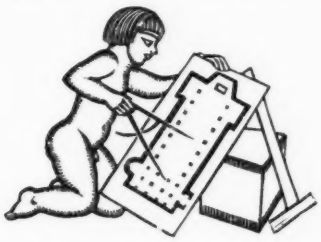
THE ARCHITECTS' JOURNAL



THE ARCHITECTS' JOURNAL
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The Editor of THE ARCHITECTS' JOURNAL wishes to draw the particular attention of all readers who are students or assistants to the series of articles on Present-day Building Construction which begins on page 395 of the current issue. It is a debatable question *how* much practical, working knowledge of building construction is necessary to make an efficient architect, but there is no question at all that some such knowledge is absolutely essential, and that by no means is all of this to be found in the textbook or at the drawing-board. So far as is known, however, Mr. Harvey's new series, which has been long and carefully planned, is the first modern attempt to put the young architect into touch with the realities that lie behind his working drawing and specification.

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PRINCIPAL CONTENTS

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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.

x. Giovanni Ghisolfi (*c.* 1623-1680).
The Ruins of Carthage.

Salvator Rosa was one of the Italian seventeenth-century masters who more keenly felt the romantic fascination of ruins—" le colonne spezzate e i rotti marmi," of which he speaks in one of his poems—but as a rule the architectural element of this type plays but a subordinate part in his compositions. It was systematically exploited, on the other hand, by his Milanese follower, Giovanni Ghisolfi, the painter of the effective capriccio of Roman ruins here reproduced. The inscription on one of the blocks of stone in the foreground says, " Carthago hic fuit " ; so there is something quite definitely localized in the note of melodramatic desolation here struck. In the figures of soldiers and others, clambering among the ruins or assuming theatrical poses, the imitation of Salvator Rosa's methods is particularly patent.—[Dresden Gallery, No. 471.]

THE ARCHITECTS' JOURNAL

Wednesday, March 10, 1926

THE SMOKE PROBLEM[1]

"PROBABLY for the first time since coal was generally used we are enjoying, owing to the coal shortage, a pure atmosphere. The whole aspect of London is changed. Vistas hitherto undreamt of reveal themselves in every direction—a walk in Kensington or St. John's Wood is like a walk in the country. Fresh, clean foliage refreshes the eye, and the scent of the lilac and may fills the air. It is depressing to think that from sheer apathy, and because it is nobody's business, we shall go back to the old conditions directly coal is again available." These words, written by Ernest Newton, were published in the *Times* on May 18, 1921, during the coal strike, when, indeed, the whole Press of England was flooded with letters, articles, —aye, and even poems—commenting on, rejoicing in, the newly-found sunshine and the newly-found beauties which the temporary absence of the smoke pall above and around all our great cities revealed.

A "London particular" perhaps epitomizes the hopeless muddle and confusion to which we have been brought, or to which we have brought ourselves, more completely than any other single outward and visible manifestation. It is the final seal of folly, it is the ultimate ineptitude of a policy of *laisser faire*, it is the outcome of uncurbed anti-social instincts, it is the crowning shame of our so-called organization.

Winter after winter, often for whole days at a time, we creep to our work in a murky darkness, we crouch at our desks and tables in an infernal gloom; coughing and choking we make our way home in a dismal shroud of suspended soot. We, men, the kings of creation, the most highly developed manifestation of life upon earth, intelligent, striving, loving creatures with the whole resources of the world around us, with the accumulated knowledge of the ages at our disposal, deliberately and continually blot out the sunshine; wantonly and shamefully besmirch ourselves with dirt, befoul our lungs, sap our vitality, blunt our senses, and embitter our lives. Yet, if, as the late Ernest Newton wrote, it is nobody's business to endeavour to remedy this remediable plague, fortunately for mankind there are some who have voluntarily made it their business to do so, and a recent piece of evidence of this fact is the appearance of *The Smoke Problem of Great Cities*, by Sir Napier Shaw and Dr. J. S. Owens, in which the matter is considered from manifold aspects—meteorological, economic, scientific, medical, industrial, and so on. Much of the book is of specialized interest, such as those sections which deal with the methods of observing atmospheric pollution, but more is of general interest, such, for example, as the early chapters, which deal with the nature and origin of fogs and mists and the atmospheric conditions favourable to their formation, and those which deal with the economic aspect. It is estimated that Greater London's fogs are a luxury costing some 24s. per head per annum; £8,400,400, in fact. Of this sum not a little is due to deterioration of buildings caused, for the most part, by the corrosive effect of sulphur produced from coal, but this fact ceases to be surprising when we are made to realize that during every hour of the day between 200 and 300 tons of sulphuric acid are formed in the air over London.

It is generally realized now that the domestic fire is responsible for much the greater part of the atmospheric pollution, particularly the kitchen range, than which there can surely exist few instruments of greater inefficiency. The actual figure of efficiency averages for all functions about 11 per cent. It would appear that it is not only quantitively but also qualitively that domestic smoke is so much more deleterious than factory smoke. Fortunately, despite the vehemence with which the open fire is defended, its use is rapidly declining, and just so rapidly is the incidence of smoke fog decreasing. In their examination of the various methods of domestic heating the authors of this book are evidently determined not to be unjust to the coal fire, but we suspect irony when we read that one of the advantages of the coal fire is that it "provides occupation in attending to it and poking it." A nation that can find no better occupation than poking its fires deserves all the fogs which it can generate.

The chapters dealing with the remedy are interesting, and those put forward for the domestic side are simple and practical. The remedy lies in a remission in the rates for those ratepayers who will give an undertaking to use smokeless apparatus. Unfortunately, this is just the kind of statesmanlike foresight that the supposedly omniscient but actually shortsighted business man is quite unable to understand. His attitude towards smoke is similar to his attitude towards town planning: one of non-interference and *laisser faire*. And any "tinkering" with the rates, as he would call such a proposal, fills him with horror and apprehension.

As it affects the architect the conservation of an untainted atmosphere is a matter comparable in importance to that of town-planning. The ill effects of smoke pollution are chiefly observable on his handiwork; the means of warding them off are largely in his hands. In order to put the whole case adequately before him we have arranged for the writing of a series of special articles dealing with some of the chief aspects of the problem.

[1] *The Smoke Problem of Great Cities*. By Sir Napier Shaw, LL.D., SC.D., F.R.S., and John Switzer Owens, M.D., A.M.I.C.E. Constable. 22s. 6d. net.

NEWS AND TOPICS

The report of the Manchester and District Town Planning Advisory Committee, summarized elsewhere, presents many aspects of interest to architects. It is in the first place noteworthy that the representatives of ninety-two local authorities in a part of the country characterized for independence of thought and outspokenness, have succeeded in working harmoniously together for six years. There is every prospect that all the authorities concerned will now function in the preparation of statutory town-planning schemes, and the procedure adopted in Manchester will be of direct influence on regional planning in all other industrial districts in this country. The report is of special interest to London. The lecture of Mr. Topham Forrest, delivered a few days ago, on "London a Hundred Years Hence," indicated a broad scheme that can only be consummated with the co-operation, not only of the County Councils, but of local authorities in Kent, Surrey, Middlesex, and the Home Counties. But these are working apparently in watertight compartments. It is little wonder, therefore, that Mr. Frank M. Elgood, formerly a housing commissioner, and now the chairman of the National Housing and Town Planning Council, asks: "Is the Manchester report a challenge, and will the London County Council take it up?" Mr. Harold Swann, the chairman of the Town Planning Committee of the L.C.C., in a statement made in last Sunday's *Observer*, agrees that co-ordinated effort is necessary in any district before local authorities can usefully begin their more detailed surveys. Lancashire is apparently thinking regionally to-day. I hope that Greater London will be equally thoughtful to-morrow.

* * *

The debate on the Weir steel house last week in the House of Commons was remarkable rather for what was *not* said than for what was said. Some references, for example, were made as to the possibility of the Weir house lasting twenty years, but no indication was given as to whether this method of construction has been properly tested by the Government's Department of Scientific and Industrial Research. It may be agreed that the processes of manufacture of standardized parts of the house developed by Lord Weir at Cathcart are admirably organized, but what is the heat conductivity of his outer walls, and how are they likely to resist wind and weather? The Government speakers also ignored altogether the pointed questions of one of their own supporters, Major Guy Kindersley. He wished to know what was the total capital of the second Scottish National Housing Company, who were the directors, what were their qualifications, who was chairman, and what was their remuneration? He suggested that the Memorandum and Articles of Association of the company should either be laid on the table of the House of Commons or placed in the library. Major Kindersley was thoroughly justified in demanding this information in view of the fact of the Government making an entirely new departure in house building, and I trust that in the near future this will be available.

The problem of the Thames bridges seems destined to provoke continuous trouble and disagreement between the various parties interested in its solution. Many people will approve the action of the London Society in addressing a letter of protest to the Molesey District Council on the subject of the proposed new bridge over the Thames at Hampton Court. The letter states that "the bridge would seriously threaten the amenities which, owing to its architectural and historical associations, was the concern not only of the local authorities, but of London as a whole. The proposed bridge on the Middlesex side would cut into and destroy part of the forecourt of Hampton Court Palace, quite altering the lay-out. The road traffic would pass immediately in front of the gate and make access to the palace dangerous and unseemly." While accepting the necessity of a new bridge, and also of a relief road connecting with the Portsmouth Road, it is to be hoped that town-planners will yet find a means of satisfying traffic needs without bringing a wide arterial road on the east side of Hampton Court Station. The present controversy provides one more argument in favour of a general scheme which would take into account the problem of London's bridges as a whole.

* * *

The authorities of London University within the space of three weeks must make up their minds with regard to the Government offer of what is known as "the Bloomsbury site," an area of nearly twelve acres north of the British Museum. It may be admitted that they had a difficult matter to decide, as while the advantages of a central position were obvious, something was also to be said for the policy of moving the university headquarters outside London, where there would be ample room for expansion in the future. Yet they have had five years to make up their minds, and one might have supposed that even a body so clumsily constituted and with such centrifugal traditions as London University would by now have found some means of formulating a policy. In a democratic age, when rulers disagree in the last resort we count noses, and a majority vote decides the issue. There can be little doubt that among both the public of London and among the staff and students of the university itself opinion is overwhelmingly in favour of accepting the Government's offer, which would enable the university to have a unique metropolitan status capable of a splendid architectural expression. As the time limit approaches the exasperated students have taken matters into their own hands and are preparing to address an appeal to the Government over the heads of the university's official representatives.

* * *

Last week a resolution was carried by the London University Society proclaiming that a centralized site, preferably in Bloomsbury, is the only feasible solution of the problem of the future of London University. Captain Swinton of the L.C.C. opposed the resolution on the ground that the site "was ill adapted to the purpose from the point of view of adding to the congestion of London. From the town-planning standpoint they should seek to decentralize and not centralize." He claimed that Bloomsbury was on a site which was going to see big business developments in the future, and was unsuitable for university use. Does Captain Swinton believe, then, that the process of decentralization should result in turning out of the metropolitan

area any institution occupying ground which might advantageously be used for commercial purposes? If so, let him propose to his fellow-members of the L.C.C. that the County Hall should at once be removed to Wembley or some other equally remote suburb. Why should it occupy valuable space which could be disposed of most lucratively for warehouses? And in these days, when nearly every M.P. has a motor-car, there seems no reason why Parliament should not be removed to Cricklewood, where, doubtless, its deliberations would be aided by the rural quietude of its surroundings. The churches, of course, have no business to intrude their presence in the metropolitan area—at least not in the City of London, as we well know. But is not this conception of the metropolis bereft of its most important public buildings entirely wrong? The place for the headquarters of a university is *in the town*. There alone can it receive its proper expression and add to the significance of the forms of civic architecture. Moreover, for the residents of London the more central the university is, the easier is their access to it. Sports grounds, of course, must also be within reach of the students, but surely these can be provided on the outskirts of London without undue hardship to the students. A great city without an important group of university buildings in its central area has failed to attain its proper spiritual status.

* * *

The negotiations between Oxford City Council and the governing body of Christ Church with regard to the development of the site in St. Aldate's, have now reached a critical stage. The Property and Estates Committee reported that a letter had been received from the treasurer of Christ Church stating that "the governing body had decided that they could not accept the proposal of the Committee, namely, that if the governing body would agree not to build south of the new entrance to the Broad Walk, the Corporation would leave a strip of land not exceeding 20 ft. in width on the north boundary of their land unbuilt upon, with a view to the use of this and the Christ Church land by the public." The Committee had passed a resolution that the development of the site be proceeded with in accordance with the proposals adopted by the Council in June, namely, to develop the site on commercial lines, which would include the erection of workmen's dwellings on part of the site. It has been suggested that the whole eastern side of St. Aldate's between Christ Church and Folly Bridge should be left devoid of buildings, so that whoever enters Oxford by the southern road will look, as soon as he crosses the river, right over open grassland to Christ Church and Merton, as he did centuries ago. This seems the ideal solution, but the question to-day is whether or not shops and flats be built on the frontage already acquired.

* * *

Christ Church has decided, in any event, to leave open, at considerable cost, the whole space between its south wall and the line of the Broad Walk. There remains the question of the disposal of the further 60 ft. of Christ Church ground between the Broad Walk and the north limit of the City's property. It is here that the hitch has occurred. The City Council offered to abstain from building on the first 20 ft. of their frontage and to unite it with the 60 ft. belonging to Christ Church, if the latter body would undertake: (1) not to build on their part and (2) to keep the whole open to the public. A problem of architectural design is seen to be here involved, because the main reason why Christ Church would not accept the first condition was that if a line of shops was begun only 20 ft. away from their ground, with its side and back towards them, they might feel obliged to screen it with some more attractive building of their own. Apart from this possibility there is no suggestion that Christ Church wishes or intends to build on this 60 ft. May we not suggest, therefore, as a possible way out of the difficulty, that the backs of these shops be designed with the utmost care and be made to present, perhaps, a pleasant and unobtrusive arcade towards Christ Church Meadows? Here seems to be an occasion for the expression of "good manners in architecture."

* * *

I am able this week to give a perspective of Sir Reginald Blomfield's scheme for the widening of Park Lane, Guildford Street, and Upperhead and Lowerhead Rows, in the city of Leeds. The new road is unique in its boldness of conception, and in the prominent place it gives to art in town development. It will be not only a fine wide road capable of passing an immense amount of traffic without congestion, but it will also be one of the most beautiful streets in England.

East and West Street, Leeds: a view from Park Lane looking north-east.

It would seem that those who govern London might learn something from the happenings in other cities. Bath, with its rhythmical planning and its suave urbanity, has always been regarded by architects as a model of what such cities should be, and now I learn that the Corporation are determined to preserve its beauty by refusing the advertisement-mongers permission to defile its fairness with their crude vulgarities and blatancies. Meanwhile the L.C.C., before whom the question of controlling flashing and illuminated signs was brought up, has decided to take no action in the matter for at least another year. It will be remembered that the R.I.B.A. suggested to the Council that it should consider whether it would not be in the interests of the general appearance of London to obtain power for the control of street advertisements generally, including the use of flashing and other illuminated signs upon the exterior of buildings, and the disfiguring apparatus connected therewith. About this there can scarcely be two opinions I should have thought. But no, business interests, even though they run counter to the general welfare, are to have it all their own way, even to desecrating London to the *n*th degree. We have learned, however, not to expect much protection from a governing body which applauds with delight the decision to demolish one of the city's most beautiful monuments.

* * *

So much attention is being focused on the Kent coalfields that it seems unlikely that a new "Black Country" will be allowed to develop. I listened to the Dean of Canterbury's broadcast on the matter last week. He gave some interesting facts and statistics, and talked of the necessity of comprehensive planning. Fortunately the East Kent Joint Town-Planning Committee has thoroughly investigated the situation, but a more detailed report than the one issued is now required. The cost of this will amount to an equivalent of one-twentieth of a penny on the rates; not, surely, a very great expenditure if, thereby, the county is to be saved from the fate of other colliery districts. Unfortunately, none of these town-planning committees has any executive power, so that their recommendations may be ignored. I do not think that this is likely to occur here, however, since public opinion is showing itself so emphatically on the side of decency and order. Nevertheless, Kent is to be the real testing-ground of town planning in the near future. If it is vanquished then the less heard about town planning in the future the better, for we shall surely have shown ourselves to be a nation of fools and hypocrites.

* * *

Some sort of agreement seems to have been reached between the liquidators of the British Empire Exhibition and the Wembley Urban District Council with regard to the future of the site. The conditions of the liquidators' offer include the removal within twelve months of the New Zealand and Malaya pavilions and certain other buildings. Part of the site is to be maintained as a garden and part used for residential purposes, or for retail shops, with a maximum density of twelve houses to the acre. The remainder of the site is to be allocated for any purpose exclusive of noxious industries. Certain land for street widening is being given to the Council free of charge, and the land formerly used as a motor park is to be dedicated as an open space in perpetuity. On the whole I should say that the arrangement is an honourable compromise.

On the advice of Professor Reilly, who was called into consultation by the Liverpool City Council, it has been decided that the Liverpool cenotaph is to be erected on the plateau facing St. George's Hall. The site agreed upon is now occupied by a pedestal bearing the statue of Lord Beaconsfield, midway between the statues of Queen Victoria and Prince Albert. The Beaconsfield statue will be removed to the rear of the cenotaph and placed at the bottom of the first flight of steps fronting the hall. The cost of the cenotaph will be paid out of the rates, and there will be a public competition with a prize for the design. Sir Archibald Salvidge, chairman of the special committee, said it was a grave responsibility for one generation to remove a statue placed in its present position by another generation, and the committee were grateful to Professor Reilly for solving a great difficulty. The new site for the Beaconsfield statue was more prominent than the present one, so no one could possibly suggest that the memory of the great statesman had been slighted.

* * *

A very well-informed correspondent in Rome tells me that Mussolini has read in THE ARCHITECTS' JOURNAL of the unearthing in London of the ruins of a Roman forum, and that on the strength of this Mussolini will claim our capital as an Italian city.

ASTRAGAL

ARRANGEMENTS

WEDNESDAY, MARCH 10

At the Edinburgh Architectural Association. 8.0 p.m. C. D. Carus Wilson, F.R.I.B.A., on Principles of Design.

At the Institution of Structural Engineers (Manchester Branch). R. Travers Morgan, A.M.INST.C.E., on Building Construction from a Surveyor's Point of View.

THURSDAY, MARCH 11

The Institution of Electrical Engineers. 2.30 p.m. Visit to the Underground Railway Repair Shops at Acton.

At the Royal Society of Arts. 8.0 p.m. W. A. Harvey, F.R.I.B.A., on Housing: Past, Present, and Future.

At the Northern Polytechnic. 7.0 p.m. Annual Speech Night and Exhibition of Students' Work.

FRIDAY, MARCH 12

At the Town-Planning Institute. 6.0 p.m. William Haywood, F.R.I.B.A., M.T.P.I., on the Control of Design—Scope and Method.

MONDAY, MARCH 15

At the Royal Institute of British Architects. 8.0 p.m. George H. Duckworth, C.B., F.S.A., on The Making of a Slum.

At the Edinburgh Architectural Association. 8.0 p.m. Annual General Meeting of the Associate Section.

SATURDAY, MARCH 20

The Royal Institute of British Architects. Visit to the Devonshire House Buildings. (1) Piccadilly Building; (2) Messrs. Cook and Son's New Premises.

WEDNESDAY, MARCH 24

At the Royal Society of Arts. 4.30 p.m. Sir Frank Baines, C.V.O., C.B.E., on The Preservation of Folk Architecture in this Country.

MANCHESTER'S REGIONAL SCHEME

BY B. S. TOWNROE

MANCHESTER has lost no time in setting an example to the rest of the country in the preparation of an advisory plan in broad outline, which will facilitate the progressive development of a region covering over a thousand square miles. The report upon the regional scheme of the Manchester and District Joint Town Planning Advisory Committee that was published during the last week-end is the result of six years' far-seeing and patient work. The initial conference, held in the spring of 1920, was attended by representatives of local authorities within a fifteen-mile radius of the City of Manchester, by architects and others, and the general question of town planning was discussed. It was then decided to form a committee to assist in the promotion and co-ordination of schemes for the industrial area of south-east Lancashire and north-east Cheshire. In the following autumn a further meeting was held, with Mr. G. L. Pepler, the chief town planning inspector of the Ministry of Health, in the chair, when it was decided to include portions of south-west Yorkshire and north-west Derbyshire. Eventually in 1921 the committee was constituted. In the following year was held the Manchester Town Planning Exhibition and Conference that performed such a useful work in bringing before the public some of the aims and objects of town and regional planning. In 1923 the committee commenced the actual preparation of a regional plan for a district covering 1,020 square miles, with a population of nearly 3,000,000 persons, and an assessable value of about £20,000,000. The committee included representatives of four county councils, eight county borough councils, sixteen borough councils, sixty-six urban district councils, fourteen rural district councils, and representatives of such bodies as the Manchester Society of Architects, the Town Planning Institute, and the Ancient Monuments Society.

It is unnecessary to discuss in detail the constitutional growth of this mammoth committee. It is of interest, however, to note that in the future the regional scheme, as presented in the report, is to be used as the skeleton or outline of statutory town planning schemes for each of the decentralized areas, into which the whole region has been divided. It is considered that such statutory schemes under the Town Planning Act of 1925 could in most cases be prepared during the next two or three years. The Central Committee is to be reorganized so as to secure co-ordination, and to advise on any differences that may arise. It is a tribute to the common sense of officials and members of local authorities in the north-west of England that the report adds a special word of appreciation to their valuable services, and to the earnestness with which all problems have been faced. The only serious note of criticism is directed against coal-owners and lessees, who showed "little evidence of willingness to co-operate and assist the committee."

The report deals with a large number of topics, giving a general survey of the region, geographical and topographical; and makes specific recommendations with regard to roads, tramway and omnibus services, railways and canals, population and traffic movements, mining areas, water, gas, electricity, and main drainage. Of special interest to architects are the sections regarding zoning, places of historic interest, and town planning. The report emphasizes the well-known fact that the existing Town Planning Act of 1925 does not apply to the regulation of built-up areas as such, and that, therefore, any town plans for developed areas can only be prepared by agreement with the persons interested or under a special Act of Parliament. "Nevertheless, unless such town plans are prepared, any town-planning scheme for the adjacent undeveloped lands must be prepared in isolation, and no co-ordinate linking up with the main structure can result." The report mainly indicates the future development of the area with a view to preventing "huge agglomerations of bricks and mortar," and suggests the provision of tracts of land to be reserved for agriculture or for recreation. Local authorities are, therefore, recommended in their schemes to provide for regulating building development in the future by zoning into areas for residential, business, industrial, and other purposes. It is advised that the housing density in urban areas should not be permitted to exceed an average of twelve houses to the gross acre, and in rural areas eight houses to the gross acre. "In the application of detailed zoning adjacent to town areas, cases will arise probably where it will be necessary to increase the density indicated, but it is considered that in no case should the density be permitted exceeding twenty houses to the gross acre." A remarkable series of illustrations showing houses erected about 1820, 1845, 1870, 1895, 1914, and 1922 is given to show the gradual appreciation of the advantages of open development. These are veritable "milestones" of housing progress. One of the most interesting sections describes places of historic interest in the region, and the report recommends that definite action should be taken in the future to secure their preservation.

As compared with some parts of Great Britain the activity of the north-western region in town-planning schemes is noteworthy. Of the 104 local authorities in the region only twenty-nine, with a population exceeding 20,000, are required by statute to prepare schemes. But altogether up to the present seventy-three local authorities have adopted resolutions to prepare schemes for the whole or part of their respective districts, in spite of the fact that such action is entirely optional in most cases. The report rightly states that this activity is "a great tribute to the efforts of the committee in its endeavour to secure controlled development, and indicates an appreciation of the advantages associated with a pre-determined plan." Of a total acreage in the region of 653,888 acres, the areas controlled to-day under town-planning schemes amount to 461,096 acres.

Full justice cannot be given in necessarily limited space to so comprehensive a report as this, but it will be obvious that all other districts, which are slowly, and in some cases reluctantly, recognizing that regional planning is of value, have much to learn from this Manchester report. It shows that business men in an industrial district recognize that waste, congestion, and confusion can be avoided if all future development, whether by private enterprise or by public bodies, is guided on well-thought-out lines. It is, of course, out of the question that all the proposals should be put in hand immediately, but given in the future the enthusiasm that has marked the procedure during the early stages, and the necessary united efforts of all local authorities, landowners and developers, leaders of industry, and others, the programme of wise development foreshadowed should in time be realized.

SOME RUINED BYZANTINE CHURCHES OF CONSTANTINOPLE

BY M. SHEEPSHANKS

II: THE PANTOCRATOR, THE MYRELAION, AND ST. JOHN STUDION

It may, perhaps, be stretching a point to include the Pantocrator under the title of "some ruined Byzantine churches," nevertheless, although happily one out of the three churches which join to form this splendid building is in good repair, and another in fairish repair, the central church, once the mausoleum of the Imperial family of the Comneni, and containing unique specimens of Byzantine inlaid marble pavement, is now the home of scores of pigeons, and in a neglected condition, the sure precursor of decay. The Pantocrator stands high, and its domes are seen from the Golden Horn on one side, and from the great land walls on the other. A near view is very difficult to obtain, so closely is it surrounded by Turkish wooden houses, whose proximity, in view of frequent conflagrations, is a menace. This church has always been important and well known, and no doubt can be entertained as to its identity. It is a triple church, dating from the eleventh or twelfth centuries, attached to a great monastery, and was probably founded by John Comnenus and his wife Irene, the lovely and saintly Hungarian princess who ended her life as a nun, and who was buried here like other Comneni, in what is now the pigeon's home.

After the sack of Constantinople by the French and Italians of the Fourth Crusade, the precious vessels and numerous relics, including a fragment of the true Cross, were looted by an Alsatian abbot, but the sacred picture of the Virgin, said to have been painted by St. Luke, was stolen from S. Sophia by the Venetians, and transferred to the Venetian headquarters at the Pantocrator, and here it remained until cut to pieces by the janissaries after the Turkish conquest. The monastery was the official residence of the Latin Emperor Baldwin II, and the church was the patriarchal cathedral during the Latin occupation, as it became again later after the Turkish conquest. Many of the Imperial family of the Palæologi were also buried here. All this shows the splendour and importance of this great church in the later centuries of the Eastern Empire. It has been known now for over three centuries as the mosque of Zeirek Kilissi. Apparently it is little used now.

The main entrance leads into the outer narthex of the south church, and from here five doors, all of them enclosed in handsome marble frames lead to the inner narthex; the old marble pavement still survives, much worn and broken. The inner narthex has a Byzantine central dome. In the south church itself the ancient porphyry columns described as still in place in the sixteenth century have gone, and been replaced by Turkish columns. The apse has, fortunately, retained its marble panelling. The marble revetment was the main form of decoration in Byzantine churches, whose architecture demanded extensive flat spaces covered with coloured marbles and mosaics from which the sun was reflected. A favourite device was to split slabs of marble, so as to form a symmetrical design. Many of the marbles were taken from ancient pagan temples. The beautiful original marble revetment has been preserved entire in the church of S. Mary Diaconissa. The Turkish "mimber" is adapted from the Byzantine pulpit, and shows the crosses with arm broken off and other carvings. The shafts and canopy are also Byzantine. Flags hang from the "mimber" now, showing the church was conquered from Christians. The mihrab, the Turkish niche turned towards Mecca, from which prayers are said, is slightly to the south of the former altar.

Bodroum Djami (its name as a Turkish mosque) is generally agreed to be the church of the Convent of Myrelaion, which, after being suppressed by the iconoclast Emperor Constantine in the eighth century, was restored in the tenth century by Romanus Lecapenus. The

The Pantocrator.

church dates from the latter period. It was burnt out with the quarter surrounding it in July 1912, but in spite of its desolation and neglect, traces of its former charm remain. Dean Hutton described it before the fire as retaining much of its old dignity, and expressed the hope that at some time its mosaics and early decoration might be rediscovered. That, alas, can no longer be, but those who cherish historic associations would like to rescue from decay the church of the Convent, to which the lovely, but wicked, Empress Theophano, the consort successively of the Emperors Constantine, Nicephorus Phocas, and Romanus II, banished her sister-in-law Agatha, as narrated in Frederich Harrison's historical romance *Theophano*. It was also the final home of the Empress Æcatherina, a Bulgarian princess, wife of the Emperor Isaac Comnenus, after his abdication, and of their daughter Maria. The Empress Helena, wife of Constantine VII, Porphyrogenitus, was borne to her grave here on a bier of gold, adorned with pearls and other precious stones in the year 981. It was considered worthy of the tombs of emperors, whose ashes were transferred here from other monasteries. From such Imperial glories it has sunk to be the receptacle of garbage, cluttered up with loose stones and filth. It is a small church of the four-column type, and has a dome in a circular drum supported on four piers, with eight concave compartments, and windows in alternate compartments. On the south side are six large semi-circular buttresses, an unusual feature in Byzantine churches; two similar buttresses are also on the east and west ends. The north side and the roof were restored in the eighteenth century after a fire. The church stands over one of the many underground cisterns with which in early times the city was supplied with water, and which have survived as one of the curious sights of Stamboul. As in the case of larger and more celebrated cisterns, this small one had an arched roof supported on pillars with beautiful capitals. This cistern gave the church its Turkish name of Bodroum, which means a cave. The name Myrelaion means the place of myrrh.

One of the saddest losses of ancient churches is that

Above, the Myrelaion. Below, the Church of St. John Studion.

caused by the rapid disappearance of what remains of St. John Studion, the oldest building in the city, and the only basilica. It was built in A.D. 463 by the Roman Consul Studius, and was connected with a large monastery built to contain a thousand monks. The monastery was suppressed by the iconoclast emperors, but gloriously restored by the Empress Irene in A.D. 799, when the celebrated Theodore became the Abbot, but he, too, incurred the wrath of the later emperors, and was exiled. Many historic events centre round the church and its monastery. In the last half century the church has rapidly fallen to pieces. Salzenberg described it in 1850 as still intact; it was then in regular use forMoslem worship. It is said to have been adapted for use as a mosque by the great architect, Sinán. When Professor Van Millingen examined it in 1912 the roof had partly fallen in; it has now disappeared entirely. The Russian Institute in Constantinople made a careful survey in 1912, but it is, perhaps, to be regretted that they uncovered the old pavement, unless steps were to be taken to preserve it. Salzenberg reproduces part of the old marble pavement, but apparently did not see the portions composed of mosaics depicting charming animal scenes. These mosaics are now loose and exposed, and bits constantly disappear. The whole interior is overgrown with vegetation, and encumbered with fallen timbers. But what remains of the old building has considerable interest and beauty.

The Church of St. John Studion. Above, a pavement. Below, fallen fragments of architrave.

Approaching from the west end a gate leads into the atrium, of which the original north wall survives, and contains crosses in the brickwork which have not been destroyed or obliterated by the Turks. A Turkish fountain stands in the centre where the old Christian fountain for ablutions stood. Ceremonial washing before prayer was practised in the eastern church, and there were baths near the churches. An inscription in S. Sophia says: "Not only cleanse thy body, but wash away thy sins." The little garden, with its shady plane trees, ivy, flowers, and grass, its Turkish gravestones, and seat running round the fountain, retains much of the peaceful charm it must have had in the old monastic days.

The situation of church and monastery; on the one hand, near the shore of the Sea of Marmora, and thus easily accessible from the Palace of the Bucoleon, and, on the other hand, near the Golden Gate; led to its being the scene of many historic events. In 1041 the Emperor Michael V, who had roused the fury of the populace by deposing the Empress Zoe, who had adopted him as her son and heir, fled by boat from the palace to the Studion, where he and his uncle Constantine took sanctuary. Here they clung in vain to the altar while the mob clamoured for their blood. They were dragged away by the feet and through the city, and though their lives were spared, their eyes were put out according to the cruel Byzantine tradition. The Studion was the scene of some of the events which led to the final rupture between the eastern and western churches. Here was held the council of the papal legates, the Emperor Constantine IX, and the Studion monk, whose denunciation of Roman practices brought matters to a crisis in 1054. The quarrel ended in the final division of the Greek and Roman communions.

The Latin occupation of Constantinople ended with the entry of Michael Palæologos in 1261. The Imperial procession came in by the Golden Gate, and deposited the sacred icon in the Studion before proceeding to S. Sophia. The Studion is thus closely bound up with many stirring events in the history of the city, besides having rendered great services to history and literature, through the industrious labours of the monks in the monastery library, and to the well-being of the population through their works of charity. It is, indeed, tragic that a building with associations of such interest should be allowed to disappear.

CURRENT
ARCHITECTURE
SECTION

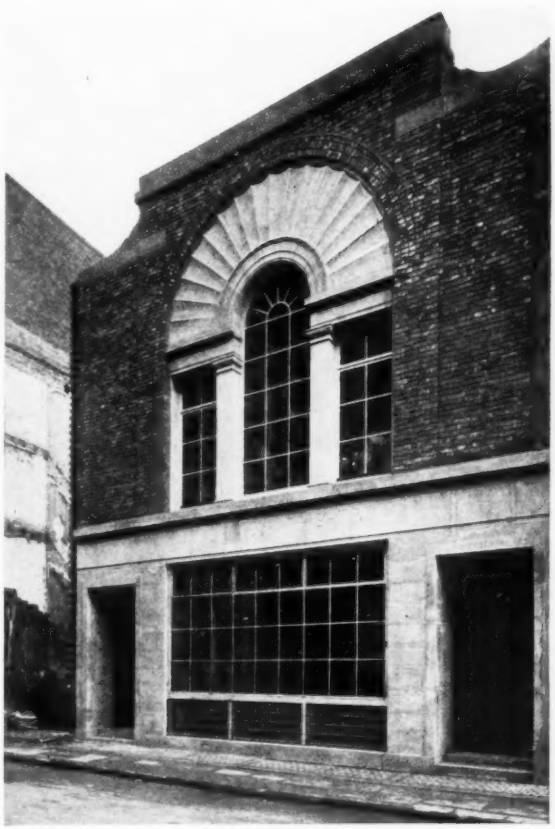
THE VAUDEVILLE THEATRE

BY J. L. MONROE

IT is, to say the least of it, a little ironical that, having a richer legacy of fine dramatic literature than any other country in Europe, the condition of the theatre during recent years should in many cases compare unfavourably with that of any other European country. While Germany, Russia, Austria, Poland, Czecho-Slovakia, France, and even the new Baltic States seem to understand the purpose, significance, and place of the theatre in national life, and are constantly experimenting with new art forms, new modes of expression, and new syntheses, theatrical enterprise in England, and particularly in London, with a few exceptions, remain without ambition and without purpose; and so London has become the worst theatrically-equipped capital in Europe, despite the large number of theatres which it contains. There are many contributory causes to this so lamentable state of affairs, but it is probable that, *au fond*, they are financial. The theatre in England is regarded by many solely as a money-making pursuit, carrying with it no responsibilities whatsoever; it is, indeed, one of the worst aspects of capitalism. What is of immediate interest here is, however, that conditions being what they are, no one can afford to have a theatre empty for any considerable length of time, and this fact led to one of the most remarkable examples of building "hustling" that has yet occurred in this country: that in connection with the remodelling of the Vaudeville Theatre.

The last performance in the old theatre took place on the evening of November 7. The first performance in the new theatre took place on the evening of February 23. During that interval of fifteen weeks practically the whole inside of the theatre was gutted; the roof was raised, part of the basement was lowered, the proscenium opening was increased, new staircases were constructed, the entire auditorium and stage were rebuilt and re-equipped, and, incidentally, the seating accommodation was increased by some ninety seats.

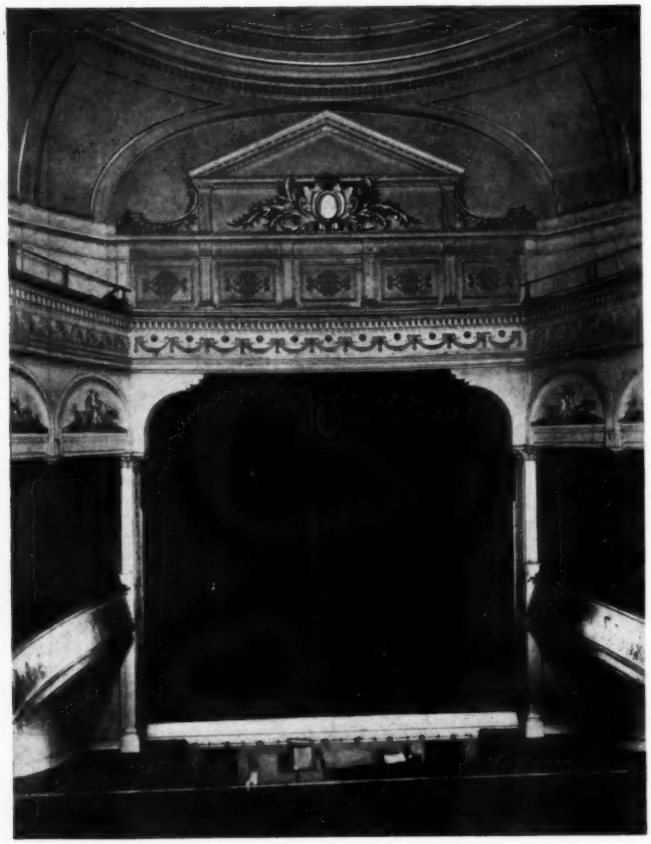
Such speed in building operations necessitates very careful and thorough organization beforehand; so that when access to the building is obtained, everything having been prepared as far as possible, the work can proceed with the minimum of delay. In this case all the steelwork was ready before the work began. The excavations for the new stanchions had been dug previously, and the foundations prepared while the theatre was still in use. The new roof was constructed with steel supports direct from the ground at a very early stage, long, in fact, before the walls were built up to it. From the morning of November 9, when the theatre was first entered, almost until the very ringing up of the curtain on the evening of February 23, work has been going on in the building day and night without cessation. However carefully the general programme of the procedure may have been worked out in advance, the actual administration rests with the foreman, who must be ever alert and ever ready to cope with emergencies, ever ready to effect a change of programme of work to meet contingencies, and by no means least important, ever tactful; and so it is not unfitting that a tribute should be paid to Mr. Graham who acted in that capacity with such success. Typical of the unforeseen contingencies which are liable to arise in a job of this kind was the discovery of a subterranean stream running beneath the Strand to the river; and special methods had quickly to be devised to deal with it.



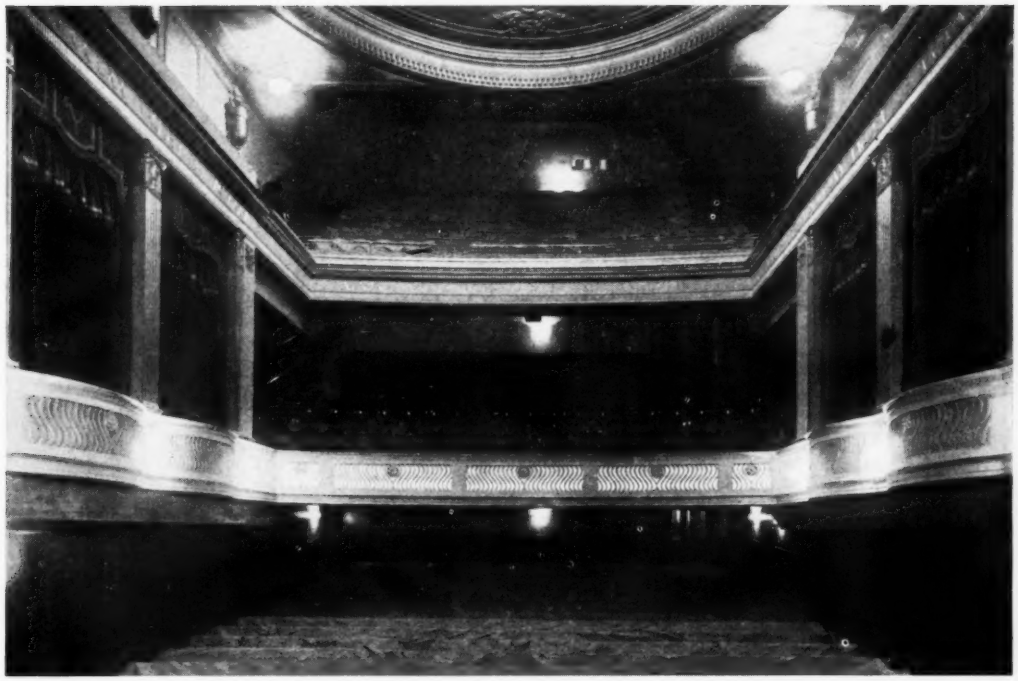
The new elevation to Maiden Lane. By Robert Atkinson.

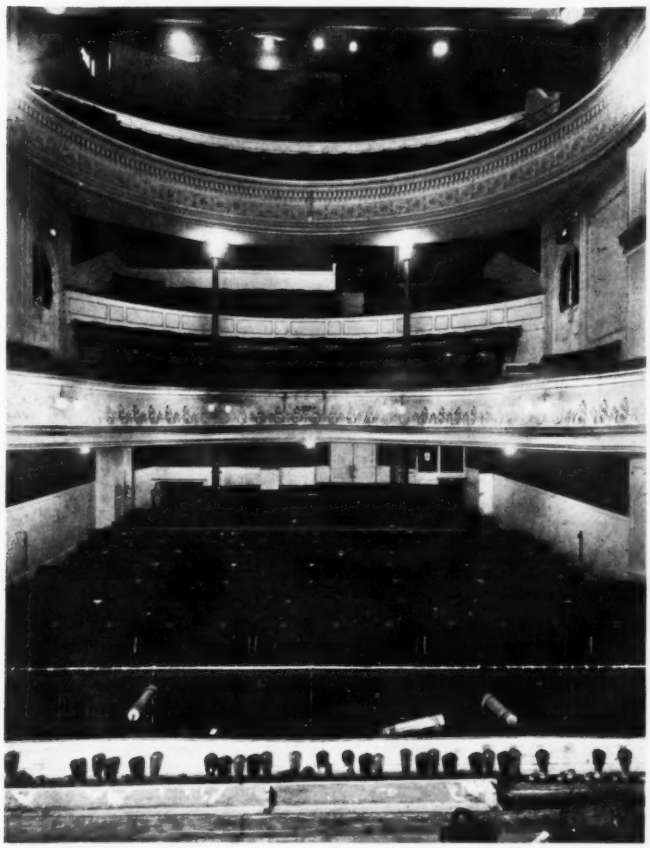
The plan of the old auditorium was of the much-favoured horse-shoe shape. In the new theatre the seats are ranged nearly parallel to the stage, having only a slight curve; the vision is uniformly good, the arrangement is altogether simpler, pleasanter, more rational, and, as we have noted, the number of seats has been very materially increased.

It is surely a remarkable fact that there would always seem to have been some kind of relationship between the decoration of the theatre and the dresses worn by its patrons. In the famous theatres of the



Above, the proscenium arch to the old theatre. Below, the new proscenium arch.



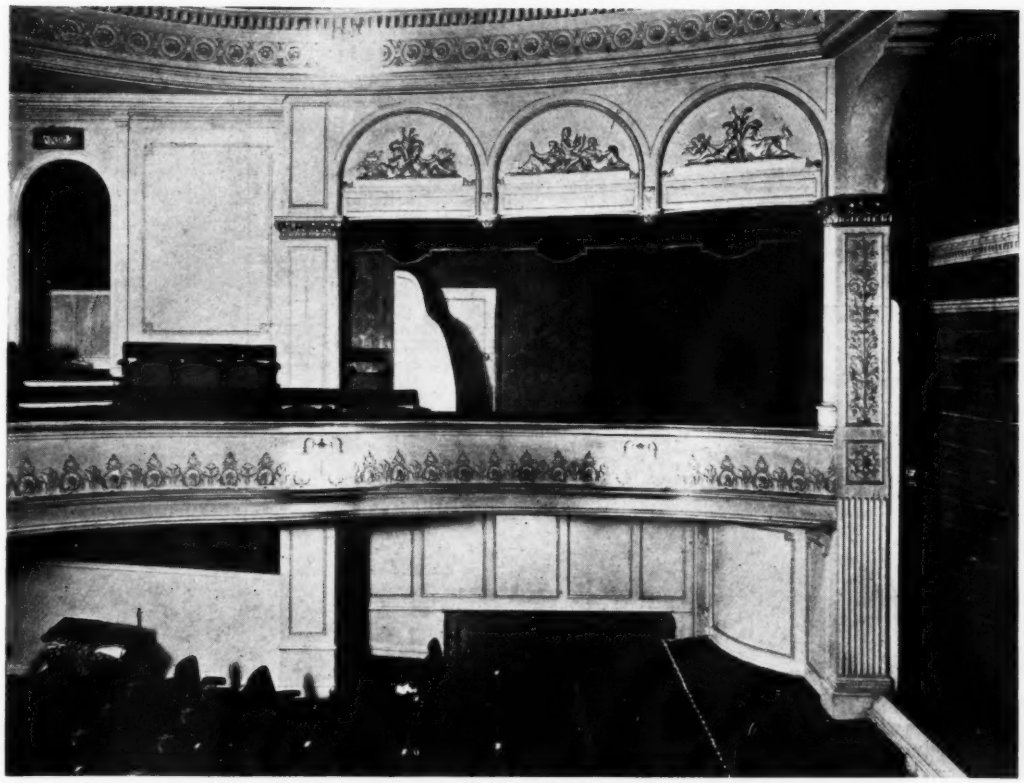


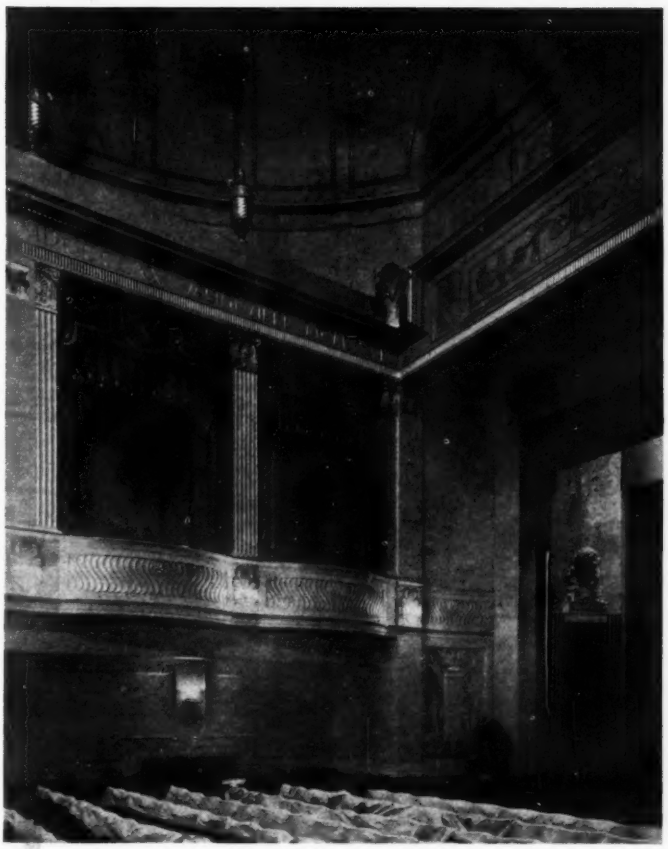
Above, the auditorium of the old theatre. Below, the new auditorium.

eighteenth century, such, for example, as the old opera house at Bayreuth, or the Court Theatre at Drottningholm, where the whole auditorium is a fit setting for the particular social life of the period, for the clothes, and even for the artificial attitude towards life. In eighteenth-century theatre design there was a kind of frivolous elegance. And then the nineteenth-century theatres seem to have, for the most part, a kind of tiresome pomposity; an unrefined and clumsy ornateness, which is curiously in sympathy with the outlook and aspirations of the day, and which certainly found its counterpart in the contemporary dress. What, then, of the theatre of to-day? It is, of course, absurd to generalize from the particular, and then, too, the Vaudeville Theatre is not a new theatre, but a remodelled old theatre, with all the limitations thereby implied. But, despite these limitations that same intimacy which is so clear in the theatres of the eighteenth and nineteenth centuries between the audience and its background is here apparent. There is appreciation and understanding of colour values. This is something common to-day to architects and designers of women's dresses (the appreciation of colour is a more primitive faculty than the appreciation of form). The tones of the new auditorium are certainly most seductive; rose, gold, and buff seem to prevail. Then there is a kind of leanness and sparseness of line, as, for example, in the simple square proscenium opening; this, again, is a quality of contemporary dress. There is the ability to achieve an effect with the minimum of effort, but, of course, an age that sells its soul to the god of speed cannot be expected to have time to indulge in elaborate decorative work. Thus it is obviously not intended that we should ponder over the details of the plaster-work and the like too carefully. So, too, women have little use to-day for fine jewellery or fine embroidery, they are too impatient to care about such things, and, after all, cannot an effect be obtained without them?

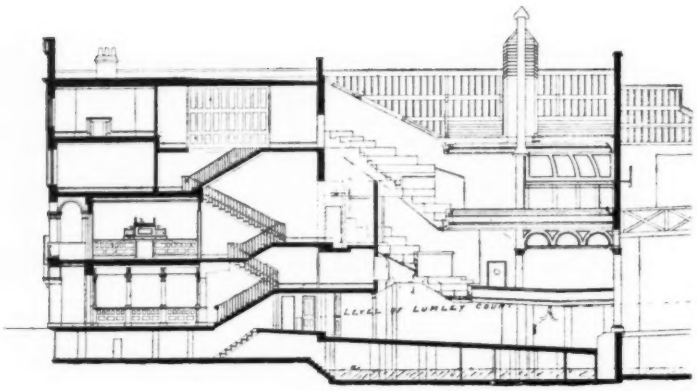
Above, a detail of an exit. Below, an entrance to the private boxes.

The general contractors for the work were Messrs. Bovis, Ltd. The sub-contractors employed on various works were: Ragusa Asphalte Co., asphalt; B.R.C. Co., reinforced concrete; Redpath Brown & Co., structural steel; Siegwart Floor Co., fireproof floors; The Luxfer Co., patent glazing and casements; Dart Co. (Novoid) Ltd., waterproofing materials; Richard Crittall & Co., central heating and ventilating; Newton, Witter & Co., sprinklers and fire hydrants; F. Burkitt, fireproof curtain; Charing Cross Electric Supply and Strand Electric Co., electric wiring; Baguè's, Ltd., electric light fixtures; Musgraves, Ltd., sanitary fittings; Arthur Maxted, Ltd., railings; Walter Cassey, Ltd., door furniture; R. E. Pearse & Co., casements; F. A. Norris & Co., iron staircases; Messrs. G. Jackson & Sons, Ltd., decorative plaster; Thomas Elsley, Ltd., metal work; Bovis, Ltd., joinery; Ewart & Son, lightning conductor; Carter & Co., tiling; Pixton & Co., seating; Barnes & Co., cloakroom fittings; Hamptons & Co., carpets.



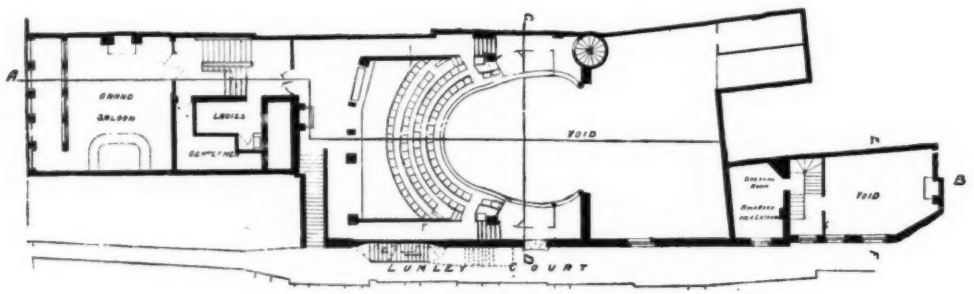


Above, the private boxes in the old theatre. Below, as reconstructed.



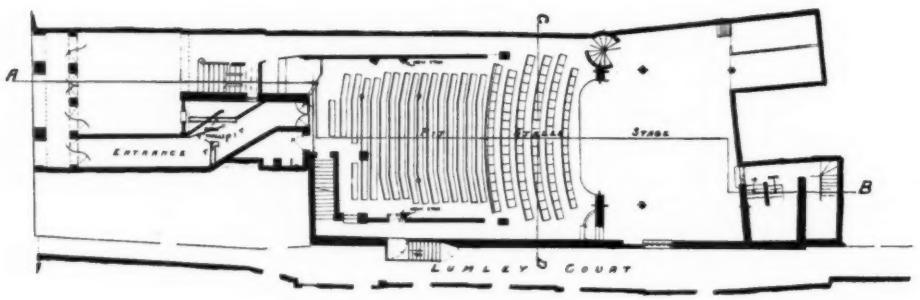
— SECTION ON LINE AB —

— SCALE OF FEET —



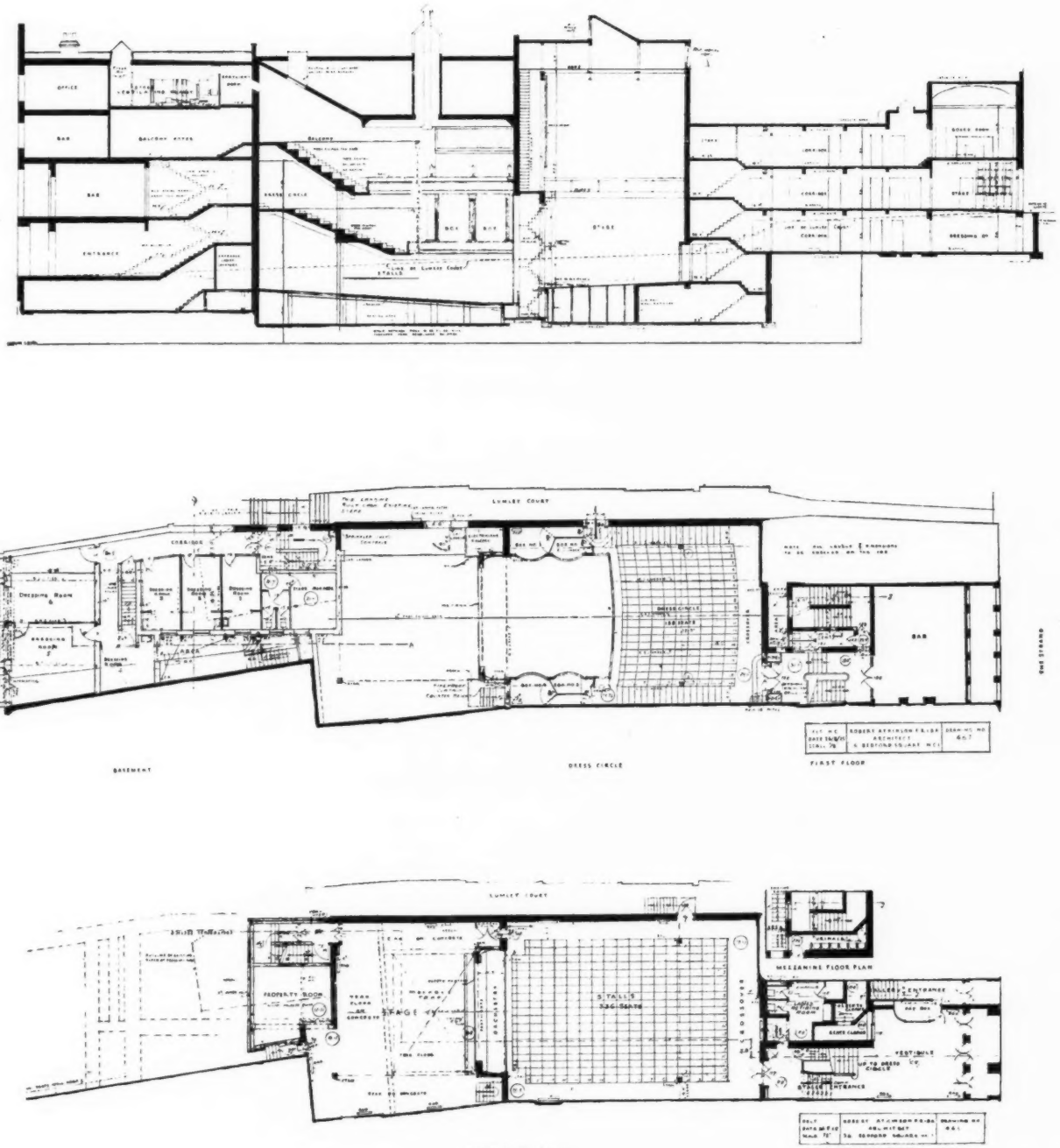
— PLAN AT DRESS CIRCLE LEVEL —

— SCALE OF FEET —

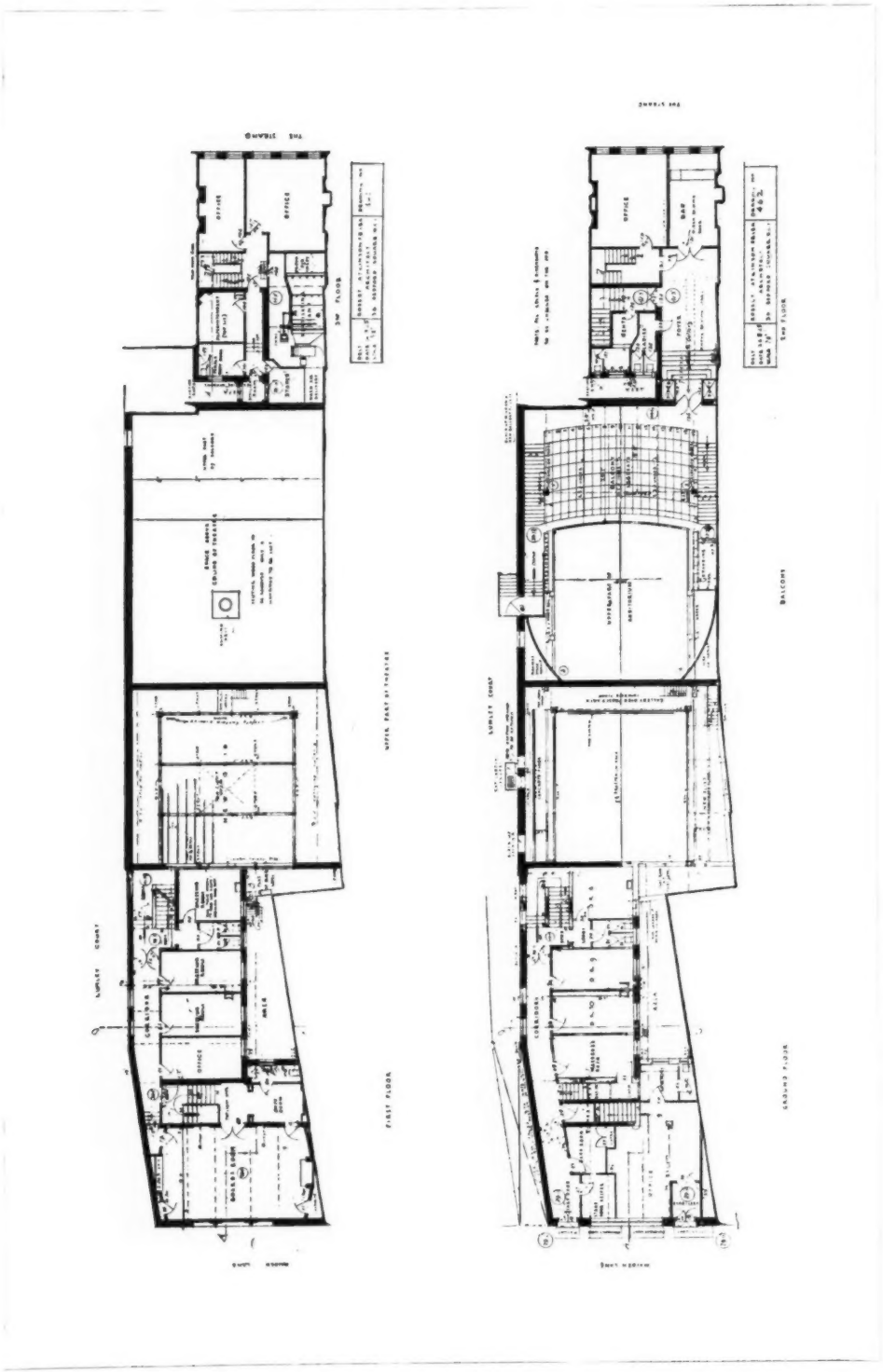


— PLAN AT PIT AND STAGE LEVEL —

Plans and section of the old theatre.



Plans and section of the new theatre.



Plan of balcony and of upper part of the new theatre.

THE COMPETITORS' CLUB

THE RUSSIAN METHOD

PARTICULARS have recently come to hand of the manner in which competitions were conducted in Russia prior to the Revolution, and these methods are so markedly different from our own, and in some respects so superior, that it will be worth while to consider them in detail. To begin with, all competitions were conducted by one of the professional societies; the only road by which a promoter could get his competition organized being by a direct approach to one of these. In Moscow there was but one society, but in St. Petersburg there were three, corresponding to groups men of who, by their training in different schools, had approached the building art from its general, its scientific, or its specifically artistic aspect. Anyone desiring to secure competitive designs approached the society he considered most suitable, and submitted his demands and proposals, including the premiums he was prepared to offer. These proposals were first dealt with by the president of the society, who decided whether they were reasonable and the premiums adequate. If he felt they were not he endeavoured to get these increased, and failing this, considered whether the case could be met by cutting down the scale and number of the drawings. Only with reluctance would he throw the proposal over, lest it should pass into the hands of one of the rival societies. Seemingly, the importance of a society depended in a measure on the number of competitions it offered.

These preliminaries having been dealt with, the next step was the appointment of the jury of assessors, the number being usually five or seven. This number was a reduction on former practice, and an explanation is given that this "small" jury was found to work better, its members attending more regularly and feeling a keener sense of their personal responsibility. The promoter was at liberty to suggest one or two names for this jury, the remainder being appointed by the president, unless it was decided that two should be left for election by the competitors, who would give their choice in a special envelope accompanying their design. The merit claimed for the latter course was that the names of some of the jury would not be known, as all names were published on appointment. Assessors when selected had the right to decline without giving any reason, as they might be competing or otherwise interested in the competition, and not desirous of disclosing the fact. The only member of the jury who received any remuneration was the one who acted as "registrar," whose fee was anything up to 5 per cent. of the total amount of the premiums offered. Even when the premiums were, as was usual, on a more liberal scale than our own, this was a small fee, taking into account the duties imposed.

Before the jury met the registrar had to go through all the designs, and scrutinize them carefully to see that they were in accordance with the conditions and fulfilled the technical requirements of the programme, while, after the adjudication had been made, on him devolved the task of drawing up the award in the form of a careful and detailed report analysing each design sent in and giving the reasons for the decision. This report was examined and signed by each member of the jury, so that it is obvious that the registrar would need to take very careful notes during the progress of the adjudication.

But we must take a step back; as an additional precaution, before the jury met, the designs were exhibited for a few days in the society's rooms to those who had the *entrée* there, and any criticism on technical points, such as compliance with the conditions, could be sent in writing to the registrar. It is pointed out that this exhibition also enabled competitors to see that their drawings had come to hand and were properly hung. After the award was drawn up it was published in the society's journal, and one of the reasons why it had to be set out as a logical and reasoned criticism was that it might have an educational value to the younger members. Then came the admission of the public to the exhibition, and the designs had once more to run the gauntlet, as a protest could then be lodged against the decision on the ground of a successful design having departed from the programme. If such a protest were lodged the assessors were under an obligation to reply to it, and establish the justice of their decision. If, in the opinion of the society, they failed in this, they had to reconsider their award.

Only after all these fences had been successfully negotiated were the sealed envelopes opened and the names of competitors published. The premiums were then paid in accordance with the award, subject to a deduction of 10 per cent., which the society were entitled to retain in order to defray the expenses of the competition. This percentage was doubled in the case of any premiated architect who was not a member of the society.

The most important advantage claimed for this method of conducting competitions was its open character, competitors being able to follow the proceedings from start to finish and being assured that their interests were protected against any accident that might be due to incompetence or carelessness. As a result it was generally admitted that not only were the best architects willing to take part, but also that the outside public was induced to take an interest in this aspect of architecture, and thus to become educated in the basic principles of design.

Even now one more note must be added in illustration of the conscientious attitude displayed by the Russian architects towards these competitions. It is laid down that if after the whole business has been carried through to the finish, the society involved came to the decision that the programme was defective in that it had failed to evoke a design embodying the original intention in an adequate manner, steps should be taken to organize a new competition on a revised programme, eliminating the errors that experience had shown to have been the cause of the failure.

SENESCHAL

COMPETITION CALENDAR

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

Wednesday, March 31. New offices for the West Bromwich Permanent Benefit Building Society. Open to practitioners within fifteen miles of Birmingham. Assessor, Mr. W. A. Harvey, F.R.I.B.A. Premiums, £100, £75, and £50. Particulars from Mr. J. Garbett, Secretary, 301 High Street, West Bromwich. Deposit £2 2s.

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.

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 competitions have not as yet been brought to the notice of 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.

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans.

No date. Open Air Bath, Morecambe. Premiums, £100, £50, and £25. Particulars from Town Clerk.

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.

No date. Lay-out for new cemetery for Leicester City Council. Open to local practitioners. Premiums, £100, £50, and £25.

No date. Cenotaph for Liverpool, on the St. George's Hall Plateau. Particulars from Town Clerk.

SPORT AND RECREATIONAL BUILDINGS

BY EDWARD R. BILL

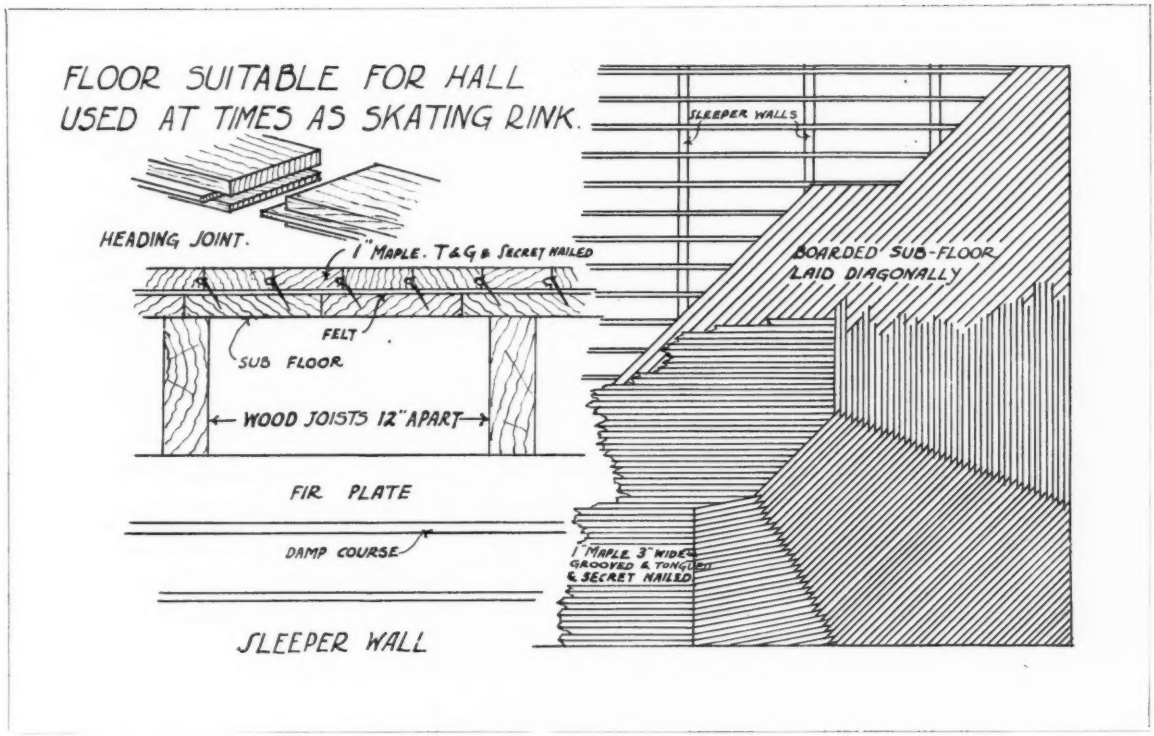
iii: SEASIDE WINTER GARDENS

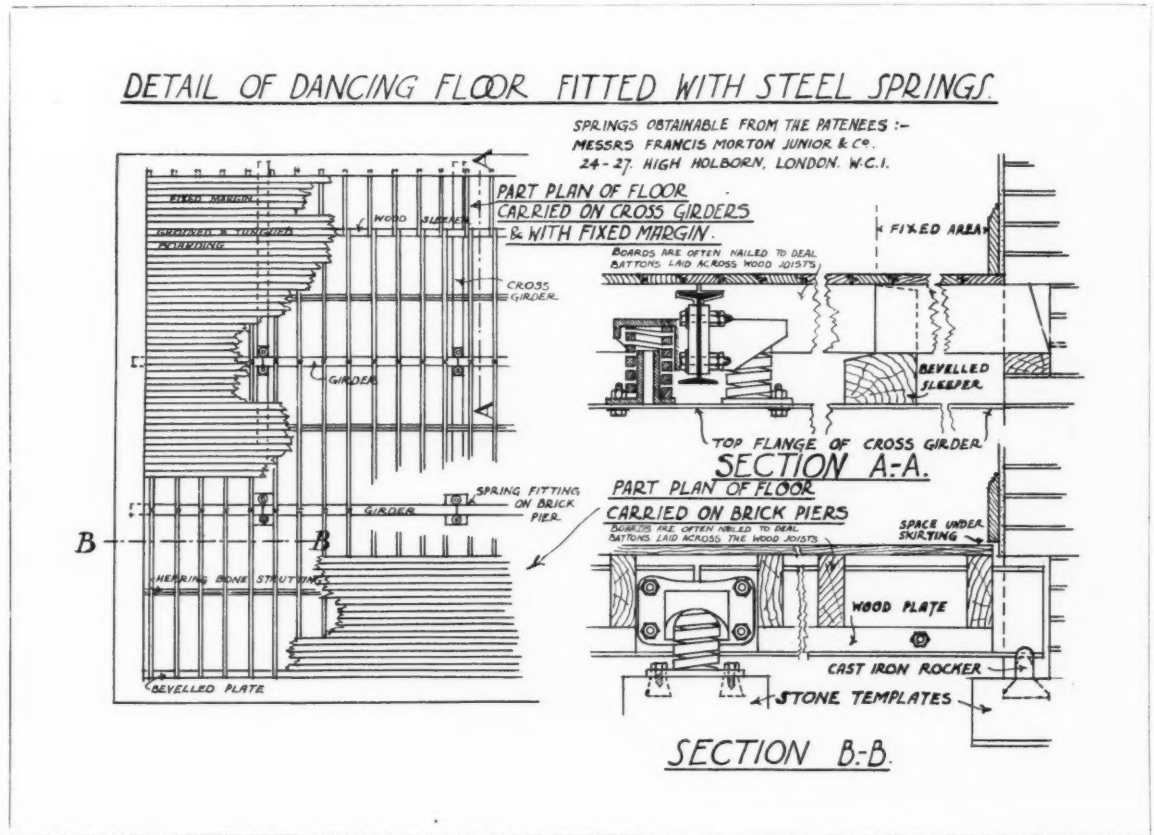
THE term winter garden is capable of a very wide interpretation. In its simplest form it may be just a large conservatory of more or less ornate design, in which horticultural specimens flourish through all seasons of the year amidst artificial surroundings designed to accentuate their natural beauty. In many of the larger seaside winter gardens the area allocated to horticultural and arboreous display forms but the nucleus around which various amusement halls, pavilions, refreshment rooms, and lounges are grouped. On the street side of the entrance turnstile and ticket offices there should be a spacious vestibule, capable of affording adequate shelter to the public waiting for admittance, and provided with outside doors or collapsible gates to enable the premises to be closed. A glass canopy roof, projecting well over the pavement to protect patrons alighting from vehicles, is an essential feature, and it must be low enough to keep off driving rain. Beyond the vestibule will come the entrance hall, with a fountain playing in the centre, surrounded with staging for palm trees, flowering plants, etc., while around the walls may be sculptured groups on pedestals, and niches filled with busts of popular poets, painters, scientists, and soldiers. Garden seats recessed in alcoves, and an electric organ or pianola are desirable attractions, while a glass-domed roof with a peripteral balcony will add additional interest and dignity to this important unit. Opening from this hall should be the approaches to the winter gardens, ballroom, pavilions, restaurants, and cafés, and whatever else is included in the programme. Adequate lavatory and cloakroom accommodation for each sex must be centrally arranged in relation to this hall, and the manager's office and the offices for the clerical staff should be conveniently accessible from all parts of the establishment.

The winter gardens will comprise a number of courts, halls, and promenades arranged to display their floral wealth to the best advantage. The greater portion of the walls and roofs may be of glass, designed in variously shaped vaults, arcades, and domes, with perhaps a great dome as a culminating feature, focusing the vista from the other promenades. Provision for a sufficient number of opening lights is very necessary, but positions at the back of, or immediately over, the seats and lounges must always be avoided. The floor must be capable of withstanding wet as well as traffic, but it must also be warm to the thinly-shod feet of promenaders from the ballroom. Fountains and waterfalls will play a conspicuous part, and an aquarium, staged in a stalactic grotto, will prove a popular addition. Casts of well-known works of sculpture may be placed in suitable positions. In one interesting example the "Cantoria" and "St. George" of Donatello, and some charming child studies after Della Robbia are introduced with telling effect. Provision must also be made for ferneries, rock gardens, grottos with cascades and pools, pergolas and rustic arbours, while treillage is an indispensable addition. Seating accommodation must be provided by means of park seats, lounge-chairs, and ornamental benches, and a small platform suitable for an orchestra, pierrots, and variety turns should never be omitted. A refreshment room on the lines of a pagoda will be found attractive, and ample lavatory accommodation for each sex must not be omitted. The winter gardens should be planned for easy access from the ballroom, to which they may, with advantage, be contiguous. An important point is the maintenance of an equable temperature from floor to roof if condensation is to be successfully eliminated.

The ballroom, in addition to its ordinary purpose, will often be used for exhibition dancing, and ample provision for spectators is a matter of great importance. It is generally advantageous to accommodate the spectators in the balconies and boxes above the level of the dancing floor, reserving the space beneath for the actual participants. The balconies may be arranged between the piers carrying the main building, and planned with circular fronts for obtaining a better view of the whole floor. They should contain two or more tiers of comfortable theatre seats, and behind there should be a promenade, 10 ft. or so in width. Opening off this promenade may be soda-fountains, ice-cream stalls, tobacco kiosks, and buffets, with a licensed bar wherever possible. Under the balconies, and a step up from the dancing floor, should

The ballroom, The Spa, Scarborough.





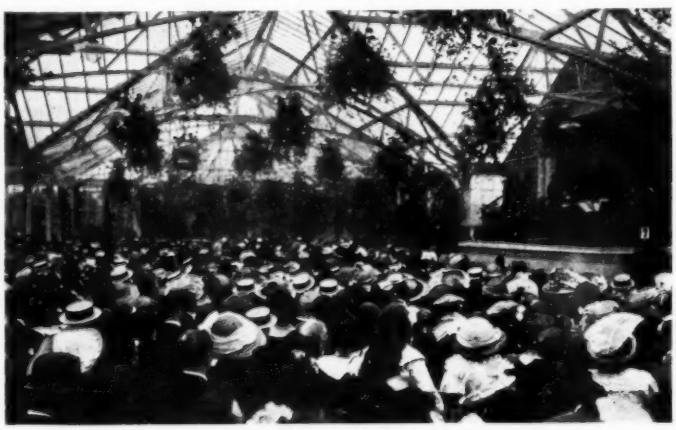
Details of two dancing floors suitable for seaside winter gardens.

be a dais around the walls. This dais should have upholstered seats for the use of dancers during the intervals. Conveniently-placed staircases would connect this dais with the balconies and buffets at the higher level.

A resilient dancing floor is indispensable, and usually some system of springing is adopted. One successful method consists of several lines of steel girders, regulated by the width of the floor, and divided into short, equal lengths by cast-iron fitments supported upon helical steel springs. The girders pivot on two bolts passing through them and the upper part of the fitment, while two lower bolts move in slotted holes to keep the casings vertical as the floor deflects. The end lengths of the girders rest on cast-iron rockers. The timber floor joists are notched round the top flange of the steel girders, and rest loosely on wood plates bolted to the webs of the girders. They are kept upright and in position by a line of herring-bone strutting fixed down the centre of each bay. If the depth of the floor allows, the joists can rest loosely on the top of the steel girder, and thus save expense. The floor covering may be of narrow oak boards having the joints tongued and secret nailed. Parquet flooring is frequently used with fine effect.

The ceiling often takes the form of a circular or elliptical coffered vault, enriched with mouldings and picked out in colour; or a flat top with a coved margin sometimes forms the field for fresco painting. The orchestra should be accommodated on a raised platform placed either at the end of the room or in the centre of one of the longer sides.

When it can be arranged, the best place for the orchestra is in a special gallery or balcony, thus leaving the floor quite free from all projections. Each row of the orchestra staging should be 3 ft. 2 in. wide, with an 8 in. rise to the bottom row, and increasing by 2 in. for each successive row above. The conductor must be so placed as to be visible to the dancers as well as to the musicians.



The Floral Hall, Scarborough, showing the band platform.

Where the ballroom is to be used chiefly at night, fenestration will be of secondary importance, and the windows may be relegated to a clerestory, or a series of roof lunettes may be installed. Where top-roof lighting is adopted, trouble from condensation is frequently encountered. Lavatory accommodation for each sex must be provided. Where exhibition dancing figures in the attractions to any large extent, dressing-rooms, with lavatories adjoining, for each sex, will have to be provided. Occasionally, where troupes of dancers are engaged, these dressing-rooms require a considerable floor area, with cubicles for " star " performers' use. Emergency exits with wide doors opening outwards and fitted with panic bolts should lead into wide corridors having the minimum of bends, and the staircases should have handrails on each side at distances of about 4 ft. 6 in. apart across the width. The standard handrails have two separate rails, so that persons on each side of them, descending at different speeds, will hold a separate rail. The staircases should be contained in outside walls, and should have no curved steps or winders.

The pavilion or concert hall is usually a separate section, entrance to which involves an extra payment. Approached from the general entrance hall, the ticket offices and turnstiles will give admittance to a spacious lounge or vestibule, fitted round with stalls for cigarettes, chocolates, and such-like sundries. Beyond will come the pavilion, entered through wide glass doors or curtained openings. The pavilion is frequently constructed as a floral hall, curved at the end, and with the wall surfaces well broken up to minimize the " echo." Hanging baskets of flowers, ornamental vases and urns on pedestals, sculptured *jardinières*, and a few pieces of appropriate sculpture—Orpheus, Terpsichore, and Pan, for instance—will produce the necessary atmosphere, when seen against a background of architectural treillage work. The seating accommodation will consist of tip-up theatre seats, arranged in segments in the usual way. The central aisle should be not less than 4 ft. 6 in. wide, with side aisles, 10 ft. wide or more, to serve as promenades from which the tea-rooms, lounge, verandas, cloaks, etc., open. The side walls of the pavilion may consist of wide arcades, filled in with glazed partition doors, pivoted to fold back, concertina-fashion, edgeways in the openings, through which access to wide, covered verandas is obtained. These verandas, provided with lounge chairs and garden seats, enable patrons to enjoy a *tete-à-tete* within hearing of the music, and without interruption to the audience intent on the performances. Opening from the pavilion, but also readily accessible from all other parts of the establishment, may be a Japanese tea-garden, with fittings, furniture, and architecture all in character. For the gentlemen's use would be a smoking-room or lounge based on Indian, Persian, or Egyptian *motifs*.

The principal feature in the concert room will be the platform. This should be from 25 ft. to 30 ft. wide towards the room, with the side walls narrowing in towards the back. Where a chorus is included, the staging, having a width of 30 in., and a rise of 15 in., should be arranged in segment form behind band. On each side of the platform, or occasionally below it, will be the retiring-rooms for each sex, with their own lavatories adjoining. Store-rooms for music, and a band-room will also be required. Where an organ is installed the organist should be placed in front of the band and the organ, operated by electric action, should be placed low down at the back of the orchestra.

If the pavilion is to be used entirely for concerts, the floor should have a fall of 1 in 18 towards the front, with the first few rows of seats kept level.

Sometimes, as at Eastbourne, the floor is adapted for the purpose of a roller skating rink as well as concerts, &c. In which cases the floor should be level, and constructed of ordinary wood joists spaced a foot apart. Boarding laid diagonally across the joists is covered with felt or other deadening material, and upon this is laid 1 in. grooved and tongued and secret-nailed maple flooring in 3 in. widths. This maple flooring should follow the direction of the length of the room except at the ends, where they are mitred round for a width of 10 ft. or so to follow the orbit travelled by the skater in negotiating the turn. All heading joints and mitres should be tongued and secret nailed. Ample lavatory accommodation, within easy reach of the pavilion, should be provided for each sex, and planned so that patrons in the lounge and tea-rooms can reach the cloak-rooms without entering the pavilion which they serve. If the pavilion is on an upper floor, or if the opening partition doors in the side walls are omitted, emergency exits similar to those of the ballroom will be necessary. Occasionally a theatre, a picture palace, a billiard-room, or a grill-room will be included in the programme. Mess-rooms and lavatories for the staff, heating chambers, coal and coke stores are also necessary.

PRESENT-DAY BUILDING CONSTRUCTION

BY WILLIAM HARVEY

i: SETTING OUT BRICKWORK

The purpose of these articles is to carry the student one stage beyond the text-book information generally available, and to relate this information to the conditions governing the practice of contemporary building. In order to introduce sufficient variety, the examples will be taken from three different sources in turn. This week the students of the Northern Polytechnic, Holloway Road, are, by permission of Mr. T. P. Bennett, headmaster of the Architectural School, shown at work in the bricklaying shop.

NOTWITHSTANDING the fact that committees meet and determine a standard size for the brick, the brick itself remains slightly irregular, and where artistic effects are to be obtained by means of bricks and mortar joints, this slight irregularity in the unit of the constructional and the artistic scheme becomes a matter of importance. The more interesting the colour and the texture of the brick and the harder it is burnt, the more irregular it is liable to be, and the more costly and wasteful of material and labour it is to trim it to fit a certain pre-arranged spacing of windows and doors on the architect's elevation.

In setting out a brick building, where hard irregular bricks are to be shown on the faces of the wall, the foreman bricklayer arranges a course of bricks dry to try them for size and for positions of "perpends," which should range in straight lines from the ground-level to the summit of the wall. The architect's visit to approve the foundation concrete may be made the opportunity for deciding just where bricks must be cropped and the bond regulated, or else how far windows and doors may be adjusted in width and position to avoid this troublesome process. Several points in modern practice make the bricklayer's work difficult.

Estimates on the basis of a price per cubic foot in the proposed new house generally mean that its over-all dimensions will be rigidly fixed irrespective of brick bond dimensions, and a clause in the contract form, which stipulates that the architect's certificates for payment shall be based upon executed work, and not upon materials on the site, leads a contractor to maintain only a poor supply of bricks stacked at the point where they are wanted.

The appearance of the house is adversely affected, since it is impossible to guarantee that batches of bricks purchased at different times, and in a hand-to-mouth fashion, will carry either the same tint, or texture, or size.

The wall that started as a mottled purple finishes in its upper courses as a bilious orange, as underburnt bricks are made use of to speed up the work.

Where the appearance of the brickwork is an important consideration, it is well to make a special arrangement with the contractor whereby he obtains a good supply of bricks for the whole house, for this permits of accurate samples of size and colour being set out in the first instance and a proper estimate of tone values observed in the colour scheme.

Neglect to obtain large supplies in the first place leaves the bricklayer in a puzzled state every time his stack runs low, and, as likely as not, he will endeavour to save the situation by picking the best-coloured bricks for the front of the house, and using them in the hope that by careful picking over of the next batch he will be able to carry on the scheme, "at any rate in front."

There is something pathetic in this hope against hope, but it leads to an objectionable difference of colour in front and flank of the building in any case and, almost invariably, also to sudden changes of colour at certain horizontal joints in the front itself. Where bricks must be purchased in small batches, the supplies should be arranged to overlap, so that half the old batch is available to mix in the new and preserve the average colour and size throughout the whole composition in all directions, from bottom to top, from front to side, and side to back. As long as the bricks are thoroughly mixed up, their different colours, textures, and sizes may improve the appearance of the building by giving life to its surfaces, but sudden stops and starts of different colours can only look patchy.

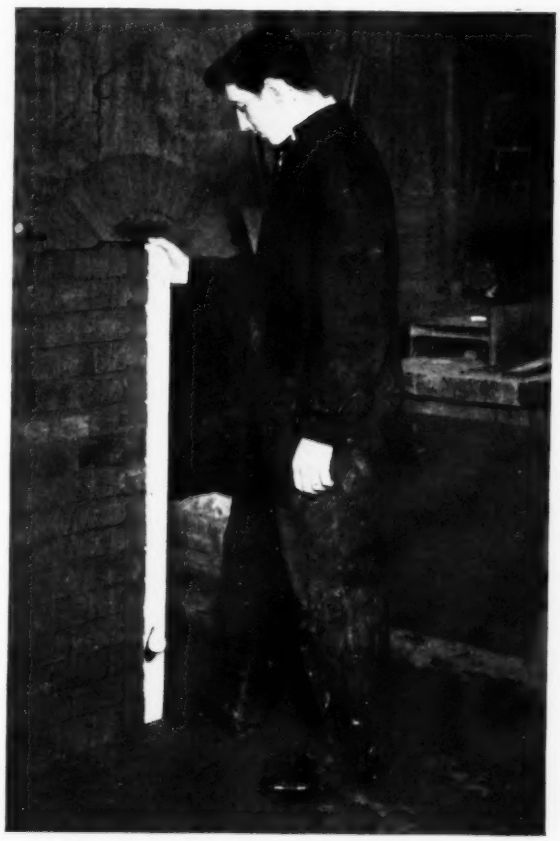


Figure one. Applying the plumb-rule to ensure that the end of the wall is being built in a vertical plane. Both hand and foot are used in keeping the plumb-rule pressed against the work.

When the bricks are being set out to determine what width of vertical joint can be given most reasonably, the colour of the joint should also be settled; and this can best be arranged by experiment on the site.

The size of the joint, the colour of the mortar, its texture, and the depth to which it is recessed behind the edge of the brick, all count as factors in the colour effect of the wall as a whole.

This is particularly important in regard to distant views, when the joints will not necessarily tell out as separate details interestingly contrasted with the bricks, and the colour of brick and mortar taken together as a mixture has to be accepted for what it is worth. Samples of brickwork set up in position will assemble all these factors in the most practical manner and permit of the architect making his decisions in the light of real knowledge of the results he may hope to obtain.

Tradition may help very greatly in these matters, and

Figure two (left). The bricklayer's line is used in conjunction with the plumb-rule for the purpose of keeping the brickwork in plane vertical surfaces. Other factors in the production of plane surfaces are the porosity of the bricks and the composition of the mortar. Figure three (right). Trying the brick in position is a necessary preliminary to bedding it. Although every precaution has been taken to set out the brick geometrically in accordance with the full-size diagram, its actual appearance in the work is the real test.

where existing houses have achieved excellent effects with bricks and mortar joints of recognizable quality, the same processes may be repeated with some assurance of success.

Tradition lies at the basis of the teaching of bricklaying in craft schools, and the joints of lime and sand shown in course of production in figure 1 are purposely made upon a very ordinary plan. The mysteries of line and level are being mastered by the student and the questions of colour arrangements of brick and jointing have hardly come into his calculations at this stage. The more practical, or rather the more constructional aspects are considered first, for even in a well-equipped school like the Northern Polytechnic at Holloway, the supply of bricks would not permit of each student beginning with bright new untouched specimens. The first thing is to learn how to put up a wall that might reasonably be expected to stand in practice, and bedding, bonding, keeping level, and keeping plumb, have been dealt with very faithfully. The photograph shows the stopped end of the wall being tested with the plumb-rule to ensure that the work is being carried out in true vertical planes. The woodwork of the rule is held with one of its straight edges in contact with the brickwork, the student's right hand and foot maintaining it in position. The top is then very slightly tilted forward until the leaden weight swings out of the hole at the foot of the rule. Any inclination of the lead bob to one side or the other would show that the work was out of the perpendicular. A battering surface is tested by the simple expedient of affixing a template cut to the required batter to the testing edge of the plumb-rule. The template is then pressed against the work, and the plummet should still hang just in front of its groove. The joints have been kept regular also, though it is impossible to judge quite satisfactorily of their neatness and their effect since the old mortar smears left by former students upon the reused bricks merge the colours of brick and mortar together. Figure 2 shows a brick being tapped down into its final position on its bed of lime and sand mortar, with the handle of the trowel.

The extra difficulty occasioned by having to pose for the photograph to be focused has given time for part of the mortar bed to creep over the edge of the bricks in the course below; a thing to guard against in the actual erection of face-work, where the prevention of smears on the bricks is, artistically considered, a matter of importance. The perpends are intentionally out of position in posing the brick which will be pressed to the left, as well as tapped down on to its bed, in order that the vertical as well as the horizontal joint shall be thoroughly flushed up with mortar.

The different appearance presented by a joint which has been merely left flush with the surface of the brickwork and those with weather-struck edges is clearly illustrated in the photograph.

The weather-resisting properties of the "struck" joint are, possibly, superior, but a great number of architects are returning to the use of plain flush joints somewhat resembling the unfinished bed joint of the brick immediately below the student's right hand. The object is, of course, an artistic one, since the flush joint does not emphasize the long almost straight lines and occasional slight irregularities presented by the bottom edges of the bricks.

The flush joint, which carries the colour of the mortar into every chipped corner of every brick, does not maintain anything like so hard and "wirey" a line, and keeps the average tone of the whole wall lighter by avoiding the creation of the shadow of the brick edge on the mortar joint. This lightening of the average tone of the wall may, or may not, be an advantage according to the size and colour of the brick and the size of the joint. Only a very deep purple brick of the richest description can stand a wide white joint, and where bricks of lighter reds are habitually bedded in white mortar the size of the joint is reduced to a minimum.

Figure 3 shows an arch in red rubbers set in fine joints of lime putty in course of construction. The newly-shaped brick is being

Figure four (left). Producing an absolutely true and flat bed by rubbing the brick on a stone after it has been cut approximately to shape by the brick-saw in the brick-cutting box. Figure five (right). The processes of marking the shapes upon the bricks are more lengthy and complicated than the architect would imagine. From the full-size drawing straight-edged and wedge-shaped wooden templates are made for use in the brick-cutting box or for scribing the outlines upon the faces of the bricks.

tried in position on the rigid timber centre. The manner of holding the brick so that its friable edges are not crumbled, should be noted. An earlier stage in the work is illustrated in figure 4, where the brick is being rubbed down to its wedge-shape upon a rubbing stone. Here again the handling of the brick is important, and great care must be exercised to keep the edges from crumbling under the fingers and to keep the brick fairly applied to the stone surface. The slightest rocking movementwould produce rounded surfaces and defeat the whole object for which rubbers are employed—the production of a wall with extremely fine joints.

Figure 5 shows the setting out of another arch in which cut bricks are to form the voussoirs. The elevation of the arch has been drawn full size on paper and the student determines the amount of taper on each brick and, consequently, the amount of material to be pared from its beds by working with straight edges on the full-sized diagram.

When the lines have been marked upon the brick, the excess of material is cut away by chipping with the wide bolster and club hammer seen on the bench in figure 6. Minor roughnesses are then removed with the scutch, handled as shown in the photograph.

Instead of using either bolster or scutch, the softest makes of rubbers are sawn to shape with a brick saw. This is an instrument with a wooden frame resembling that of a carpenter's frame-saw provided with a blade formed of two steel wires twisted together.

The saw is used with both hands and the brick is kept in position in a brick-cutting box. This is a frame made of hard wood or cast iron with an adjustable bottom for raising and lowering the brick so that its upper surface is presented at the correct angle to the cutting action of the saw as it is worked to and fro across and along the edges of the vertical sides of the box.

Figure six. Using the scutch. The brick is held with the left hand, and the plank supporting it is being kept steady with the left foot.

To cut a brick into a wedge-shaped voussoir the adjustable bottom of the box is raised more at one end than the other, the exact angle being governed and tested by means of wedge-shaped setting-out strips of wood. The great thing in a brick-cutting box is to have the upper edges of the vertical sides absolutely level, hard and smooth. Once they are worn in the middle of their length they no longer act as correct guides for the saw blade.

With arches in gauged or rubbed work it is of course necessary to employ a temporary centre, upon which to keep the voussoirs in position until the putty has set hard, and such arches of soft bricks are not usually expected to bear any very great load. With arches formed of hard bricks set in moderately wide joints of rich cement mortar, it is sometimes thought advisable to use a centre which may be lowered slightly in order that the green work may compress its mortar joints and settle without producing unsightly cracks by doing so after the whole building has been completed. The ingenious use of a centre made of two stout wires permits of a certain amount of elasticity in the curve of the arch and also considerably reduces the cost of the temporary centre.

CORRESPONDENCE

THE TROUBLES OF THE PAINTERS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—In your very interesting leading article of February 3 on "The Troubles of the Painter," it is taken that social service should be the primary consideration in a man's work. But this surely depends on a man's philosophy of life, and cannot be taken apart from it. As a case in point, the painter and sculptor who merely regard their art as a means of self-expression are contrasted with the architect who looks on his work, it is said, as social service. Is it social service which is making such havoc in London, one is tempted to ask, or is that a case of suppression in the interests of finance? If social service is not founded on something held to be absolute it may mean even less than the most self-indulgent attitude to work, which, at any rate, does imply personal responsibility. Painters and sculptors can, no doubt, be justly blamed in many ways, including the habit of looking upon themselves as "privileged persons"—an attitude fostered by schools of art as by an industrial civilization (which looks on art as a trimming instead of the concern of all making). It is stated that "reason conquers," but it has no chance of doing so without goodwill, and *that* surely is the chief trouble, not only of the painters, but of modern civilization as a whole.

P. A. L. E.

A POINT IN PLANNING

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—"William in the Country" remains unrepentant. His pseudonym was not adopted in order to attack, under cover, anyone, but in the interests of impersonality in criticism. The other "William" is too Pontifical. Artisans' cottages were not in question. Mr. Harvey's opinions as to the planning of these in regard to water-closets are "William in the Country's" very own. The houses of Masters of Arts and the like were more in mind. It was desired to emphasize the undesirability of making a "parade hall," be the "parade" never so modest, and then spoiling it by sticking a water-closet into the foreground of the picture. This has been done too often, as plan after plan published shows.

WILLIAM IN THE COUNTRY

LINO ON A CONCRETE FLOOR

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Subscriber's query, published in your issue for January 20, G. N. Kent's letter in February 17, and the further remarks in your issue for February 24 are interesting. Your querist should have given the work to a firm specializing in linoleum floor-coverings. Any reputable firm doing that class of work would have made it clear that a new cement floor, even if it appeared dusty, was not fit to cover with linoleum unless special methods were adopted. To lay linoleum successfully on cement is specialists' work. Their price will generally be more than if the work is done by casual fitters supplied by linoleum manufacturers, but my experience is that any extra sum so paid will be recouped over and over again. The job does not go wrong in a year or so, and everyone is satisfied. G. N. Kent rightly says that casein is generally used for sticking linoleum to cement. The mention of linoleum ¼ in. thick is probably an error. For institution work 4 mm. or 5 mm. thickness is ample. It is not necessary to specify any particular make nowadays, as one is as good as another, but seasoned goods that are actually in stock should be insisted upon even if the shade of colour is not exactly what one had in mind. Good firms do not mind showing their actual stock to bona-fide inquirers if they know the proposed work is likely to come their way, and cuttings can be taken for microscopical examination and testing. Other things being equal, choose linoleum with a painted back. Of course, if the job requires less than 100 sq. yd. the matter is not of great moment, and it might pay to have a very cheap quality laid while floors dry out.

"X"

THE A.A.S.T.A. EMPLOYMENT BUREAU

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Kindly permit me through the medium of your columns to call the attention of your Northern readers to the employment bureau of this Divisional Council.

Divisional Council No. 1 operates for the members of this Association within the counties of Lancashire, Cheshire, Cumberland, and Westmorland, in the West Riding of Yorkshire, and in North Wales, and the employment bureau maintains a register of all classes of architects, surveyors, and technical assistants in the building industry who seek appointments as assistants within that area. Its services are available, free of charge, to practising architects and surveyors and building contractors who may require such assistants.

Particulars of any appointment will be immediately despatched by the hon. secretary of the bureau to those registered who may be qualified for candidature upon receipt by him of the appropriate information.

HUBERT A. HESKETH

(Hon. Secretary, Employment Bureau, Divisional Council No. 1, Association of Architects, Surveyors and Technical Assistants.)

OBITUARY

The death occurred last week of Mr. Henry Leslie Paterson, F.R.I.B.A., of 65 Clarendon Road, Sheffield, one of the best-known architects of the City. He was in practice in St. James's Street.

Mr. Paterson was the son of the late Mr. Alexander Paterson, for many years editor of the *Barnsley Chronicle*. He was born at Stockton-on-Tees. Educated at Barnsley Grammar School, he was later articled to Mr. W. Senior, of Barnsley.

From 1881 until 1891 he was assistant to various architects in London. He was admitted an Associate of the Royal Institute of British Architects in 1887.

He came to Sheffield in 1891, and practised for a year alone, but later went into partnership with Mr. W. F. Hemsoll, of Sheffield. In 1903 the partnership was dissolved, and Mr. Paterson continued on his own account.

His competition successes with his partner included the Woofindin Convalescent Home, Sheffield, erected at a cost of £20,000, and several blocks of Council schools, including Morley Street and Upperthorpe.

After the dissolution of the partnership he was responsible for the conception of Walkley Free Library, Sheffield, several blocks of Council schools, and private residences.

Mr. Paterson specialized in the designing of cottages of the garden city type in Sheffield and at Letchworth. He won the gold medal in the cheapest cottage class at Sheffield Model Cottage Exhibition. He designed a row of five shillings a week cottages erected by the City Council at High Wincobank, and another row was afterwards built.

Among his more important works of recent years were the central store of the Sheffield and Ecclesall Co-operative Society, the Don Picture Palace, as well as shops and factories.

Mr. Paterson was a member of the Council of the Sheffield Society of Architects and Surveyors on which he had served since 1902, and he had almost completed two years as president of the Society. He was also a member of the Council of the R.I.B.A.

He acted as hon. lecturer on several occasions in the architectural department of Sheffield University.

In 1915 he lost his second son, aged twenty-one, Private Henry Franklin Paterson, of the H.A.C., who was killed while with a line of Grenadiers engaged in retaking a trench in Flanders.

Mr. Paterson was a brother of Dr. H. G. Paterson, of Machon Bank, Sheffield.

LITERATURE

A GERMAN HOUSING SCHEME

In our admiration for the domestic architecture of Sweden and the big coloured blocks of flats, we must not neglect the rather similar work to the south of the Baltic. The Ostmark of Germany before the war contained all those cities whose arms are enblazoned on the bay of a house shown in the frontispiece, but now that they are no longer in Germany it remains for Frankfort on the Oder to make itself worthy to be the chief city of the Ostmark, and the chief railway centre of Eastern Germany. This book is a full and admirably illustrated account of the efforts which its architect, Herr Kiessling, has made to house the new colony of railway officials, in a manner which will add dignity to the railway and to the city, give a lead for future development, and mask the worst faults of the last half century. Wisely, the city and the railway management gave their architect, who had done several schemes of housing for railways in the Rhineland, a fairly free hand, and he came humbly to view, from a carriage behind a quiet little "temperamentless" horse, the lovely and dignified old town above the river, with its tall gabled Medieval houses, with their Barock fronts, the partly built-over girdle of green, where the old fortifications had been, the crudity of the later developments, and the background of wooded hills.

There were seven hundred families to house, and of these, three hundred elected to live in a garden suburb, which was laid out on a kite-shaped piece of ground, the axis leading up between two stone boys on gateposts to a gatehouse higher up the hill, in the centre of a bowed cross-road, and on again up to meet the main cross axis by a pond, made from an old clay pit. The houses are of different sizes, the small cottages being generally on the roads which mount up the hill, or swing round in very pleasant ring streets, the larger ones being in the more central positions. The custom of building in rows allows of great dignity in the architectural treatment. The scheme which was evidently closest to the author's heart was a group of houses in one of the prettiest bits of the old fortifications, where they were threaded by a stream —already menaced by speculative building.

The very irregular site is reduced to an appearance of symmetry by a court-like arrangement, through which one is led on by a brightly emblazoned bay up the curve of the main street, the long line of buildings there masking the backs of speculative flats. All the new houses are covered with coloured plaster. In the garden suburb and the "Green Way" the colour is restrained, but more striking in the town, where it has to hold its own with the older and much decorated houses and villas. The colouring is admirably controlled, and used to accentuate shape and distance with great skill. The other groups are in various open spaces—one along a road in an area of villadom—one forms a great block of flats, which cleverly reconciles the planning of the huge existing school and gymnasium, with the road running at an angle to them; another by focusing the attention on to brilliantly-coloured features, gives architectural expression to a whirl of meeting streets, linking up the old and new town, and masking the railway workshops. The houses of the directors and senior

The entrance to the garden suburb. (From Ostmark Bauten-Stadtebau in Einer Mittelstadt.)

Dantzig Street and Gatehouse. (From Ostmark Bauten - Stadtebau in Einer Mittelstadt.)

officials form a daintily balanced group at the end of a long pleasure garden.

The houses are, in the main, designed with simplicity and dignity, and the small stone decorative motifs sculptured with force and charm by Lemke and Kupsch. Specially neat and sharp are the fanlights over doorways, often enclosing lamps. Apart from the absorbing care in adjusting the relations of buildings—the author describes how he cudgelled his brains to solve the problems of these adjustments—the outstanding thing about all these houses is, of course, the colouring, and this is well shown by colour plates of nearly all the groups. While grey and white or dark grey is the usual colour for the majority of the houses, all the more important groups are done in clear and pleasant colours, and the window frames and shutters are well thought out. Several architectural features are accentuated with strong colour. The rendering is done in two coats—one of hydraulic lime and cement in equal parts—then a second coat of white lime, sharp sand, and crushed sandstone. While this coat is damp it is scraped over with a steel trowel, giving a peculiar rough texture. Where colour is wanted this top coat is mixed with an earth colour. The decorations of heraldry, and the eagles in the vault of the archway are done in a modified form of sgraffiti, the colouring being in two layers and covered in places with a weather-resisting paint. The fault is that the colouring is not fast, but fades a little—though not unpleasantly. Green goes off to grey, and, to modify this, the undercoat is covered with a wash of mineral green before the top coat is applied. The author realizes the danger of colouring under the influence of Romantic silliness ("romantische gefühlsduselein"), but under his control and direction it is a gay and splendid servant, and suggests admirable possibilities. H. C. HUGHES

Ostmark Bauten-Stadtebau in Einer Mittelstadt, by Martin Kiessling Julius Hoffmann. Stuttgart, 1925.

THE ART OF DRAWING IN LEAD PENCIL

This is an excellent work, and the various problems relative to the art are dealt with both clearly and comprehensively, and can be readily grasped by the student. Apart from the primary intention to assert the claim of an only partially appreciated and exploited medium, the book is suggestive and helpful in stimulating ideas, and will specially appeal to those who already recognize the possibilities of black and white for the expression of colour in an abstract and intellectual sense. The permanency of the value of "form" in comparison with that more illusionary and sensuous nature of colour, however, is well explained. "Form," as he puts it, "goes straight to the centre of mental judgment—being vital and the other necessary to our well-being." This opinion is well reinforced by Shopenhauer in his *Metaphysics of Fine Art*, where he asserts this apprehension, a matter of intuitive understanding significant of a "noble and elevated taste." The abstract sense of colour "conveyed by the conscious mind," as differentiated from that "conveyed through the visual sense," is also aptly compared to the emotional stimulus derived in a literary composition through the use of similies and the arrangement of metre and rhythm which create a sensation of colour. The illustrations to demonstrate the various points are well selected, though one might prefer more work to denote the virility as the delicacy of pencil work. On the whole, there is little in the book that is not of a really sound and practical nature.

The Art of Drawing in Lead Pencil. By JASPER SALWEY. London: Batsford. Second edition. Price 12s. 6d. net.

PUBLICATIONS RECEIVED

Paradise in Piccadilly, by Harry Furniss. The Bodley Head 12s. 6d.

London's Lost Theatres of the Nineteenth Century, by Erroll Sherson. The Bodley Head. 18s.

SOCIETIES AND INSTITUTIONS

Students' Evening at the R.I.B.A.

A students' evening was held recently in the galleries of the R.I.B.A., where the architects' working drawings of the following buildings were exhibited : Devonshire House, a house at Hampstead Garden Suburb, building for Courtaulds, Ltd., kindly lent by Mr. Thomas Hastings and Professor C. H. Reilly, Messrs. Hennell and James, and Mr. L. Sylvester Sullivan respectively. About ninety students attended, and Professor C. H. Reilly assisted by Mr. J. Eaton, Mr. C. H. James, and Mr. L. Sylvester Sullivan assisted by Mr. Robert Edwards, explained the special points of interest in the respective buildings.

The Edinburgh A.A.

At the eighth meeting of the Associate Section of the Edinburgh Architectural Association, with Mr. J. C. Cunningham in the chair, Mr. A. M. Murray, of Glasgow, constructional engineer, lectured on cements, ancient and modern. The lecturer gave a history of the manufacture of cements from Roman times to the present day, and showed how much we were indebted to Smeaton, the builder of lighthouses, to Aspdin, and their contemporaries. The methods used by these men in the early part of last century were similar to a great extent, though crude, to the modern highly efficient processes. After the lecturer had described how cement was manufactured in a modern plant, and how it was tested by chemists at various stages of its manufacture, and had given a brief description of some of the lesser known cements, a film was shown entitled : "The Concrete Age from Roman Times Onwards."

York Architects at Dinner

The annual dinner of the York and East Riding Architectural Society took place at York. Major J. Malcolm Dossor, president of the Society, presided, and among those present were Mr. E. Guy Dawber (president of the R.I.B.A.), Mr. H. L. Paterson (president of the Sheffield and South Yorkshire Architectural Society), and Mr. T. Butler Wilson (Leeds and West Yorkshire Architectural Society). Mr. S. Wilkinson proposed "The Royal Institute of Architectural Societies," and Mr. Guy Dawber, in reply, said he did not think there was a living architect who would be called upon to build a Harewood, a Castle Howard, or a Blenheim. Those days were passed, and they could attribute the cause, as much as anything, to the advent of the motor-car, which had changed the social life not only in this country, but all over the world. As a result of the change the great examples of modern architecture were confined to the public and commercial buildings in the towns and cities. In London, at any rate, there was the need for some controlling hand and some artistic authority to prevent the disfigurement of fine sites by absolutely inappropriate buildings. Mr. H. L. Paterson gave the toast of "The York and East Riding Society," and referred to the architectural beauties of York and the East Riding, both of which could, he said, show to them some of the best architecture, not only in the North of England, but in the country. The president responded, and said he was delighted to hear that Mr. Guy Dawber had entered upon, or was about to enter upon, a vigorous campaign to arrest the spoliation of their countryside. There was scarcely a suburb in a rural district, he said, which was not being robbed of its natural beauties by the erection of buildings of most unsuitable materials and design, and without any consideration of layout. That was, of course, largely due to the terrible shortage of dwellings and the scarcity of materials and skilled labour, but much could be done by the education of public opinion by the employment of trained and competent architects, and by the wise use of the extensive powers granted to local authorities and property owners by the recent Town-Planning Acts, in seeing that the countryside was developed in accordance with its natural beauties. There was a great work to be done in that direction and in preventing the vandalism that was going on at the present time.

Cardiff School of Architecture

Professor Leslie Wilkinson, F.R.I.B.A., who is in charge of the School of Architecture of the University of Sydney, New South Wales, is visiting a number of the leading schools of architecture in Great Britain. During his visit to the School of Architecture in the Technical College, Cardiff, he inspected a representative collection of designs, measured drawings, sketches, etc., prepared in the school, and gave an inspiring address to the students. After congratulating the students on their work, and on their good fortune in studying in a school with such a fine architectural setting, Professor Wilkinson drew attention to the great importance of sketching and measuring, strongly advising the students to avail themselves of local opportunities during term time, and to visit other centres of architectural interest during vacations. A hearty vote of thanks was proposed to Professor Wilkinson by the head of the department (Mr. W. S. Purchon, M.A., A.R.I.B.A.).

It is becoming more and more common for architects' staffs to arrange social functions—dinners, dances, cricket matches, and such-like—for the benefit of members past and present. In old-established offices the number of assistants who have come and gone is often very considerable, and one of the chief objects of this kind of reunion is to regain contact with as many as possible of these. The Editor of THE ARCHITECTS' JOURNAL *will be happy to publish the dates of the more important of these functions in the list of arrangements which appears weekly at the foot of the "News and Topics." Particulars should be addressed to him at 9 Queen Anne's Gate, Westminster, S.W.1.*

THE BUILDING EXHIBITION

The Lord Mayor, accompanied by the Sheriffs, will open in state the Building Exhibition at Olympia on April 14 at twelve o'clock. Mr. E. Guy Dawber, president of the R.I.B.A., will preside at the ceremony, and a vote of thanks to the Lord Mayor will be proposed by Sir Kingsley Wood, M.P., Parliamentary Secretary to the Ministry of Health. The exhibition will remain open till April 28. A prize of £100 will be given by the promoters for the best essay on "My Impressions of the Building Exhibition, 1926." This competition will be open to all bonafide architectural and building students in the United Kingdom who are connected with a trade school, polytechnic, or university. The judges will be Mr. E. Guy Dawber, president of The Royal Institute of British Architects, Mr. H. S. Goodhart-Rendel, president of The Architectural Association, and Mr. J. C. Squire, president of The Architecture Club.

R.A. CLOSING DATES

All works intended for the annual exhibition of the Royal Academy must be punctually sent there on one of the days fixed for their reception. These days this year will be : Water-colours, pastels, miniatures, black and white drawings, engravings, and architectural drawings, Friday, March 26; oil paintings, Saturday, March 27, and Monday, March 29; sculpture, Tuesday, March 30. Hours for the reception of works, 8 a.m. to 10 p.m., except Saturday, March 27, 8 a.m. to 2 p.m. No work will under any circumstances be received before or after these specified dates. All works must be delivered at the Burlington Gardens entrance. None will be received at Piccadilly entrance. All works sent from the country or from abroad must be consigned to an agent in London for delivery at the Academy, unpacked, on one of the appointed days. No works in cases will be received; nor will the expenses of carriage be defrayed by the Academy. The attention of foreign artists and of English artists residing in the country and abroad is especially called to this regulation. Forms and labels can be procured (during the month of March only) from the Academy. Applications for them made by letter must be accompanied by a stamped and addressed envelope for their enclosure. The exhibition opens on May 3 and closes on August 7.

THE WEEK'S BUILDING NEWS

A New Club-house for Eltham

Eltham Conservatives are to erect a new £8,000 club-house.

Electricity Extension at West Ham

About £76,000 is to be spent on West Ham's electricity extension mains and plant.

Road Repairs at Kensington

Kensington is spending nearly £10,000 on road repair relief schemes.

A Mission for the East End

A mission for Norwegian seamen is to be erected at Rotherhithe.

A New Hospital for Margate

A new general hospital is to be built at Margate; £50,000 is to be raised.

A Village Hall for Keston

The Keston Parish Council proposes to erect a village hall on Keston Common.

An Elementary School for Stratford

It is proposed to build an elementary school, costing £33,000, at Stratford.

A Police Court for Grays

A new police court is to be built at Grays (Essex) at a cost of £26,000.

L.C.C. Housing Scheme for Spitalfields

Dwellings costing £39,000 are to be erected by the L.C.C. at Spitalfields.

Church Extensions at Bristol

In the Bristol Diocese it is proposed to spend £200,000 on church extensions.

Housing at Perth

Eighty-four houses are to be erected by the Perth Corporation at Pitheavlis.

Electricity Extensions at Stepney

£4,859 is to be spent on municipal electricity extensions at Stepney.

Improvements to a Motor Park

Improvements are to be made at Kingston's new motor park at a cost of £2,200.

Housing at Foleshill

Plans for forty-six houses in Willenhall Lane, Binley, and twenty-six other houses have been approved at Foleshill.

East Stow Housing

The East Stow Rural District Council has decided to build fourteen houses at Combs, and six at Creeting or Haughley.

Docks Enlargement at Southampton

It has been decided to proceed with enlargements of the Southern Railway Company's docks at Southampton.

New Schools Proposed at Finchley

The Finchley Education Committee has recommended the building of two new schools during the coming three years.

A Housing Site for Stepney

The Stepney Guardians propose to sell a housing site in Vallance Road to the local council for £16,000.

Housing at Heston-Isleworth

The Heston-Isleworth Urban District Council has passed plans for sixty-nine houses.

A New Girls' School for West Ham

An open-air school for eighty girls at West Ham has been proposed, to be erected at a cost of £14,000.

Three Hundred Houses for Rotherham

The Rotherham Rural District Council has obtained sanction for the erection of 310 houses.

The Condition of Ruislip Church

Efforts are being made to save Ruislip Parish Church, which is in a state of decay. Over £2,000 is needed.

Housing at Eltham

The Woolwich Borough Council is erecting another 51 houses at Eltham, at a cost of £31,314.

More Houses for Trowbridge

Plans for the erection of an additional thirty-eight houses at Trowbridge have been recommended for approval.

Birmingham Town Hall

It is expected that a start will be made upon the work in connection with the Birmingham Town Hall interior reconstruction scheme within the next month.

A Proposed School at Salford

The Salford Education Committee recommend the purchase of a site for a new elementary school for the Lower Kersal area.

Road-reconstruction at Dunfermline

The Dunfermline District Committee has authorized the reconstruction of the Dunfermline-Halbeath road at an estimated cost of £20,000.

A Dance Hall in the Strand

A new underground dance hall and restaurant is shortly to be constructed, at a cost of over £30,000, underneath the Tivoli Theatre in the Strand.

Flats in Holborn

The Holborn Borough Council proposes to build a five-story block of tenements in Betterton Street, W.C., at a cost of about £10,000.

A Big Leeds Scheme Approved

The Leeds City Council has approved of plans for a big street improvement scheme which, it is estimated, will cost over £500,000.

The Completion of an Ilkley Scheme

The Ilkley Urban District Council proposes to complete the Leeds Road housing scheme by the erection of an additional forty-eight houses.

New Buildings for Paddington

The Paddington Borough Council has proposed a scheme for building a new library and public hall at Porchester Road at a cost of £90,000.

A New Nottinghamshire Mining Village

Bricklayers are stated to be laying 70,000 bricks a day—about 777 per man—at the new mining village at Langold, near Worksop, Nottinghamshire.

Building Schemes at Wakefield

The Wakefield City Council has had provisional plans prepared for the proposed new bridge over the River Calder. The cost is estimated at £100,000.

Chelsea Embankment Improvements

The Ministry of Transport has decided to recognize Chelsea Embankment as a first-class road, and will contribute half the cost of relaying the famous drive in concrete. The work is to start immediately.

Housing at Tooting

The Wandsworth Borough Council has adopted a recommendation from the Housing Committee to erect fourteen self-contained flats at Blackshaw Road, Tooting, at a cost of £11,072.

Scarborough Harbour Improvement Scheme

The Scarborough Harbour Commissioners have obtained permission to build a wharf 500 ft. long at the north side of the harbour. This will be part of the harbour improvement scheme, costing £45,000.

Bristol Museum Extensions

The offer of Sir George A. Wills to provide for an extension of the Bristol Museum and Art Gallery, at a cost not exceeding £75,000, has been accepted "with intense gratification."

Land for Church Buildings

The Liverpool Housing Committee has recommended the sale of 4,125 sq. yd. of land at the corner of Queen's Drive and Atheldane Road to the trustees of the Crescent Congregational Church, for the erection of a church and rectory.

LAW REPORTS

PLANS DIFFERING: A CURIOUS POINT

Ecclesiastical Commissioners v. *Palmer and others. King's Bench Division. Before Mr. Justice Wright*

This was an action by the Ecclesiastical Commissioners against H. A. W. Palmer and certain executors of a testator named Ridley, acting for tenants, to recover possession of a fodder store and a piece of land about 10 ft. by 50 ft., adjoining 9 Ayliffe Street, St. Mary Newington, S.E., which Mr. Ridley had apparently acquired by a purchase of property in Harper Street.

Mr. Clauson, K.C., appeared for the plaintiffs, and Mr. E. Charles, K.C., for the defendants.

Mr. Clauson said in this case the testator in 1891 undoubtedly acquired from Theobald's Estate a building lease, and the value of the property was represented by a £30 rental. Here a ninety-nine years' lease was granted in 1824 to a person named Brittain, and his case was that it included this property. A dispute also arose as to the boundary line. His clients said it was the middle of an old sewer, but there was a question as to where the sewer was. Theobald's Estate came down on one side, but at first neither party built on boggy land neighbouring the sewer. At a time which nobody could fix, wooden supports were clamped to certain walls and made to support the floor of a first story, and so the fodder store came into existence. A house window looked into it. The Dean and Chapter of Canterbury Cathedral went back to pre-Reformation times—to 1511—for their first document of title, which he produced. Here it was apparent that a fifth of the store was on the Harper Street site, and four-fifths on the Dean and Chapter's, and at some time the occupant of 9 Ayliffe Street must have allowed an occupant of 34 Harper Street to use the open space upon which the window looked, nobody thinking of the Dean and Chapter. When two men had made an arrangement, and there was twelve years' possession, the law would ratify it, except where there was a freeholder in the background and a ninety-nine years' lease, requiring everything to be handed back that was granted. Mr. Ridley had undoubtedly bought at auction on particulars and title given, and it was his bad luck that the adjoining occupier happened to be a leaseholder and not a freeholder.

Mr. Charles pointed out that the plan on which Mr. Ridley bought at auction in 1891 referred for title to the lease of some eighty years previously, and this early lease contained the portion of land in dispute, with a print of a plan for a lease of a still earlier date, viz. 1793.

His lordship, after hearing long, legal arguments, found in favour of the plaintiffs, and gave them possession with costs. He accepted the plans put forward by the plaintiffs. The defendants' conveyance certainly included all the fodder store. It was clear that the defendants purchased from vendors who held under a building lease of 1811, but when one had found the starting-point for the defined measurements, and found the course of the old sewer to be on the line plaintiffs had opened up, the rest followed. The figures could be made to fit, and there was a series of coincidences in other maps and check measurements. The plaintiffs' lease of 1824 to Joseph Brittain included the site of the disputed store. The defendants urged that the plaintiffs were following the wrong line of drain, and said the common sewer was 10 ft. wide, but he found no evidence that such was the case. There would be judgment for the Commissioners with costs.

HOUSING SUBSIDY: CLAIM TO SHARE

Park & Co., Ltd. v. *Stanford. King's Bench Division. Before Mr. Justice Wright*

This was an action by a firm of builders of Southsea against the defendant, of Southborne, Sussex, to recover the sum of £130, being half the subsidy received by the defendant in respect of a house and shop built by them for the defendant in 1921-22 on an estate at Southborne, which the plaintiffs were developing.

Mr. Hilbery, for plaintiffs, said his case was that the defendant agreed to purchase a plot upon the estate, and later instructed them to build the house and shop. The parties were then uncertain whether the subsidy could be obtained, and it was agreed at an interview that if it were forthcoming it should be shared equally.

For the defendant it was denied that he ever promised to share the subsidy, and that when, in February, 1922, the price he was to pay for both properties was settled at £1,470, no mention was made of the subsidy.

His lordship, in giving judgment for plaintiffs for the amount claimed, with costs, found that there was a definite agreement to share the subsidy on the house and shop.

OVERHANGING EAVES AND WATER PIPES

Gill v. *Bates. King's Bench Divisional Court. Before Lords Justices Scrutton and Sargant*

This case came before the Court in an appeal by the defendant, Mr. H. P. Bates, from an injunction granted by Judge Crawford, of the Watford County Court, to the plaintiff, Mr. H. E. Gill, to restrain a trespass by overhanging eaves and waterpipes on a house built by the appellant in Vaughan Road, Harrow, adjoining plaintiff's land. The County Court judge also awarded plaintiff £20 damages, and dismissed a counter-claim by the appellant alleging trespass in respect of a shed by the plaintiff.

Mr. Elkin, for the appellant, said the respondent began the erection of the building for the appellant on the understanding that the frontage was to be 12 ft., or thereabouts. A disagreement took place between the parties, and another builder finished the work. Judge Crawford tried the action between the parties, and found that the guttering did overhang plaintiff's land. The appellant's case was that the respondent knew the plans, and, assisting to build, he waived any rights he had.

The parties during the hearing of the case arrived at terms, appellant conceding the point as to the guttering, and respondent agreeing to give appellant some land to enable him to complete some offices at the rear.

The Court in dealing with the costs, ordered the costs below to stand as ordered by Judge Crawford, with no costs of the appeal.

DAMAGE TO HEDGE AND QUESTION OF PRIVATE ROAD

Fletcher v. *Bothway. Chancery Division. Before Mr. Justice Romer*

In this action Major Leslie Fletcher, of Ashwellthorpe Hall, Ashwellthorpe, Norfolk, sought an injunction against Mr. Harry Bothway, of the Hall Farm, Ashwellthorpe, to restrain him from interfering with the hedge on the east side of Long Meadow, and damages for cutting it down. Defendant contended that this was a party hedge, and he cut it down to preserve it. As to the plaintiff's complaint of trespass by defendant on Walnut Meadow, and the use of a private road in front of the Hall for vehicles, it was stated that the defendant had consented to judgment "for the sake of peace and quietness."

Sir Thomas Hughes, K.C., argued the case for the plaintiff, and Mr. Manning, K.C., for the defendant.

For the defence evidence was given that an old hedge should be cut down to the ground, because it was useless to preserve it, and a new hedge planted. This view was in opposition to that of the plaintiff's witnesses.

His lordship, giving judgment, said that in Norfolk, and it might be in other parts of the country, it was considered that the best way to renew a hedge was to cut it down and to plant fresh sprigs among the stubs. It appealed to him as a sensible thing that it ought to be cut down as the defendant had cut it down. Apart from this, he should have thought the dispute about the hedge would have been capable of amicable arrangement between two neighbours, but unfortunately they were not on friendly terms owing to an old dispute about rights of way. He had examined the evidence of witnesses, and plans and photographs, and his conclusion was that the hedge belonged to plaintiff. The defendant's act in cutting it down was a trespass, but he declined to accept the plaintiff's estimate that the damage done to the hedge was £20. Defendant had paid £5 into Court, and he granted the plaintiff £5 beyond what the defendant had paid. There would be an injunction restraining any interference with it; also an injunction restraining trespass on Walnut Meadow in regard to which the defendant must pay £2 as nominal damages, and also the costs of the action.

RATES OF WAGES

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

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

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₂	Kendal ..	N.W. Counties	1 5	1 1
B₂	Keswick ..	N.W.Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A₃	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 5	1 1
A₁	LANCASTER	N.W.Counties	1 7½	1 2
A₃	Leamington	Mid. Counties	1 6½	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₃	Lewes ..	S. Counties	1 4½	1 0½
A₃	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W.Counties	†1 9	1 3½
B	Llandudno	N.W.Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12–15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W.Counties	1 7½	1 2½
B	Maidstone ..	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester ..	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₃	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₃	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₃	NANTWICH	N.W.Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E.Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W.Counties	1 8	1 3½
A₃	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	•1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	•‡ 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.*

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	7	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	35	0	0
DO. in cement do., per rod	37	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 enquiry.

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. for every 10 ft. above 30 ft., add 15 per cent.			
PLAIN face Portland basis, per ft. sup.	£0	2	8
DO. circular, per ft. sup.	0	4	0
SUNK FACE, per ft. sup.	0	3	9
DO. circular, per ft. sup.	0	4	10
JOINTS, arch, per ft. sup.	0	2	6
DO. sunk, per ft. sup.	0	2	7
DO. DO. circular, per ft. sup..	0	4	6
CIRCULAR-CIRCULAR work, per ft. sup.	1	2	0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0	1	1
DO. circular, do. per ft. run	0	1	4
HALF SAWING, per ft. sup.	£0	1	0

Add to the foregoing prices if in York stone 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0	6
RUBBED round nosing to do., per ft. lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed.	1	13	0

SLATER AND TILER

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

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

Slates, 1st quality, per M:			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10
Cement and sand, see EXCAVATOR, *etc., above.*			
Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

SLATING, 3 in. gauge, compo nails, Portmadoc or equal:			
Ladies, per square	£1	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	8	0
DO. *T. and G., 1 in., per sq.*	1	8	0
Planed Boards, 1 in.×11 in., per std.	36	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., 1½ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1¼ in., per ft. sup.	0	3	3
If in oak multiply 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., 1¼ in., per yd., sup., average	0	12	0
DO., DO., 1¼ in. maple blocks	0	15	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1¼ in. tread, fixed, per ft. sup.	0	3	6
2 in. deal strings, fixed, per ft. sup.	0	3	9

PLUMBER

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

Lead, milled sheet, per cwt.	£2	7	6
DO. *drawn pipes, per cwt.*	2	8	0
DO. *soil pipe, per cwt.*	2	11	0
DO. *scrap, per cwt.*	1	4	0
Copper, sheet, per lb.	0	1	5
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	7
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	16	0
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;* 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 or 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. and up	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

Glass: 4ths 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	0	0
Linseed oil, raw, per gall.	0	4	2
DO., *boiled, per gall.*	0	4	5
Turpentine, per gall.	0	7	2
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	£11	0	0
Sheet steel:			
Flat sheets, black, per ton	18	0	0
Do., Galvd., per ton	27	0	0
Corrugated sheets, galvd., per ton	26	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, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	17	0	0
DO., *red*	19	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7
Waterproofing compounds for cement. Knot 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