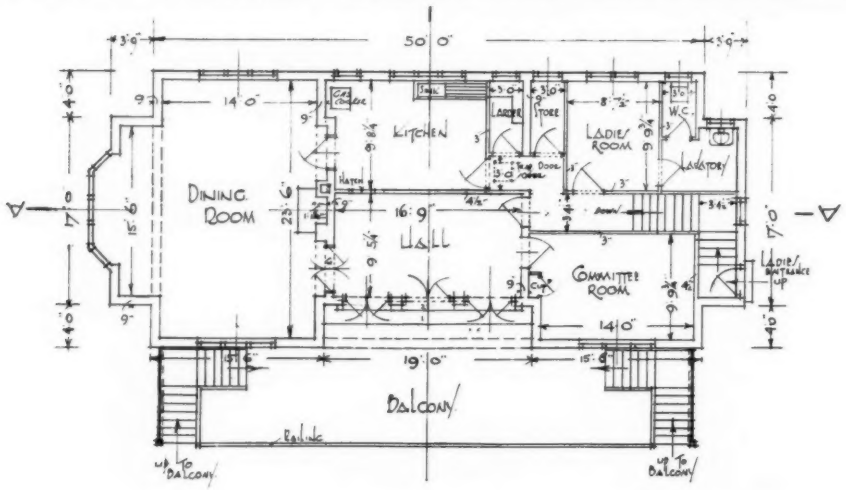


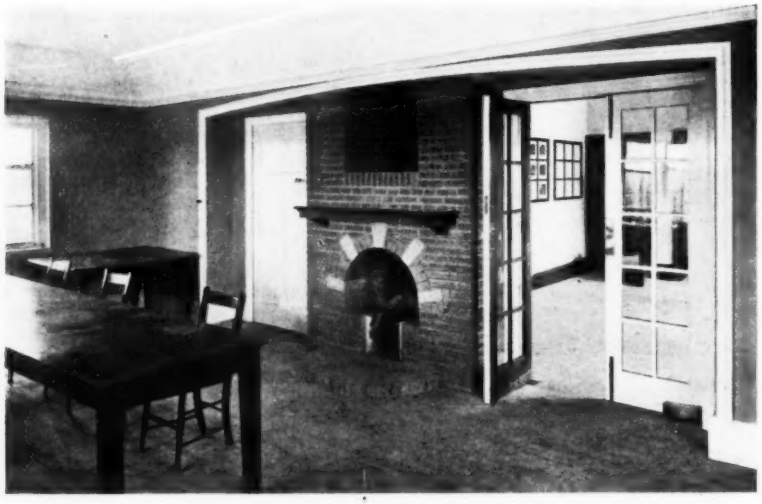
Sports pavilion at Kirkcaldy. By Heiton and McKay. Above, the main front and the ground-floor plan. Below, the bowling-green pavilion.



Sports pavilion at Braintree. By E. Vincent Harris. Above, a view from the north-east. Centre, the lodge and entrance gates. Below, the ground-floor plan.







Cranleigh School Sports Pavilion. By Masters and Dear. Above, the main front and the upper-floor plan. Below, the dining-room, looking into the hall.

THE COMPETITORS' CLUB

NEW ELEMENTARY SCHOOLS FOR THE OLDBURY URBAN DISTRICT COUNCIL

This week our contributor, SENESCHAL, *whose regular page on competitions was started on January 13, summarizes the conditions of the above competition. The accommodation required includes a junior department, senior departments for boys and girls respectively, a domestic science centre, and a caretaker's house. No special style of architecture is suggested, but the promoters desire that the elevations should aim at simplicity and breadth of effect. The cost of the schools is not specified.*

OPEN to architects resident in the United Kingdom. Assessor, Mr. W. S. Skinner, F.R.I.B.A., Bristol.

1st premium	.. .. ..	£200 (merging)
2nd ,,	.. .. ..	£100
3rd ,,	.. .. ..	£50

A plan showing the site with building lines and surface levels will be supplied to each competitor, with the conditions, on payment of a deposit of £2 2s. to be returned on a receipt of a bona-fide design, or if sent back within one month.

An estimate to be given of the total cost of the buildings, including boundary walls and playgrounds (properly tar-paved), drainage, heating and ventilating apparatus, electric lighting, gas and water supply.

If tenders are not within 10 per cent. of the competition estimate after adjustment to suit any modifications, or fluctuations in prices, the Council shall not be bound to carry out the design, nor shall the architect be entitled to any remuneration beyond the premium.

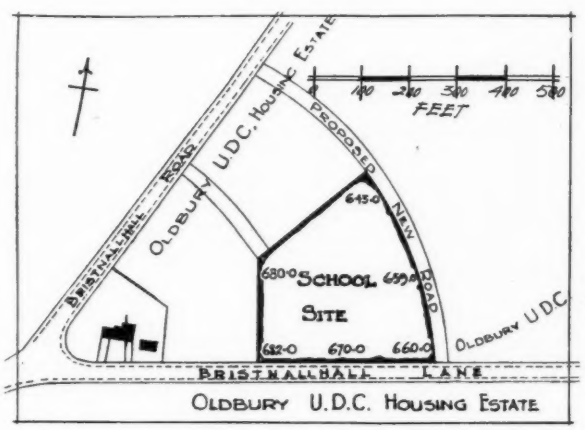
Competitors must mark the areas of each playground on their plans in square yards.

No special style of architecture is suggested; the elevations should aim at simplicity and breadth of effect. The buildings to be single-storied, of brick, and roofed with slates or tiles.

The general drawings, to a scale of 16 ft. to an inch, to comprise plans, sufficient sections to illustrate the height and construction, and an elevation of each front, finished in ink. All sectional parts to be blacked in and no colour to be used. A small part of the principal front is to be drawn to a scale of ½ in. to 1 ft. No perspective drawings.

Drawings to be mounted on plain cardboard or strainers without coloured mounts or margins. They must have no names, mottoes, or any other means of identification.

A short typewritten description of the building must accompany each design, with cubical contents and the total cost. The domestic science centre and handicraft centre to be separately estimated.



Designs must be delivered to the Clerk of the Council, Council Offices, Oldbury, not later than May 21, 1926. The author's name and address to accompany the design in the special envelope supplied with the conditions of competition.

Questions relating to this competition must be sent to the Clerk of the Council not later than April 2, 1926.

SCHEDULE OF ACCOMMODATION AND REQUIREMENTS

The school to be in three departments containing accommodation for :

(*a*) Junior department for children up to nine years of age. Five classrooms, each with accommodation for forty children. Four classrooms, each with accommodation for fifty children.

(*b*) Senior department for boys above nine years of age. Seven classrooms, each with accommodation for forty children; also one practical science classroom not less than 600 sq. ft. in area.

(*c*) Senior department for girls above nine years of age. Seven classrooms, each with accommodation for forty children; also one needlework classroom of not less than 600 sq. ft. in area. Advanced needlework.

Halls to be provided for each department. In the senior schools, the halls are to be so divided that they may be used as one.

A domestic science centre, including cookery, laundry, and housewifery (twenty girls), and handicraft centre, including woodwork and metalwork (twenty boys).

A caretaker's house containing living-room, scullery, larder, pantry, coals, and W.C. on ground floor, with three bedrooms and bathroom on first floor to be provided.

Competitors should plan the buildings strictly in accordance with Board of Education's Building Regulations for Public Elementary Schools and the amendments thereof as regards playground space, halls, and the provision of sufficient latrines, together with cloakrooms and teachers' rooms (one to each department), with separate teachers' rooms for heads of departments.

COMPETITION CALENDAR

The following competitions are announced with the full approval of the R.I.B.A.

Thursday, April 1. Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Assessor, Mr. Walter Cave, F.R.I.B.A.

Monday, May 10. Isolation Hospital for Infectious Diseases, Doncaster. Assessor, Mr. T. R. Milburn, F.R.I.B.A. Particulars from Mr. W. Bagshaw, Town Clerk. Deposit £1 1s.

Friday, May 21. Elementary school, Bristnall Hall Lane, Warley, Worcestershire, for the Oldbury U.D.C. Assessor, Mr. W. S. Skinner, F.R.I.B.A. Premiums, £200, £100, and £50. Particulars from Mr. Arthur Culwick, Clerk to the Council, Council Offices, Oldbury, Worcs. Deposit £2 2s.

Saturday, May 22. Working-class dwellings to be erected in various parishes, for the Daventry R.D.C. Particulars from Mr. W. H. Abbott, Clerk to the Council, 4 New Street, Daventry.

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

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

Monday, June 14. Dance Hall, Restaurant, Pavilion, and Shops at the Sea Beach, Aberdeen, for the Town Council. Assessor, the President of the Incorporation of Architects in Scotland. Particulars from Mr. A. B. Gardner, Town House, Aberdeen.

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.

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.

THE ARCHITECT'S INCOME TAX

BY OUR FINANCIAL CORRESPONDENT

ii: IMPORTANT ALLOWANCES

WITH the numerous variations in the Income Tax Acts since 1921 the taxpayer, through not being conversant with the allowances to which he or she may be entitled, fails to take advantage of such, and loses, in many cases, substantial sums which are properly deductible from the gross assessment.

A few of the most important points to watch are the following:

A: PROPERTY

Presuming a taxpayer in London has a freehold house situated at Harrogate; when the application for property tax (or income tax under Schedule "A") is made, the tax on the assessment of this property is charged at the full standard rate of tax ruling (4s. in the £ at the present time) because the inspector in the Harrogate district has no knowledge whatever of the total taxable income of the freeholder, and it is up to the taxpayer to arrange for the assessment to be amended if necessary.

Assuming the Schedule A assessment on the above property was £75, the tax payable would be £15.

If the taxpayer's assessable income from trade, etc., was £150, then the tax on the property should be reduced to half rate, reducing the tax to £7 10s., a saving to the taxpayer of £7 10s.

B: MOTOR-CAR

Allowances in respect of depreciation of a private motor-car used for the purpose of travelling in connection with the trade, vocation, etc., is another claim which may very possibly be missed.

In this connection, presuming a car was purchased at the commencement of the fiscal year, 1925-26 (April, 1925), for £470, and it was ascertained as near as possible that eight months out of the year it was used for business purposes, then the amount by which the assessable income would be reduced is £63, arrived at thus:

Purchase price	£470
Wear-and-tear at rate of 20 per cent.	94
Two-thirds of £94	63

The tax saved would, therefore, be £12 12s., or £63 at 4s.

The following year, 1926-27, the saving would be £10 in tax arrived at as follows:

Purchase price	£470
Less allowance, 1925-26	94
	£376
Wear-and-tear at rate of 20 per cent.	£75
Two-thirds of £75	50
Tax at 4s. in the £ on £50	10

C: CHILDREN

Any child on whom a claim is being made must be living and under the age of sixteen on April 6 in the year of assessment, i.e. April 6, 1925, in respect of 1925-26, but the claim can still be made if the child is over sixteen, and receiving full-time educational instruction at any university, college, or school, or other educational establishment.

Step-children and adopted children may also be claimed for as above.

No allowance is given if the child has an income in his or her own right exceeding £40, excluding any income from a scholarship, bursary, or similar educational endowment.

D: INTEREST TAXED (BUSINESS OR PRIVATE) BETWEEN APRIL 6, 1925, AND PASSING OF LAST BUDGET

Interest paid by the Government after April 5, 1925, and before the passing of the Budget, was taxed at the rate of 4s. 6d. instead of 4s. in the £, but on an income-tax adjustment claim form being filled up, and the counterfoil of the warrant being attached, the refund of 6d. in the £ can be claimed.

Thus on interest received amounting to £50, 25s. is lost unless claimed as above.

E: REPAYMENT CLAIMS

If a taxpayer is entitled to a repayment claim he or she need not wait until the end of the year in question, but may make claims convenient to the claimant during the year, as long as proof of tax borne to the date of claim is forthcoming.

F: MARRIAGE

If (in the case of a man) you were married at 2.55 p.m. on the *last day* of the year of assessment, you can still claim the personal allowance of £225, as an allowance from your assessment for *that* year, and thereby save £225 at 2s. or 4s. as the case may be, viz., £22 10s. or £45 in tax respectively. At the same time, if the marriage took place at the above-stated time, the lady would also be entitled to her personal allowance of £135 for the full year, although in this particular case she would only be assessed for 364 days out of 365 in respect of her own income.

Marriage, therefore, if it takes place on the last day in the year of assessment, is as of much value from an income tax point of view as the first.

In this connection it would be interesting to know whether, in the case of marriage being postponed on the last day of the fiscal year owing to the non-attendance of the clergyman, whether he could be sued for damages, viz., the tax lost on £225 for that year.

G: DEATH

A male taxpayer, if he were unfortunate enough to lose his wife, on, say, as early a date as April 7 in the year of assessment, would still be entitled to the personal allowance of £225, notwithstanding the fact that in reality he would have been a widower practically the whole year.

H: WHEN THE EARNED INCOME ALLOWANCE CAN BE OBTAINED ON UNEARNED INCOME

In accordance with the provision of Section 15, sub-section (2) of the Finance Act, 1925, any individual who, in the manner prescribed by the Income Tax Acts, makes a claim in that behalf, makes a return in the prescribed form of his total income, and proves that at the commencement of the year of assessment either he or, in the case of a married man, his wife living with him was of the age of sixty-five years of age or upwards, and that his total income for the year of assessment does not exceed £500, shall for the purpose of ascertaining the amount of his assessable income for the purpose of income tax be allowed a deduction from the amount of his total income of a sum equal to one-sixth of the amount of that income.

In the case of a taxpayer taking advantage of this deduction he is not entitled to deduct a further one-sixth from his earned income, as provided by sub-section (1) of the section referred to above.

Thus, for example:

Mr. "A," under sixty-five years of age, whose income was	£480
Would deduct one-sixth	80
And pay tax (subject to any other allowances) on ..	£400
Mr. "B," sixty-four years of age, but wife over sixty-five years of age, whose total income was all unearned ..	£462
Could deduct one-sixth, or	77
And pay tax (subject to any other allowances) on ..	£385

This provision applies, therefore, to the following persons:

1. Bachelor, sixty-five years or over, whose total income does not exceed £500.

2. Spinster, sixty-five years or over, whose total income does not exceed £500.

3. Widower, sixty-five years or over, whose total income does not exceed £500.

4. Widow, sixty-five years or over, whose total income does not exceed £500.

5. Husband and wife, both living, husband only sixty-five years of age or over, whose total income does not exceed £500.

6. Husband and wife both living, wife only sixty-five years of age or over, whose total income does not exceed £500.

7. Husband and wife both living, both sixty-five year of age or over, whose total income does not exceed £500.

1—INSURANCE PREMIUMS

There is a likelihood of tax being lost in connection with the first or additional premiums paid on life assurance policies.

Presuming a return was sent in in September, 1925, and in January, 1926, a new premium was paid (either additional or the first), then the amount of the premium would, therefore, be omitted from the return, although the tax thereon at the appropriate rate should be claimed as a deduction from the tax payable in respect of the year ending April 5, 1926.

Therefore on a premium of £25 at the rate of 3s. in the £, £3 15s. would have been lost.

The allowances in respect of premiums are calculated at three different rates, and for 1925-26 they are 2s., 3s., and 4s.; according to the total income and the date when the policy was effected.

CORRESPONDENCE

THE ARC DE TRIOMPHE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—In a recent issue of the JOURNAL there was a note and a reproduction of the sketch design for the draping of the *Arc de Triomphe*. The note stated that it was by Charles Garnier, which I was not aware of, but it did *not* mention that it had been carried out. That the latter was so I have evidence in one of my early sketch-books, dated 1905—at which time I was a student at the Beaux Arts—the occasion being the funeral of Victor Hugo.

ALEXANDER N. PATERSON

HOW HE WOULD REGULATE ARCHITECTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—We have read the letter signed "A Client"—hardly a happy pseudonym in this instance—in your issue for March 17, with astonishment. He commences by saying that building societies will lend money only on ready-made houses. We do not think this is a fact. Building societies will inform intending borrowers approximately what they can borrow on a house built to particular plans and specifications. They will even provide interim advances, but before the final advance is made they will, of course, make a thorough inspection to see that the work has been properly carried out in accordance with the plans and specifications. We have had experience of this, both as architects applying for a loan, and as surveyors to a building society.

But there is a far bigger question involved, namely, the employment of architects generally for the design of small houses. Here we think your correspondent is also in error in his assumption that architects will not bother with these. We have been concerned with the small house in a number of differing circumstances, and we are reluctantly compelled to accept the view that the general public prefers the flashy finish of the jerry builder. We enclose a photograph of one of a number of small houses which we have recently completed. They have been favourably commented upon by our friends of taste, but the general public does not rush after them. This, unfortunately, is not our only experience of this kind. Developers are not philanthropists, and like other traders, must give the public what it wants or go out of business.

Undoubtedly it is the education of the public that is required, and one of the best ways of doing this would be for gentlemen of means like your "Client" to build houses from the designs of architects and *let* them. Their tenants would soon be converted and tell all their friends of the benefits, and gradually the demand would be created—a little practice is worth a lot of precept.

Notwithstanding the somewhat pessimistic tone of this letter,

We remain

"STILL HOPEFUL"

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Your correspondent, "A Client," is interesting, but he hardly grasps certain rules which govern the profession. The "small fry" rarely get opportunities for "large houses" or "free hands," and have to confine themselves to, and concentrate on, "small houses." As for shouting; this is only a roundabout way of gaining publicity and advertisement, and surely he knows of one of the fundamental rules governing this? He is, however, quite right in his remarks on housing the working man, and enlightenment on this would be even more valued than "missions" on other subjects. But the working man himself is difficult and obstinate at times! It does not require a corner-stone to publish the fact that a building has been designed or not! But invariably in hearing a building discussed the name of the builder is voiced, rarely the name of the designer.

Recently we have carried out several "small jobs":

1. Price was the governing factor in all.

2. In two only were we given a free hand architecturally.

3. In the rest we were bound hand and foot. We made the best of bad jobs, and at least the results are "better" that if we had refused them. That is our only consolation; the work entailed for the size of the fees certainly is not!

We were recently called in to put on paper "another client's" *ideas* on housing. These are so fixed and definite that one more atrocity would have been perpetrated unless these were gently led into respectable channels. After transferring them to paper we mildly criticized some of the worst features. The job cubed at £850. It has taken an assistant and myself twenty-seven full days to scheme and specify it into decency. The fees, stated unfortunately before the difficulties were realized, were £15 15s. We have further had the temerity, with criticisms, of presenting a free sketch of the same accommodations and wishes, treated architecturally. We hourly expect our heads blown off, or a summons for defamation! His design! Our criticisms!

Principal rooms get little or no sun.

The portion you will occupy for at least two-thirds of your conscious moments faces north and on to the roads and other

bleak houses, instead of south, on your own garden, sunlight, and sea.

The drainage could be more economical and efficient, the roof more picturesque and cheaper, if you would have your larder, coals, etc., as well as your entrances on the new roadside, i.e. north and north-west, and brought all your principal rooms, drawing, living, kitchen, and two bedrooms to the south and garden side.

The back entrance, in the living-room, allows no privacy, and would be draughty. Tradesmen and coals have to come round into the private garden instead of by way of the roadway, as the new sketch suggests.

Some 1,980 to 2,000 cu. ft. of present waste space would be saved, i.e. say £150, by having the house properly designed.

If a client wants the best house he can get it by advertising. If he gives a prize for the best design for a small (free) workingman's home, he will arrive at the knowledge he wants. But does he really want it?

A. SELWYN HAYWARD

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The "three-type" gentleman signing himself "A Client" seems to think, apparently from his experience of the attitude of his own architect friends, that architects generally will "bother themselves" only with the rich client. This, and, in fact, the whole letter, seems to me to hint at the suggestion that the architect's one and only concern is his ultimate remuneration, and that he has no interest at all in his art or in his client's satisfaction. This may be so in certain cases, but surely it should be comparatively easy, if only from the many published journals and other works on domestic architecture, to find architects sufficiently interested in their work, and, incidentally, their reputation, to do justice to even the smallest of houses. A mere glance at many of these show the immense amount of care and thought expended on their planning and design generally, from the house as a whole to the smallest detail.

Concerning the architect, it is not a question of fees or whether a particular job will pay him, but simply a question of being appointed for the work without in any way advertising or touting for it. The public who know the status of an architect will understand it is for them to make the first move. The others who do not know will have to be content to live in the type of house they object to until they learn. After all, everybody should know there are such people as architects, also jerry builders, and it is for them to discriminate as to which they shall go to.

Regarding "Client's" remarks on the necessity of the qualified architect's name appearing on the building to distinguish his work from that of others, it can only be assumed then that from the public's point of view there can be no other distinction, and being, I take it, for their sole benefit, what is the object? The real object of the label should be to give credit where the appreciative public is concerned to the right man, namely, the designer.

ARCHITECT

ARCHITECT, BUILDER, CRAFTSMAN

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Mr. Aumonier's letter speaks of the undignified system of some contractors deducting 2½ per cent. discount from the payments to craftsmen. These builders are evidently unable to differentiate between craftsmen and their own merchants. The latter provide for this discount in their selling price and are able to obtain payments thereby within a specified time, but not so the craftsmen. When the builder receives by his contract a percentage on sub-contractors' accounts to cover his profit and expenses it would certainly be more dignified to make no deduction in payments. It is necessary to mention, however, that this is not invariably the case as the more dignified firms pay their craftsmen nett.

In some cases, under the main contract at present in use, contractors defer payment of a retention until after their period of maintenance. With some work this may be quite justifiable, but where labour only is entailed, such as stone and wood carving, it is an unnecessary hardship, and I should like to know if such a retention is in order.

I would like to support the suggestion that a simple form of sub-contract be standardized, especially as regards the insurance indemnity clause. At present, although I am insured against every risk, including third party and Common Law, yet my insurance company forbid my signing some of the agreements at present in use, on the grounds that the contractors include therein some of their own risks.

I also wish to voice my pride in the great building organizations of the present time.

A. T. BRADFORD

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Mr. Aumonier's interesting letter on the subject of the status of the sub-contractor is particularly opportune at the present time, as the building trade has reached the point where "the old order changeth," and its organization, especially in the large cities, is being steadily revolutionized. The old type of builder who employed his own craftsmen in various trades is gradually becoming extinct, and is giving place to the financier who will soon employ no one except clerks and managers, and will leave the actual construction of the building to sub-contractors, his function being merely that of financing and co-ordinating the job. We are, in fact, gradually coming back, in a modified form, to the system that was formerly common in this country (Gibbs employed it in building the Radcliffe Library at Oxford in 1747) and is still in use in Scotland and France. The important difference is that in those cases there were direct contracts between the client and the sub-contractor and the co-ordinating financier was absent; but the principle was the same.

As the sub-contractor's part is of such growing importance, it would seem to be only just that he and the general contractor should be put on exactly the same footing as regards payment, the retention money, and the penalty. This could probably be achieved if a model form, on the lines of the R.I.B.A. Form of Contract, but as between the general contractor and the sub-contractor, were prepared by representatives of the three parties concerned, namely, the architect, the general contractor, and the sub-contractor. To make this effective, it would probably be necessary to add a clause to the present R.I.B.A. form, making it obligatory on the general contractor to enter into such contracts with his sub-contractors. If carried out, this would surely get over many of the difficulties which undoubtedly cause a good deal of friction, make for delay, and add materially to the cost of building work, to the detriment of the building-owner and, incidentally, to that of the building industry as a whole.

GRAHAME B. TUBBS

OFFICE HOURS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—It would be interesting to have the views of your readers on the subject of office hours and its effect on output of work.

I recently had a change of office and found myself fettered by a host of rules, regulating every detail of office life, which, to depart from, meant instant dismissal. The existence of these can literally be felt in the atmosphere of the whole place, like a kind of disease.

The difference briefly between the two types of offices can be summed up thus:

In one the staff will willingly stop after hours to dispatch drawings required; generally speaking, regulations, as such, are non-existent. In my present office the work is done solely because it has to be done, and without zest. The clock is the only regulator of leaving-off time.

Every practitioner's office may be put in one or other of these categories. Which obtains the best from their staff?

AN ASSISTANT

ANNOUNCEMENTS

Mr. H. O. Tarbolton has moved his office to 4 St. Colme Street, Edinburgh.

Mr. John Dovaston, architect, has been appointed L.C.C. district surveyor for Bermondsey, S.E.

Mr. W. Courtenay Le Maitre, F.R.I.B.A., has moved his office to 28 Albemarle Street, Piccadilly, W.

Mr. T. Johnson, of Latrigg, Hulmes Road, Clayton Bridge, Manchester, architect, left £14,332; net personalty, £12,061.

Mr. Frederick Anstead Browne, the deputy-county architect to the Cheshire County Council, has been appointed county architect. Mr. R. S. Wilshere, of Chelmsford, has been appointed deputy-county architect.

The attention of students who intend to submit drawings in answer to R.I.B.A. problem in Design No. XC, a concert hall, is drawn to the fact that they may, if they so desire, submit to the R.I.B.A. by October 30 a sketch design for this subject for preliminary criticism.

A large party organized by the School of Librarianship, University College, London, and the British Institute of Florence is attending a vacation school to be held in Florence between March 26 and April 11. Among the lectures to be delivered will be two on "The Architecture of Florence," by Mr. Martin Briggs, F.R.I.B.A.

The Belfast Education Committee has appointed as architect, under the new Education Act, Mr. Frederick Willey, F.R.I.B.A., F.S.A., in succession to Mr. W. G. Davies, A.R.I.B.A., who has been appointed city architect of Sheffield. Mr. Willey is at present architect to the Education Committee of Durham County Council. The Belfast Committee is at present engaged on an extensive scheme of new school building.

The annual general meeting of the South Wales Institute of Architects was held at Cardiff, when the following officers were elected for the year 1926-27 : President, Mr. C. F. Ward, F.R.I.B.A.; vice-presidents, Mr. Percy Thomas, F.R.I.B.A., Mr. C. S. Thomas, F.R.I.B.A.; hon. treasurer, Mr. Harry Teather, F.R.I.B.A.; hon. auditor, Mr. T. Alwyn Lloyd, F.R.I.B.A.; hon. librarian, Mr. R. H. Winder, M.A., A.R.I.B.A.; hon. secretary, Mr. Ivor P. Jones, A.R.I.B.A.

The annual conference of British Architects will take place in London from June 14 to June 19 (inclusive). All members of the R.I.B.A., the Architectural Association, and the allied societies in Great Britain, Ireland, and Overseas are invited to take part in the conference. It is hoped that many ladies will be present, as guests of members, at all the events contained in the programme. A complete programme with full particulars will be issued in the near future to all the members of the bodies mentioned above.

Following upon the leading article on page 443 of our last issue a questionnaire on the subject of architectural criticism has been sent to a number of architects throughout the country. Readers who have not received a copy, and who would like to give their views on any of the points raised in the questionnaire, are asked to apply to the Editor, THE ARCHITECTS' JOURNAL, *9 Queen Anne's Gate, Westminster. Questionnaires should be returned by April 9.*

COMPETITION AWARDS

New Buildings for Liverpool College : (1st) Mr. J. R. Leathart, in association with Messrs. Granger and Webber; (2nd) Messrs. Crickmer and Foxley; (3rd) Mr. Maurice E. Webb. Assessor, Sir Giles Gilbert Scott, R.A.

New Head Office Building for the Bank of Liverpool : (1st) Mr. Herbert J. Rowse, A.R.I.B.A. Assessor, Professor C. H. Reilly.

Memorial Clock Tower and Fountain, Blackpool: (1st) Professor Lionel B. Budden, M.A., A.R.I.B.A.; (2nd) Mr. J. Lindsay Grant, A.R.I.B.A., in collaboration with Mr. Edward Adams, A.R.I.B.A.; (3rd) Mr. Jack A. Coia, A.R.I.B.A. Assessor, Mr. E. Bertram Kirby, F.R.I.B.A.

LOCAL AUTHORITIES AND QUALIFIED ARCHITECTS

The following question, asked in the House of Commons by Sir Philip Pilditch at the request of the Council of the R.I.B.A., is one of great importance at the present time.

Sir Philip Pilditch asked the Minister of Health whether he was aware that in certain localities local authorities have appointed a sanitary inspector or inspector of nuisances to act as architect for their housing scheme, irrespective of whether the official is qualified as an architect, and whether, seeing that it is undesirable that housing work should be entrusted to other than qualified architects, he will notify local authorities that they should appoint only qualified architects to carry out housing schemes.

Mr. Neville Chamberlain, in reply, said: As a general rule local authorities are not now required to submit for my approval plans and details of their housing schemes. But as stated in the circular which was issued to local authorities in connection with the Housing Act of 1924, I attach importance to the maintenance of a good standard in the planning and lay-out of schemes, and I hope that I can rely on the co-operation of local authorities in doing all within their power to ensure that these features will be creditable to the country and to the local authority. I take this opportunity of recalling that local authorities were informed in connection with schemes under the Housing Act of 1919 that competent architects should be employed to plan and design the houses to be erected.

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 enquiries concerning 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

6185.—Adams, M. J.—Slab walls. March 5.
6081.—Henderson, J., and McKenzie, J. T.—Wall tie. March 4.
5690.—Malcomson, A.—Shuttering for concrete buildings. March 1.
5835.—Johnstone, E.—Treatment of concrete. March 2.
5720.—Abraham, R. M.—Telescopes for surveying, etc. March 1.

SPECIFICATIONS PUBLISHED

247620.—Boorne, W. H., and Budde, C. C. L. G.—Resinous compositions suitable for building and analogous purposes, and method of making same.
247640.—British Reinforced Concrete Engineering Co., Ltd., and Hall, E. B.—Metal reinforcements for concrete road foundations and the like.
247747.—Diespeker & Co., Ltd., and Rackham, L. T.—Mounting doors upon concrete or other analogous partitions or structures.
247790.—Buckhout, W. C.—Wall construction.

THE WEEK'S BUILDING NEWS

Housing at Manchester

576 houses are to be erected at Moston, Manchester.

More Houses for Hatfield

The Hatfield Main Colliery Co., Ltd., is to erect another 300 houses.

A New School for the Oval

A new school is to be built at Kennington Oval for the Governors of Archbishop Tenison's Grammar School.

More Houses for Birtley

The Birtley Parish Council has resolved to apply to the Chester-le-Street Rural District Council for 500 more houses.

Building Developments at Pelsall Village

The Pelsall Parish Council has decided to ask the Walsall Rural District Council to erect another forty houses.

School Enlargement at Ormiston

The East Lothian Education Authority has decided to enlarge Ormiston School at a cost of £9,000.

Housing at East Ham

The East Ham Council has received sanction to borrow £36,000 for building sixty municipal houses.

Housing Progress at Thorne

The Thorne Housing Association, Ltd., proposes to erect 232 additional houses in completion of the first section of a scheme comprising 2,000 houses.

Housing on a New Brighton Estate

The Ministry of Health has sanctioned the erection of 200 houses on the Brighton Council's new estate at Moulscombe, at a cost of £120,000.

Aberdeen Hospital Scheme

The purchase of the site for the new hospital for sick children at Aberdeen has been negotiated, and work is to proceed shortly. The cost is estimated at £100,000.

Bradford Public Hall

The Public Hall Committee of the Bradford Corporation has decided to investigate the possibilities of developing a site for a public hall in the central area of the city.

Housing at Bromley

The Bromley Rural District Council has directed its architect to prepare plans for eighty-five houses to be erected in the district.

More Houses and Flats for Brighton

The General Purposes Committee of Brighton has approved of applications for the erection of twenty houses in Coombe Road and twelve flats in Ladysmith Road.

Housing at Greenwich

The Greenwich Borough Council proposes to erect 120 additional houses, and permission is to be sought for the erection of a further 100 houses at Charlton Park.

A Public Hall for Islington

At a recent meeting of the Islington Borough Council a recommendation was passed to build a public hall on the remaining portion of the Tyndale Place site.

A Tuberculous School for Bermondsey

A school for tuberculous children is to be provided on the Fort Road site in Bermondsey, subject to the approval of the Board of Education.

Town Planning at Baginton

The Warwick Rural District Council has decided to prepare a town-planning scheme for Baginton with reference to an area situate wholly within the rural district of Warwick.

Five Glasgow Housing Schemes

The Dean of Guild Court has granted sanction to the Glasgow City Council to proceed with the erection of five housing schemes at an approximate gross estimated cost of £450,000.

Chesterfield Housing Costs

The Chesterfield Rural District Council has borrowed nearly £500,000 on housing schemes. It is estimated that 300 houses will be completed under the 1924 Act by next September.

Factory Building at Hull

The Hull Corporation Health Committee has approved of plans for the building of additional works by the Hull Fish Meal and Oil Company (Limited), at a cost of £15,000.

Housing at Rotherham

The Rotherham Rural District Council has received sanction from the Ministry of Health to proceed with the erection of 310 houses, in accordance with the plans of its architect.

Ministry of Transport Grant for Roads

The Ministry of Transport has allocated £250,000 towards the trunk road schemes in Buckinghamshire—viz. the London and Oxford and the London and Bath main roads.

Housing in East Anglia

The Lexden and Winstree Rural District Council has decided to make application to the Ministry of Health for sanction to borrow £13,000 for the purchase of land and the erection of thirty houses.

Rotherham Borough Council Schemes

The Rotherham Borough Council proposes to undertake a scheme prepared by Mr. E. Vincent Turner, for the construction of a reinforced concrete bridge alongside the Chantry Bridge, at an estimated cost of £70,000.

Market Extensions at Leeds

The Markets Committee of the Leeds Corporation proposes to proceed with the scheme of extensions to the Central Meat Market at an estimated cost of £30,000, in accordance with plans prepared by Messrs. Braithwaite and Jackman, of Leeds.

Concrete Houses for Dundee

The Housing Committee of the Dundee Town Council has decided to recommend the acceptance of the offer by Messrs. Henry Boot and Sons to build 1,000 concrete houses. The total cost of the scheme will be about £500,000.

The Upkeep of Public Buildings

For the upkeep and repair of Royal Palaces, the Houses of Parliament, and other public buildings Parliament this year will be asked to vote £6,559,053. Compared with last year's estimate this represents a decrease of £658,006.

Halifax Corporation Schemes

The Halifax borough engineer has been instructed by the Housing Committee to prepare plans for the erection of twenty-eight houses on the Nursery Lane site. The Ministry of Health has sanctioned the Corporation's proposals for the erection of an additional forty houses at Booth Town.

Town Planning at Darlington

The Darlington Corporation's new town-planning proposals, which make provision for the systematic development of the town for about a hundred years to come, were the subject of a recent Ministry of Health inquiry. More than 6,500 acres are involved in this scheme.

Church Extension Scheme at Bristol

The Bishop of Bristol (Dr. Nickson) has recently launched a £200,000 church extension scheme. Dr. Nickson has received private donations and promises exceeding £80,000, including £25,000 from Sir George Wills, 10,000 guineas from Miss Violet Wills, and other substantial contributions.

A Water-supply Scheme at Spalding

An inquiry has been held into the application of Spalding Urban District Council, Lincs, for the issue of a provisional order to enable the Council to take on lease, for the purpose of a water supply, land at Bourne, and to construct a pipe-line to the pumping station. The laying of the main is estimated to cost £55,000.

READERS' QUERIES

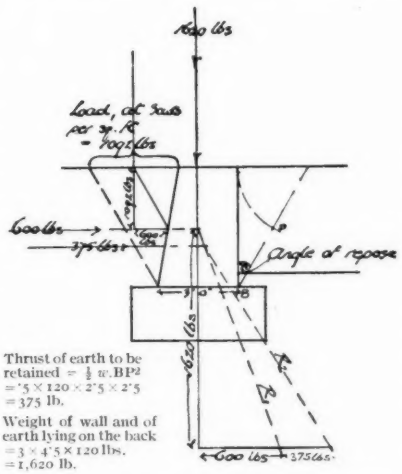
A Dwarf Retaining Wall

Subscriber writes: Would you have the accompanying calculations for a dwarf brick retaining wall checked for me? The thickness which my own calculations seem to require appears out of all reason. The building is for a cabinet-maker's factory, with a drop of 4 ft. in the ground on the line of the back wall. The soil is dry gravel, and I have taken 30 deg. and 60 deg. as the angles of repose and rupture. I wish to make the retaining wall strong enough to resist a distributed load on the ground floor of 3 cwt. per foot super. The wall above the ground-floor level is only a panel wall, liable to be altered or removed at a later date, so that it cannot be taken into account in reckoning the weight of the wall.

The thickness of the wall would be considered excessive in practice, though the calculations indicate that an even more massive wall would be required, since R passes dangerously near the outer edge of the base of the wall, and R2 falls outside it altogether! A slight mistake has been made in the diagram in respect to R2, which should join R1 at the level of the 450-lb. thrust and not at the *cg* of the wall, but correcting this would not suffice to produce a reasonable result. The horizontal thrust of 450 lb. might also be reduced to about 288 lb. if a more optimistic figure were taken for the angle of repose of dry gravel, and its weight were calculated at 100 lb. per foot instead of 120 deg. (Kidder Nolan's Handbook gives angle of repose 36 deg. 53 min., and weight 100 lb.) The thrust might be stated at 325 lb. by another formula.

The real point at issue is whether the floor load ought to be considered as a driving force, making the sliding wedge of gravel push against the retaining wall at its centre of gravity. Before this load could become a surcharge in fact, and start the wedge-driving action credited to it in the diagram, it would have to break the floor at its junction with the inner edge of the wall as well as at the line where the plane of rupture of the retained gravel intersects the floor surface. In practice these breaks in the floor should not be permitted to occur.

If the floor concrete is not strong enough to support the load, and transmit it to the wall on the one side and to the solid gravel beyond the sliding wedge on the other, it should be made stronger by being thickened,



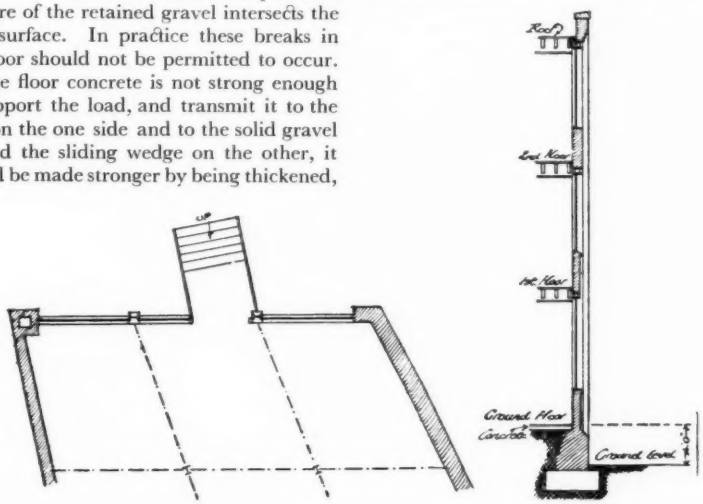
or by the addition of suitable reinforcement, until it can act as a continuous floor slab supporting the weight of 3 cwt. per square foot over a span of about 8 ft.

In this way the dangerous floor load—which presses on the sliding wedge according to the diagram, and which would really do so if the workshop had no floor over the gravel—would be converted into an additional safeguard.

Half of the floor load would be carried by the floor slab to a line where it would press harmlessly upon the solid gravel 8 ft. from the wall, and the other half would be transformed into a useful balance-weight upon the inner edge of the retaining wall, which would be vastly improved in stability in consequence.

Another factor which makes for safety is that the retaining wall is effectually buttressed every 11 ft. or so by the flank walls of the building and by the foundations of the stanchions.

The formulæ given in the textbooks apply to retaining walls of unlimited length, whereas the retaining wall in question may be made to possess very considerable lateral tenacity between buttresses by the simple expedient of inserting suitable reinforcement in the courses of the brickwork, and anchoring it back in the flank walls and around the stanchion bases.



Instead of calculating the retaining wall as a dead mass of material deflecting lateral thrusts by means of its weight, it may be reinforced suitably and calculated as a beam bending (sideways) under a distributed load. In this case the floor slab and the foundation concrete may be looked upon as parts of the beam, and contributing very materially to its stiffness.

Neglecting, for the moment, to count upon any of these valuable aids to lateral continuity of structure, and confining attention to the question of balance in the section, a wall with a thickness of 18 in. might be considered.

Its weight $= 1{\cdot}5 \times 4{\cdot}5 \times 120 = 810$ lb. acts at a distance of 9 in. from the inside edge.

The weight picked up by half the 8-ft. width of floor slab $= 4 \times 3 \times 112 = 1{,}344$ lb., and acts at a distance of $4\frac{1}{2}$ in. from the inside edge of the wall.

The lateral thrust of the sliding wedge on the $\frac{1}{2}w.BP^2$ formula $= 288$ lb. to 450 lb., according to figures given in different books, and acts at a height of one-third the height of the wall in a horizontal direction.

Combining this thrust with the vertical load of 1,344 lb. contributed by the floor slab the resultant comes just inside the centre line of the wall if the figure is taken at 288, and just outside it if the figure is taken at 450.

If it is objected that the floor is not always loaded, there is still the weight of the one-half of the floor slab itself $= 224$ lb., to help deflect the thrust; and taking this and the weight of the wall together the resultant of a 288-lb. thrust just comes within the centre third of the wall's thickness at its base. A wall 18 in. at the top and 2 ft. 3 in. thick at the base, with some reinforcement in the course joints, and a suitably reinforced floor slab over the made-up retained gravel would seem to be a practical solution of the problem.

The points to be remembered are to pick up the floor load from the position where it is dangerous and place it where it will be advantageous, and to connect all parts of the retaining wall with return walls, stanchion bases, floor slabs, and concrete foundations that will serve to give it additional strength. 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. The two latest recruits are specialists on finance and inventions respectively. Each of these specialists also contributes separate features to THE JOURNAL *this week. An article on the Architect's Income Tax by* OUR FINANCIAL EXPERT *will be found on page 500, while* OUR PATENTS EXPERT *gives a list of new specifications and applications for patents filed.—Ed.* A.J.

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A	E Glamorganshire & Mon. Valley	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
A₁	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. Glamorgansbire			
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	*‖ 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
A₂	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	E. 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 4½	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, 1s. 9d.
† Carpenters and Painters, 1s. 8½d.
‡ Plumbers, 1s. 9d.
§ Painters, 1s. 6d.
‖ Carpenters and Plasterers, 1s. 8½d.
¶ Painters, 1s. 7d.

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.*

	£	s.	d.
Broken brick or stone, 2 in., per yd.	£0	10	0
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	16	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	5	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 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	7	0
Flettons, per M.	3	6	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	22	0	0
DO. *headers, per M.*	21	10	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	4	4
Basebed, per ft. cube	0	4	7
Bath stone, per ft. cube	0	2	9½

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. 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 18s. 0d. per square.

FIXING lead soakers, per dozen	£0	0	10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10	0
LABOUR only in laying slates, but including nails, per square	1	0	0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

CARPENTER, 1s. 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	6	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., 1¼ 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 6 times.			
If in mahogany multiply 6 times.			
If in teak multiply 7 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone :			
Deal, 1 in., per yd. sup., average	0	10	0
DO., 1½ 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, 1*s.* 9½*d. per hour ;* MATE OR LABOURER, 1*s.* 4½*d. per hour.*

Lead, milled sheet, per cwt.	£2	5	6
DO. *drawn pipes, per cwt.*	2	7	0
DO. *soil pipe, per cwt.*	2	9	0
DO. *scrap, per cwt.*	1	4	0
Copper, sheet per lb.	0	1	3
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	6
Cast-iron pipes, etc. :			
L.C.C. soil, 3 in., per yd.	0	4	2
DO. *4 in. per yd.*	0	5	1
R.W.P., 2½ in., per yd.	0	1	10
DO. *3 in., per yd.*	0	2	2
DO. *4 in., per yd.*	0	3	0
Gutter, 4 in. H.R., per yd.	0	1	10
DO. *4 in. O.G., per yd.*	0	2	0
MILLED LEAD and labour in gutters, flashings, etc.	3	12	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	3
DO. 3 in., per ft.	0	2	8
DO. 4 in., per ft.	0	3	0
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, 1*s.* 9½*d. per hour (plus allowances in London only) ;* LABOURER, 1*s.* 4½*d. per hour.*

Chalk lime, per ton	£2	12	6
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	4
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, 1*s.* 8½*d. per hour.*

Glass : 4lbs in crates :			
Clear, 21 oz.	£0	0	5
DO. *26 oz.*	0	0	6
Cathedral white, per ft.	0	0	5½
Polished plate, British ¼ in., up to 2 ft. sup.	0	2	5
DO. *3ft. sup.*	0	3	2
DO. *7 ft. sup.*	0	3	9
DO. *25 ft. sup.*	0	4	3
DO. *100 ft. sup.*	0	5	1
Rough plate, ⅛ in.	0	0	5½
DO. *¼ in., per ft.*	0	0	6
Linseed oil putty, per cwt.	0	16	0
GLAZING in putty, clear sheet, 21 oz.	0	0	10
DO. 26 oz.	0	0	11
GLAZING in beads, 21 oz., per ft.	0	1	0
DO. 26 oz., per ft.	0	1	3

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

Patent glazing in rough plate, normal span 1*s.* 5*d.* to 2*s.* per ft.

LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, and up, per ft. sup.	£0	3	6

Glazing only, polished plate, 6½*d.* to 8*d.* per ft., according to size.

DECORATOR

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

Genuine white lead, per cwt.	£3	5	0
Linseed oil, raw, per gall.	0	4	0
DO., *boiled, per gall.*	0	4	3
Turpentine, per gall.	0	6	6
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	5	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	10
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	4	0	2
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* 1*s.* 9½*d. per hour ;* MATE, *do.* 1*s.* 4*d. per hour ;* ERECTOR, 1*s.* 9½*d. per hour ;* FITTER, 1*s.* 9½*d. per hour ;* LABOURER, 1*s.* 4*d. 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	27	0	0
DO., in small sections as reinforcement, per ton	17	0	0
DO., in compounds, per ton	18	0	0
DO., in bar or rod reinforcement, per ton	20	10	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, fixed on, but not including studs or grounds, per ft. sup.	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, 1/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	2
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, 3/32 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.	0	0	7

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

0 5 6
0 1 2

0 1 7
0 1 10
4 0 2
0 9 0

0 3 0

0 1 2

0 0 11

hour;
1*s.* 9½*d.*
BOURER.

2 10 0

9 0 0
3 0 0
3 0 0
0 1 10
0 1 1
1 18 0

7 0 0

7 0 0
8 0 0

0 10 0

2 0 0

2 5 0

0 2 0

0 0 2¼

0 0 6
0 1 7
0 2 8
0 2 3
0 3 2

0 4 0
0 5 0

2 15 0
3 0 0

17 0 0
19 0 0

0 7 0

0 6 6

0 1 6
0 1 9

0 2 10

0 0 7

0 0 2
0 0 3½
0 0 5

0 0 11