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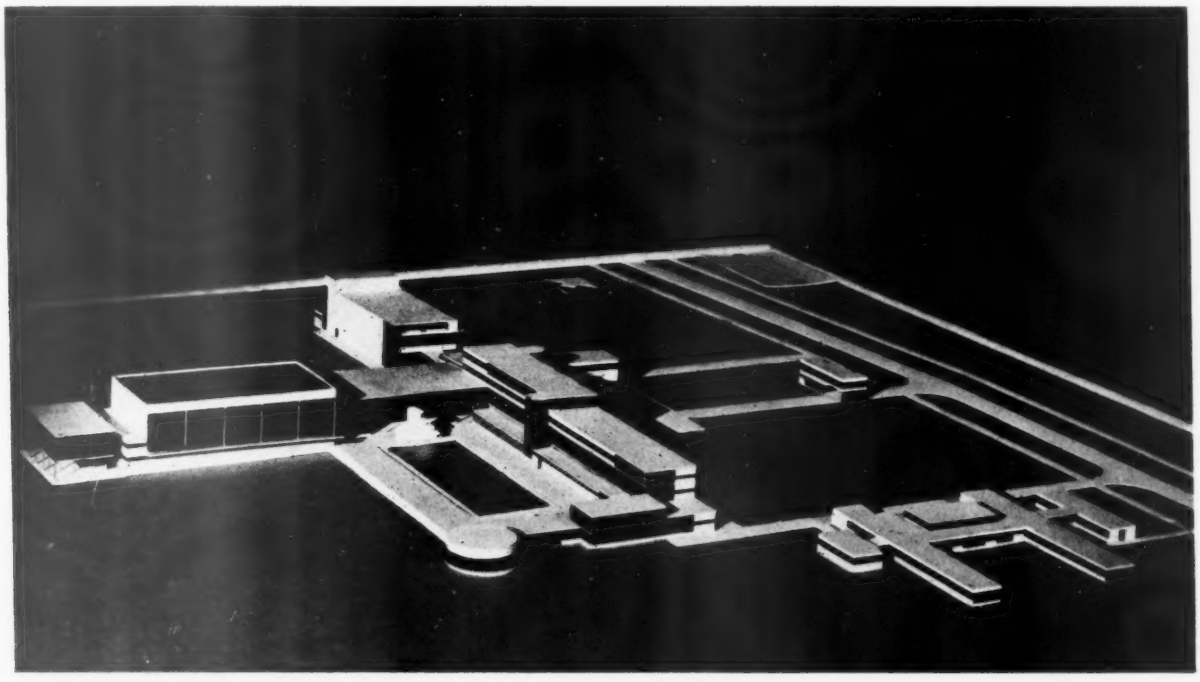
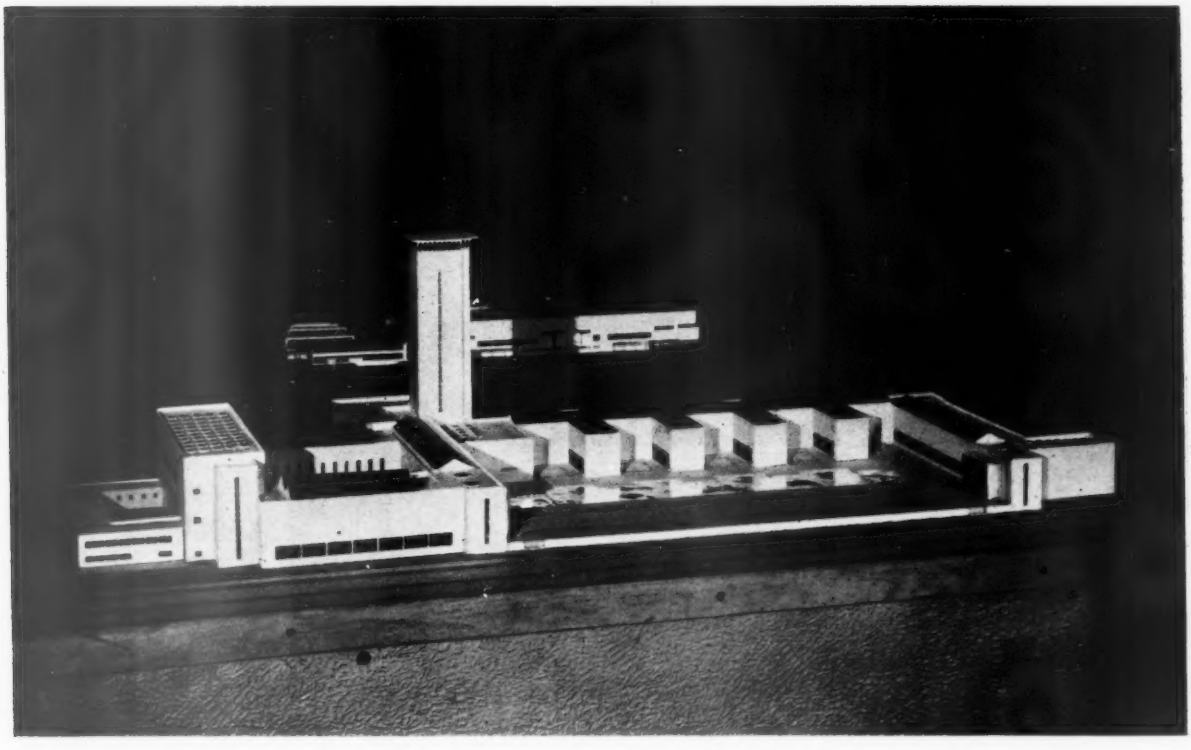
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

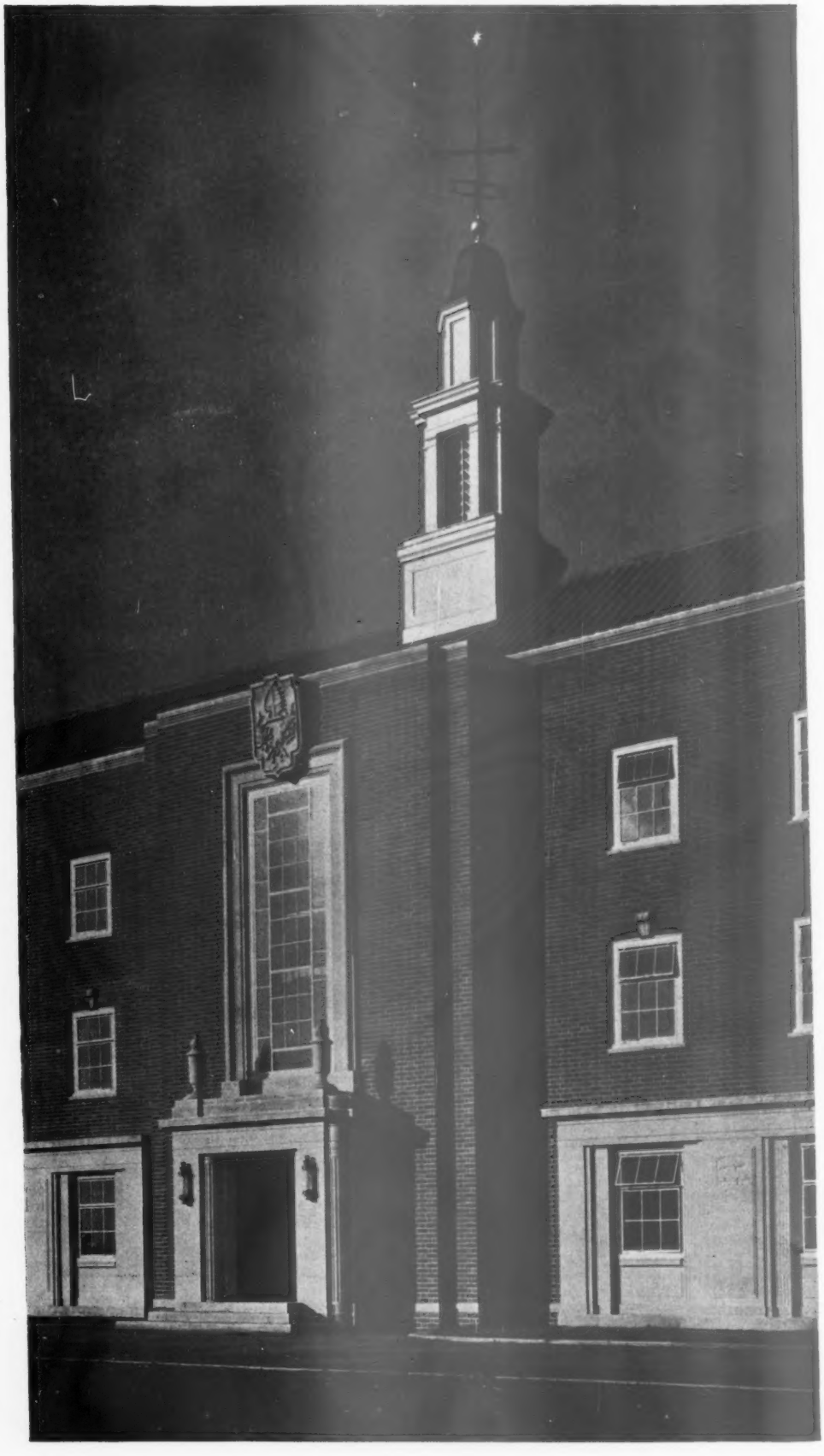
PRINCIPAL CONTENTS

STUDENTS' WORK, LEEDS SCHOOL OF ARCHITECTURE





Two models on view at the annual exhibition of the work of the students of the Leeds School of Architecture. Top: A Health Centre for Seacroft. By E. A. Heppenstall (fifth year Diploma Student). Bottom: A Regional Art Gallery and Museum for Yorkshire. By F. Booth (fifth year Diploma Student).



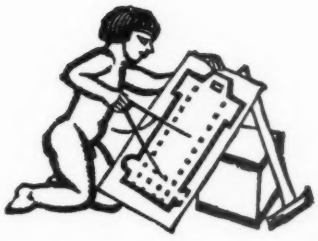
OPENED LAST FRIDAY

The L.M.S. School of Transport at Osmaston Park, Derby, was officially opened by the Rt. Hon. Leslie Burgin, Minister of Transport, on Friday last.

The School has been established for the better and quicker training of the L.M.S. staff in an instructional centre where training can be given in the best practices known in the railway industry. The fundamental idea is that the men shall be trained at a resident staff college rather than at what might be termed a day college, at which those of various grades and from various areas will work and have their recreation together, an arrangement that will tend to break down any tendency to a purely departmental outlook, which is a potential danger in all big organisations.

The school is a residential one, accommodating fifty members of the staff for varying periods of training. The architect is Mr. William H. Hamlyn, Principal Architect, L.M.S.

On the left is a detail of the main entrance. The weathervane has, instead of the customary arrow or weathercock to indicate the direction of the wind, a rocket, designed as an expression of the vision which entered Stephenson's mind when he sought a suitable title which would indicate speed for his locomotive. Further illustrations and plans of the building are reproduced on pages 167-169.



PLANNING COMMISSION: 2

BEFORE making its recommendations for a national planning commission, the National Survey and National Planning Committee's report (the earlier stages of which were discussed last week) examines the position of the Ministry of Health, at present the only official source of guidance in the planning system. It is pointed out that the Minister's capacity is severely limited by his constitutional position under the 1932 Town and Country Planning Act, in which he is regarded not as advisor, but as regulator and judge. It is also pointed out that if, as many people have suggested, the Minister were freed of his quasi-judicial duties so that he could take a much more " positive and creative share " in planning administration, he could, indeed, provide planning authorities with fuller advice on *local and regional planning* requirements, but he could not deal satisfactorily with the more important *national planning* requirements.

The report concludes that neither the Ministry of Health nor any other existing Government department could soundly be made responsible for the central reinforcement of planning and its application in the national field. A new organ of central government is needed and it is recommended that it should take the form of an advisory *national planning commission*, whose functions would be :

(*a*) to compile and collate all necessary information (national survey) ;

(*b*) to advise and co-ordinate Government departments, statutory undertakers and highway authorities ;

(*c*) to advise and guide local planning authorities ;

(*d*) to watch the general progress of the planning system, investigate its problems (such as the vital question of compensation and betterment), and make recommendations for its legislative and administrative development ;

(*e*) to formulate—as a basis for all its advisory activities—a national plan or policy on broad and flexible lines for the allocation and distribution of major land uses and developments (national planning).

It is recommended that the commission should consist of a full-time chairman and not more than six other commissioners, and that the principal members of its staff should be a deputy commissioner and from six to nine divisional officers who would be responsible for maintaining contact with the local planning authorities in their several divisional areas.

The commissioners, says the report with a trace of cynicism, should be of " acknowledged capacity and disinterestedness." They should not be representatives of particular interests, but their collective experience should " cover a wide range of the principal types of land utilization."

The commission would be as free and independent as possible, but to ensure effective contact with Parliament and the Government it would be formally responsible to a Cabinet Minister—preferably a Minister free from regular departmental duties. While its functions would be essentially advisory, it would have full power to make its view effectively known and duly considered. It would be entitled to publish annual and other reports, to require all necessary information, to appear at all enquiries and before royal commissions and departmental committees, and to examine and report on all planning schemes.

The proposals are outlined in fair detail and it is impossible to give an adequate summary of them here. They are by no means extreme—in fact, most of the general and detailed proposals are so obviously practicable that they could be put into operation before the end of the year without dislocating any department.

The broad issues of land utilization which the report covers—location of industry and population, agricultural development, co-ordination of transport and public services, reservation of national parks—these are urgently in need of investigation and there is no reason why a series of inter-related reports should not be undertaken immediately. The Royal Commission on the Geographical Distribution of the Industrial Population has provided a most exemplary beginning.

" Helpful guidance should be the main object of the commission's relations with planning authorities." An obvious criticism of the report is that it has been over-cautious in its recommendations for putting the planning commission into operation. There is ingenious compromise in its attempt to graft the envied central power of a dictatorial government on to the precious free-lance privileges of a democracy. The proposed system of national planning is described as similar on a national scale to the *advisory* regional planning which now precedes the preparation of statutory planning schemes. Unfortunately, it is well known how disappointing many advisory regional planning schemes have been when translated into statutory undertakings, and one is apt to be dubious of the success of mere friendly guidance. There is, however, a recommendation that the planning commission should have certain statutory rights to help tie its proposals down to earth.

The report as a whole is far-seeing, imaginative, yet clear-cut in its recommendations. Coming at this time, when the need for territorial planning on a national scale is so desperately urgent, and when the term " national planning " is in danger of becoming the flaunted catchword of those who think in vague generalities, this thoughtful work deserves most wide acclaim ; for it gives a crisp, inspired interpretation of the meaning of national planning for land utilization.

If we, as architects, born with the instinct to co-ordinate, repeat over and over with untiring emphasis the necessity for a national planning commission on these lines, it is not too vain to hope that we shall have one in under a year's time.

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NOTES & TOPICS

SCOOP FOR "ARCHITECT AND BUILDING NEWS"

THE mystery of the A.A. deepens—or would if one were to accept as news merely what one sees published in other news-organs. This, for instance, which I have abstracted from the *Architect and Building News*:

> We are informed that the recent uncertainty regarding the administration of the A.A. School of Architecture has been satisfactorily settled, and that Mr. Arnold Silcock has been appointed Bursar of the School.

*

Mr. Arnold Silcock is unknown to me except by repute as an authority on Chinese art. No doubt he will make an admirable Bursar.

*

But one cannot help wondering what a Bursar does. Major Seymer is treasurer, Mr. Alexander secretary. There are other able administrators in the key positions. The only position in abeyance is that of Principal of the School, which Mr. Billerey holds provisionally pending the choice of a successor. Is the new Bursar to be regarded as Mr. Billerey's successor, elevated to the principalship under a tactful title?

*

I think not. What our distinguished contemporary somewhat nebulously refers to as the "recent uncertainty regarding the administration of the A.A. School," which has been, it seems, "satisfactorily settled" by Mr. Silcock's appointment as Bursar, is as everyone knows an uncertainty regarding the kind of way the students are going to be taught architecture. An authority on Chinese art, however distinguished, could hardly be expected to solve that one.

BURSAR OR BUFFER?

One deduces, it may be quite wrongly, that Mr. Silcock is destined to play a part equivalent at the A.A. to that which Mr. Arundel (Buffer) Clarke has selected for himself in the larger architectural field. Mr. Arundel Clarke, it will be remembered, seeks, in his own words, to be "a sort of buffer" between architects and their clients. It may be that the new Bursar is to be a sort of buffer between the directors of education and the students.

THE NEW PRINCIPAL

For the new Principal rumour has mentioned a whole galaxy of names, including that of Cambridge's present Principal, Mr. James Macgregor. I believe, however, that there is no likelihood of Mr. Macgregor taking the appointment, which has been offered by the A.A. Council to Mr. E. Maxwell Fry, who, I understand, has accepted it after some hesitation. Mr. Fry's appointment as Principal will be a highly popular one with the students.

THE BEAUX ARTS SPEECH

The main cause of the present contretemps at the A.A. can be traced to a speech delivered a month or two ago by Mr. H. S. Goodhart-Rendel (as Director of Education) in which in his scintillating, epigrammatic way the President unburdened himself of sentiments which sent the students into a huddle.

*

Just as in an earlier speech he surprised the world of official architects with *stale chocolate* so in this one he shook the student world to its core with *Beaux Arts*. He no doubt knew that to an English student of the Earnest Thirties *Beaux Arts* is as a death's-head-hawk-moth to a bee.

MR. ANTHONY COX

Not the least of the repercussions was the current issue of *Focus*, in which Mr. Anthony Cox, in AN OPEN LETTER TO H. S. GOODHART-RENDEL replies in the name of the students to the speech. It is, I think, the most brilliant *apologia* for a rational education I ever read. It doesn't step beyond the bounds of good manners—it is indeed icily polite—and it doesn't say any more than a respectful student should to a respected Director of Education; yet——well, read it, dear reader. Mr. Cox reminds me of a courteous gunman doffing his hat while spraying the chosen target in a pleasantly precise way with the proceeds of a sawn-off shot-gun.

*

His single discourtesy is the opening sentence (Mr. Cox, I believe, has left the A.A.). "This is not by way of a bread-and-butter letter for a delightful holiday at the A.A., for, after all, I was a paying guest, wasn't I?" The highest compliment I can think of paying Mr. Goodhart-Rendel is to say that he would probably be the first person to appreciate the merit of this performance. If the official architects had had such a pamphleteer, what a high wind there would have been in Jamaica.

FOCUS

Focus, by the way, is the new students' magazine, 1s. 6d., published last week—very tastefully—by Lund Humphries, procurable from the A.A. or from the publishers, 12 Bedford Square, London.

It starts

> We were born in the war.
>
> Much that follows in this journal can be orientated to that one fact. We were born into a civilization whose leaders, whose ideals, whose culture had failed.

But after that, as I have indicated, it deserts the technique of Sir Philip Gibbs.

THE NEW MAURETANIA

The photographs were published this week of the design for the interior of the new *Mauretania*. They are in the usual Cunard-Lalique style, which is so popular among the rich cosmopolitans who form the majority of the passengers on the Atlantic run—a voyage so short that they have not time to weary of the whimsies in wood, glass, chromium or paint.

*

The example of the *Orion* and *Orcades* is not yet being generally followed, though one has more sanguine hopes of the new *Queen Elizabeth*! This is progressing fast under the direction of Mr. Grey Wornum. He evidently believes in getting into the skin of the subject. Last week, when landing at Bosham to buy stores, I saw his authoritative and monocled figure directing, in true quarter-deck manner, the bringing alongside of a canvas canoe.

LOIN CLOTH FOR SYMBOL OF BIRMINGHAM'S CRAFTS?

Sculptural symbolism is once more in the news—this time the scene passes from Huddersfield to Birmingham.

*

A nude figure, 12 ft. high, of a man standing astride a model of Birmingham's civic buildings has been erected at one end of Broad Street, and caused a storm of protest. One man said: "It ought to be indoors."

*

The sculptor, Mr. Bloye, says: "It doesn't represent a man. It represents symbolically the crafts that have made Birmingham what it is, and has certain made-up proportions which give it an heroic aspect. If, however, they want a little loin cloth I suppose I shall have to give it one."

CITY COUNCIL TO THE FORE

Two weeks ago the City Council of Winchester learned that negotiations were afoot for the demolition of the sixteenth century Hostel of God Begot, in the High Street. It made an order under the Town and Country Planning Act to prevent this, and requested the Minister of Health to use his power to declare that the order should operate immediately. For the second time in the history of the Act, the Minister assented to the request of the council.

*

As the building is occupied it cannot be scheduled as an ancient monument, but the Minister's temporary enforcement will last two months, during which time it will be considered whether the order shall operate permanently.

*

The City Council is to be congratulated upon its prompt action—nor is it the first time it has shown a sense of civic decency. Many will remember that only a month or so ago, it tried to prevent a "Tudor village" development on the outskirts of the town.

HELP FOR THE ARCHITECTS' BENEVOLENT

Mr. Montgomery, generous as usual, has offered to organise a Tombola at the September Building Exhibition: a Tombola being a sort of raffle in which everyone who buys a ticket gets a prize. The problem is now to collect a suitable number of prizes and the A.B.S. wants sketches, drawings, paintings (framed), china, glass, ivory and general *objets d'art*, to be sent to 66 Portland Place.

*

Now this is a most worthy object. The funds of the Society are in a bad way, and the President has appealed in more than usually dulcet tones for more wholehearted support. So send something: not that old ormolu clock which has taken one step further round your relatives every Christmas since 1912, but something worth having. Something, for instance, which you wouldn't mind winning back for yourself.

LUXURY FLATS

A friend of mine who intended leasing a flat in a luxury block near Westminster has been forced to give up the idea, as he was refused permission to build in even so much as a bookcase. At the same time, a correspondent to the *Times* complains of a similar block that the kitchen provides no space for a vacuum cleaner, but only for a broom, an instrument almost as obsolete as the cross-bow. The other thing I've always wondered about concerning flat blocks is why restaurants are only provided in those blocks where the flats are all large enough for resident maids.

RUSSIA TUNNELS

It is generally thought that Russians are kept in ignorance of the progress of other countries. But at an exhibition a friend of mine (another one) visited in Moscow, he saw photographs of the Berlin, London and Moscow tubes compared. Naturally enough, the last was described as being the last word.

*

A member of his party, however, darted forward, and laying his finger upon a photograph of Hyde Park Corner tube station, said "This is the best." The horror at this outburst was sharpened by the fact that the interrupter, so evidently lacking in critical ability, turned out to be the Czech architectural delegate. The other interesting thing I gathered is that nearly all bricklayers are women—the Russian answer to the problem "Do women make good architects?"—and that plumb-lines are unknown. The results are somewhat like the gayer compositions of Mr. Lubetkin.

HOLIDAY CHALETS

The increasing popularity of the seaside holiday camp has led to a new scheme, financed by the Workers' Travel Association in conjunction with the Co-operative Wholesale Society. Every person who stays for a week at one of their camps can nominate for a free holiday a deserving case, to be considered by a committee. Over 400 applications were granted under this system last year.

*

Six camps are scheduled to be built during the next 12 months on the East Coast. It is regrettable that such an excellent scheme should run the risk of spoiling the coast by indiscriminate colonies of dapper little chalets. A recent competition, sponsored by the Timber Development Association, has shown what architects can make of a similar problem, but in this instance they are apparently not being given the opportunity.

PITZHANGER MANOR

Ealing Town Council has decided to add a new wing to Pitzhanger Manor, Sir John Soane's old house, which is now the Ealing Central Library and Museum. Since I do not know who is to be the architect for this addition, there is little to be said at present except that the S.P.A.B. and Mrs. Arthur Bolton seem to take a somewhat apprehensive view of the whole business. Very rightly. Pitzhanger Manor might just as well be pulled down as monkeyed about with. Is this outside the Georgian Group's age limit?

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

ARCHITECTURAL ASSOCIATION

We have received the following notice from the A.A. :

" The appointment of a new Principal is being actively considered with a view to his taking up his duties as soon as possible. In the meantime, Mr. Billerey will carry on until his contract expires next Christmas. Mr. Arnold Silcock, F.R.I.B.A., has just been unanimously elected by the Council to serve as Bursar. He will take over immediately the administrative work of the school, the work of re-organization, and of liaison between the Council, Director, Principal, staff and students."

BATH ASSEMBLY ROOMS RESTORED

The Assembly Rooms at Bath have been restored to serve again their original purpose after a period in private ownership. The rooms have been purchased by an anonymous donor and vested in the National Trust, which leased the buildings to the Bath City Council on the understanding that they be restored to their original condition.

THE ARCHITECTS' DIARY

Thursday, July 28

REDFERN GALLERY. *Summer salon of French and British paintings. Private view. Hours, 10 to 6. Until October 1.*

ARCHITECTURAL ASSOCIATION. *Exhibition of students' work. Until July 29.*

ROYAL ACADEMY. *Summer Show at Burlington House. Until August 6.*

POLYTECHNIC SCHOOL OF ARCHITECTURE. *Exhibition of students' designs. At the Building Centre, 158 New Bond Street. Until August 26.*

Thursday, August 4

DESIGN AND INDUSTRIES ASSOCIATION. *Visit to Holland. Depart 6.30 p.m. from Victoria. Return August 6.*

GENERAL POSITION OF THE BUILDING INDUSTRY

" The position of the building industry is less satisfactory," states the current issue of the Building Industries Survey, published by the Building Industries National Council, " the seasonal improvement having failed to attain its usual dimensions. Activity in general, though at a high level, is definitely lower than a year ago, and the decline is likely to become steeper, when reinforced by normal seasonal influences."

The present issue commences a new volume of " The Survey," which thus enters the fourth year of its existence. In accordance with what is now the established practice of the National Council, the occasion is marked by the introduction of a number of improvements and extensions. Chief among these is the new Stock Exchange section incorporating a Building Industries National Council Index of Building Materials Share Prices. In an interesting and informative article, it is shown how closely movements of Stock Exchange values in general, as well as of building materials share prices in particular, are bound up with the trend of building activity. But apart from providing yet another indication of the key position of building in the economic structure, the new section and index are important indications of the Council's ability to extend the service offered by " The Survey " to the industry and to those interested in it as a medium of investment.

" The outlook for public works contracting continues favourable, the improvement as compared with a year ago being well maintained. It is anticipated that the increase in activity will continue to be greater than that indicated by the normal seasonal factors.

" The outlook for the materials industries is not encouraging, and a more than seasonal decline in demand is to be anticipated. This will particularly affect the materials used in houses and the smaller structures in most areas, though in some districts housing activity may receive an indirect stimulus from the re-armament programme in so far as it affects the location of population. The demand for materials for the larger structures is likely to decline to a somewhat less extent, especially in and near the main centres of population, but specific materials may be affected by changing methods and by substitution.

" The further outlook is rather uncertain, in view of the present state of official policy. On the one hand, an undertaking has been given that local authorities' housing will be accelerated as far as possible as private demand falls, and the Minister of Health has asked Local Authorities to submit five-year programmes covering all capital expenditure. But it is not known to what extent a long-term public works policy will be carried into execution to fight the depression, or whether machinery will be instituted to administer such a policy. On the other hand, the position with regard to structural A.R.P. is still uncertain. A favourable decision on these two points would provide a very powerful impetus mitigating the depression."

HALF-YEARLY HOUSING RETURN

The Minister of Health has just published a return of housing and slum clearance progress showing the position at March 31 last.*

The new return records that 3,666,014 new houses have been built in England and Wales since the beginning of 1919. It shows that the production of houses still continues at a high level and there is continued progress in the housing and slum clearance activities of local authorities. The total number of houses provided during the half-year ended March 31 last was 181,944, the highest output of houses in any single half-year.

The total number of houses completed by private enterprise without assistance during the half-year was 138,639, being 20,197 more than the number so provided in the preceding half-year but 7,150 less than the number so provided in the half-year ended March 31, 1938. The number provided by local authorities was 41,631, which was 5,286 more than the number

* " Housing (House Production, Slum Clearance, etc. England and Wales. Position at March 31, 1938.)." Published by the Stationery Office, price 4d.

Design for a " glass age " Princes Street, Edinburgh, by Mr. R. Furneaux Jordan, a member of a group of architects who have been making plans for rebuilding London and other centres largely in glass. The author of the design states : " In my design I have done away with the present incoherent clutter of bad lettering and shop fronts and substituted a uniform treatment of buildings, which are commensurate in scale with modern requirements."

provided by them in the preceding half-year and 6,637 more than the number provided by them in the half-year ended March 31, 1937.

The proportion of small houses provided by private enterprise remains unreduced: proportionately the number of small houses built for letting is steadily rising and is now nearly 46 per cent. as compared with 44 per cent. and 42 per cent. in the two previous half-years.

The good progress that is being made at the final—and effective—stages of slum clearance is shown by the increasing number of new houses completed under the Act of 1930 and of houses demolished.

During the year ended March 31, 61,021 houses were demolished or closed as compared with 52,216 during the previous twelve months. Up to March 31, 195,241 houses (with accommodation for 916,007 persons) had been provided for the purpose of rehousing persons displaced in connection with slum clearance operations; 59,164 of these houses were completed in the year ended on that date.

The return concludes with a table (Table IX) showing the number of houses provided during the past half-year by local authorities and private enterprise separately for each county borough and for the larger areas in each administrative county.

DRYTONE JOINERY

We regret that in our issue for July 21, the name of Messrs. Drytone Joinery, Ltd., was omitted from the list of sub-contractors for the new Civic Offices, Swindon. Messrs. Drytone supplied the whole of the doors for this building.

CHANGE OF ADDRESS

The offices of Mr. Harold Alexander, L.R.I.B.A., are now at 8 Clarges Street, Piccadilly, W.1. Telephone No.: Grosvenor 1364.

EXHIBITIONS

[By D. COSENS]

AT the New Burlington Galleries an exhibition of twentieth-century German art has been organized under very distinguished patronage for the admirable purpose of assisting refugee artists, and in the catalogue we are told that "the artists represented here are the German equivalents of artists like Degas, Cézanne, Seurat, Matisse, and Picasso in France; or of Walter Sickert, Augustus John, Jacob Epstein, Duncan Grant, Paul Nash and Ben Nicholson in our own country." It must, of course, have been difficult to assemble this exhibition, largely from private collections, for, in their own interests, no artists living in Germany today have been asked to contribute or even consulted as to which of their works should be shown. But those who hoped for the promised "equivalent of Seurat or Picasso," or expected something comparable to the exhibition of so-called degenerate art in Berlin, will be severely disappointed.

It may, however, reasonably be assumed that in spite of a certain number of omissions, and even more unfortunate inclusions, this exhibition is a fairly accurate cross-section of contemporary painting in Germany, and it emphasizes the fact that Germany has never excelled in the visual arts—with the exception perhaps of her Baroque architecture of the seventeenth and eighteenth centuries. And even here, in the wealthy German cities, the over-elaborate development of the Jesuit theme never achieved the more restrained elegance and charm necessitated by the relative poverty of Italy, and dictated by her more rigid traditions. Only in the Rococo which Frederick the Great imported fully grown from France has art in Germany triumphed. In painting also, the successive Italian and French influences have been earnestly cultivated rather than grafted on to any native tradition.

Though today cultural ideas may again be autocratically controlled they no longer travel slowly by the trade-routes of the world, deflected here and there by wars and geographical barriers. There is immediate communication, and all art has become international, and is not conditioned by locality; and only by the general standards of twentieth-century painting should this, or any other exhibition, be considered. Unfortunately, by those standards, it is not very good. There are a number of paintings of interest, mostly in the small end room, but the better-known painters are rather indifferently represented. Among the good things are some fine compositions by Kandinsky, Liebermann's "Rider by the Sea," Franz Marc's well-known horses, Paalen's "En Face" (one of the few surreal paintings), Feibusch's "Death of Narcissus," Kokoschka's "View of Marseilles," fine, but not their best, work by Klee and Ernst, Willi Baumeister's analysis of various games in terms of linear pattern, interesting work by Kolle and Corinth, and excellent propaganda by Kollwitz. But undoubtedly Germany's nearest approach to visual expression has been, not in painting, but in her recent and unfortunately abandoned experiments in the more practical arts of architecture, and film and stage production.

•

At Zwemmers there is some interesting work by Fred Uhlmann, a self-taught German barrister—more interesting on the whole than the majority of the work at the New Burlington Galleries. He paints better through direct and very personal obervation than in his more imaginative work, and it is in the unaffectedly naïve and accurate definition of the things he sees and knows that he is most successful.

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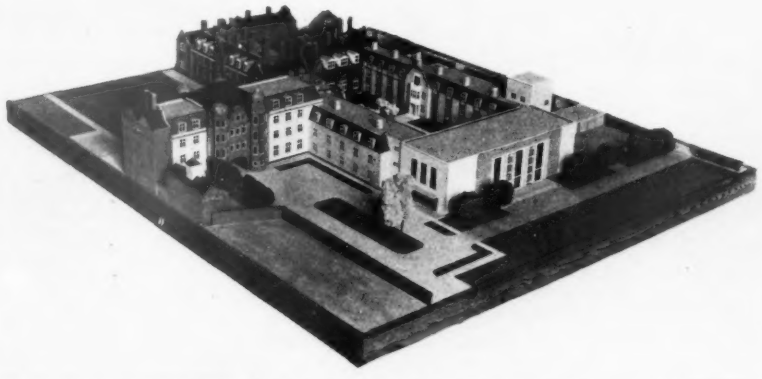
Twentieth-Century German Art. New Burlington Galleries, 5 Burlington Gardens. Until August 7.

Fred Uhlmann. Zwemmer Gallery, 26 Litchfield Street. Until August 6.



Photograph of a model of Newnham College, Cambridge, showing, on the right, the new extensions which are to be opened next month by Queen Mary. The architect is Miss Elisabeth Scott.

Professor Reilly Speaking

THE new R.I.B.A. Council has met with lots of new faces and some old ones missing which one had begun to think were as solid and as permanent as the furniture of the Chamber itself. The main interest was the arrival of the official architect. I confess I felt it the beginning of a new era, but then, as an amateur journalist, I naturally have a flair for new eras. Instead of only the kindly Mr. Roberts, the official architect of Winchester, whose personality seems to show the advantage of not living in a competitive world, there was the tall handsome City Architect of Manchester, Noel Hill, looking extraordinarily young and very much as he did when he was a Liverpool student. Mr. Bunch, of Warwickshire, was there too, but not the great and I find the very considerate (when I have my rare dealings with him) Mr. Wheeler, the L.C.C. Architect, who counts his staff by the hundred. This first meeting is always a more or less formal one, and no doubt he will appear when there is real work to be done.

I was, of course, particularly interested to note the number of old Liverpool students who had survived the general election or had risen through it. There were in addition to Noel Hill, Professor Abercrombie and Professor Holford, each at the head of the poll in their respective divisions of Fellows and Associates. There were Naseby Adams and Wesley Dougill, both, like Holford, looking young and fresh and very much as they did as students. There must be something life-giving in the air of the Liverpool School. Harold Dod, now on the Council as the President of the Liverpool Society, hardly looks older than he did thirty odd years ago, when he was in the same year at the School as Professor Budden, my successor, who now bears the burden of two hundred student lives, and I hope of their secrets too. There was Anthony Minoprio, like Holford and Dougill, a Rome Scholar and none the worse for it, and now very appropriately Secretary to the Board of Architectural Education, and therefore in my opinion starting on the most important work that can be done for architecture and the profession inside the Institute. I felt proud of them all, and particularly of their looks. It is curious as one grows older how one

appreciates more and more the man as a man as well as his works.

A man I appreciated very much as a man as well as an architect was the late Sir John Burnet. He had the most charming smile of any successful architect of my acquaintance, and he was at his most delightful with the young. I remember a visit he paid the Liverpool School in its early days. As he was leaving he said he had enjoyed himself so much he was going to pay for his pleasure. He then gave me ten pounds to spend among the students on a prize or prizes for anything I liked. It was we who ought to have paid him. Afterwards, he always had time to see me when I wanted his advice or help. He took me once to Mr. Gordon Selfridge when Mr. Baldwin failed me as opener of the annual School Exhibition and, whether it was his smile again or the invitation I gave Mr. Selfridge to take the place of the Prime Minister—a technique I admit to on more than one occasion—the latter not only accepted, but when he saw the School work, founded a prize. I think, too, he liked the decorations the students did to the main studio where we gave him lunch. The current slogans of the great store were round the room or paraphrases and expansions of them. Next to some trellis, for instance, meant to represent the Boswick gates of a battery of lifts, was "Make a friend, the manicurists are on the next floor."

I hope the profession is reading the *News Chronicle* these days. It not only gives the fullest news from Spain about the tottering state of our civilization, for that is where the rocking is most evident, but also of the things in which we as architects are particularly interested. It will be remembered how it sought the assistance of the R.I.B.A. last year, and then promoted the only proper architectural competition, indeed one might say the only really useful competition, a great daily newspaper has ever held. These competitions, for there were really two of them, for the ideal school were an extraordinarily fine gesture and one with no obvious profit in it for the paper like cross-words and such things. The increase in circulation due to them would be minute, a few young architects and students perhaps. The older men would still probably stick to their *Times* and *Telegraph* and hear one side only of all that is going on. Of course, some may be wise men who take as well the *News Chronicle* or *The Manchester Guardian*. As an old retired person, with much time on my hands, I take four daily papers, two on one side two on the other, and I notice how differently the same piece of news can be given. Mussolini the other day talked some bombast about whom his Blackshirts were hoping to fight next. One set of papers said the enemy was to be Bolshevism, the other that it was going to be Bolshevism and Democracy—a slight difference which involves ourselves.

To return to the *News Chronicle*. Its move, the one before the last, for the good of architecture it may be remembered, was to press for a competition for the National Theatre. Its latest move has been to give up each Saturday its picture page to good vernacular building up and down the country. Instead of photographs of bathing belles or mothers-in-law recovered from gas ovens, it gives delightful views of simple pieces of good architecture with a plan of how to find them and a short explanation of why they are good. Before it finishes this series, which has now been running for a dozen weeks, and is to last through the summer, good current modern work, I am told, is to be included. Its million and a half of readers are therefore gradually having their eyes opened to our art in a form they can appreciate, because they have never thought of that form as art at all. That a national newspaper should be doing such a thing for the first time is something for us as architects to note and be thankful for. I always look in trains and tubes to see what papers people are reading, and then at their faces. Next time I see an architect of my acquaintance on a Saturday morning without his *News Chronicle* I shall know he is really a light weight whose interest in architecture is merely commercial.

R.I.B.A.

THE R.I.B.A. DISTRICT AND BUILDING SURVEYOR

A revised syllabus for the R.I.B.A. Examination for the office of District Surveyor in London and the R.I.B.A. Examination for the office of Building Surveyor under Local Authorities will be brought into operation at the examinations to be held in May, 1939. Copies of the revised syllabus may be obtained upon application to the Secretary, R.I.B.A. It has also been decided to publish the questions set for the above examinations, and in accordance with this decision the questions set for the examinations held in May, 1938, are on sale at the R.I.B.A., price 1s. per copy.

R.I.B.A. MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The R.I.B.A. announces that the following Maintenance Scholarships have been awarded for the year 1938-1939: An R.I.B.A. (Houston) Maintenance Scholarship of £100 per annum to Mr. F. R. Greenen, of Bournemouth. The *Builder* Maintenance Scholarship of £55 per annum to Mr. P. R. Ferguson, of Runwell, Essex.

The Maintenance Scholarships awarded last year to the following candidates have been renewed for a further period of one year: J. S. Minton (Architectural Association School of Architecture)—R.I.B.A. Maintenance Scholarship of £70; T. H. Lodge (Leeds School of Architecture)—R.I.B.A. Maintenance Scholarship of £55; I. L. B. Hopkins (Aberdeen School of Architecture)—R.I.B.A. Maintenance Scholarship of £60; S. Cruickshank (Architectural Association School of Architecture)—Ralph Knott Memorial Maintenance Scholarship of £45; M. Shepheard (Liverpool School of Architecture, University of Liverpool)—R.I.B.A. (Houston) Maintenance Scholarship of £100; J. L. Ware (Bartlett School of Architecture, University of London)—R.I.B.A. (Houston) Maintenance Scholarship of £100.

COUNCIL MEETING

Notes from the Minutes of the Council, July 4, 1938

Obituary.—The Secretary reported with regret the death of Sir John Burnet, R.A., R.S.A., Royal Gold Medallist, 1923, a former member of the Council.

Testimonies of Study for the Intermediate Examination.—On the recommendation of the board, certain amendments were made in the regulations for the Testimonies of Study for the Intermediate Examination.

The Fellowship.—The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925: Mr. William Harvey.

Election of Students.—The following Probationers were elected as Students of the R.I.B.A.: Bell, Guildford Marsh (Special Exemption); Brown, Gilbert Smith (Glasgow School of Architecture); Buckley, Diana Gabrielle (Architectural Association); Cruickshank, George (Aberdeen School of Architecture); Davies, Richard Llewelyn (Architectural Association); Falconer, Peter Serrell (R.W.A. School of Architecture, Bristol); Reid, Jean Payton (Edinburgh College of Art); Renton, Andrew (Edinburgh College of Art); Smith, Frank Gibson (Liverpool School of Architecture); Wylie, Harry (Edinburgh College of Art).

ELECTION OF MEMBERS

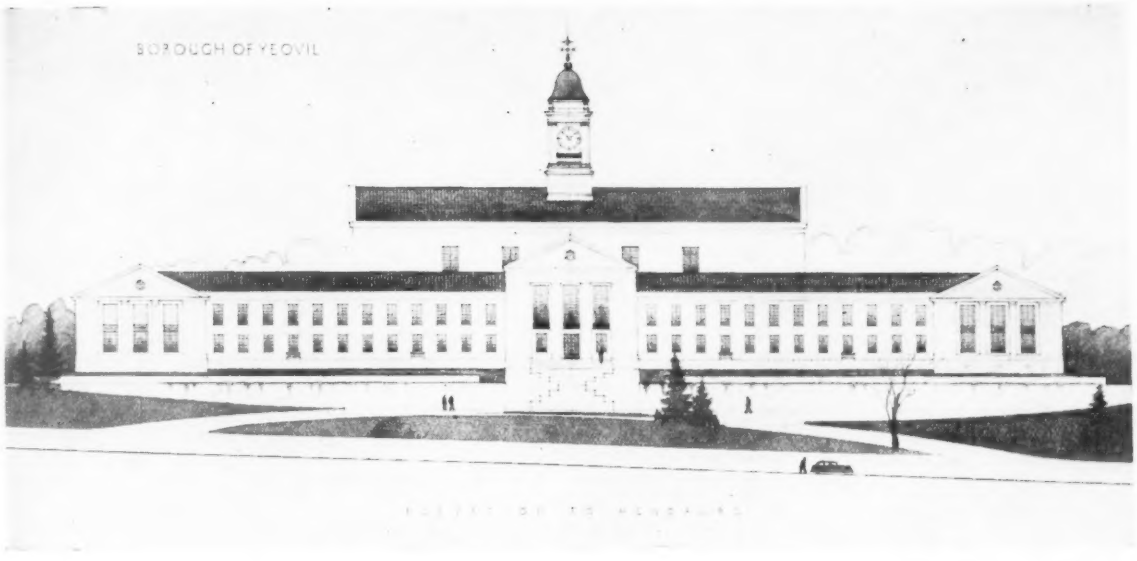
At a Council Meeting of the Royal Institute of British Architects held on Monday, 18 July, 1938, the following members were elected:—

As Fellows (6): Ashworth, Henry Ingham (London); Button, Eustace Harry, A.R.W.A. (Bristol); Eldred, Herbert Sydney Guildford (Rochdale); Jones, Colin Lancelot (Newport, Mon.); Thompson, Bruce Dermott (Worksop, Notts); Walters, Edward John (London).

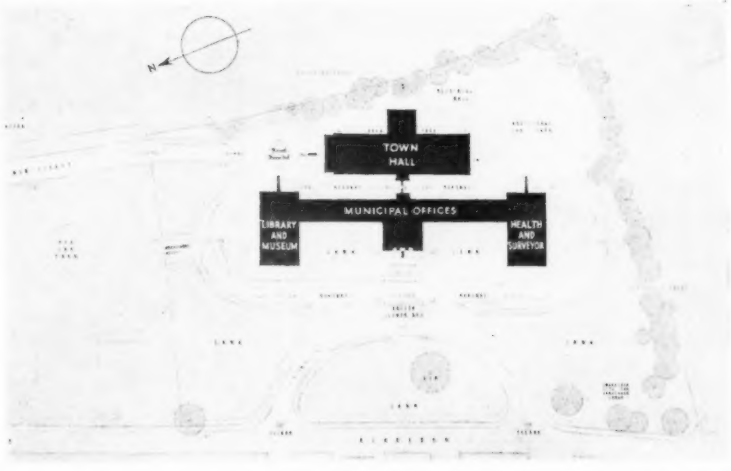
As Associates (17): Beswick, Robert Eastcott Edward (Liverpool School of Architecture, University of Liverpool) (Swindon, Wilts.); Blair, Donald Lansdowne, B.ARCH., A.M.T.P.I. (School of Architecture, McGill University, Montreal) (London); Cousins, Frank Walter (Architectural Association) (London); Edwards, Stracey Allan (Architectural Association) (Folkestone); Garton, Arthur Ernest James, B.A. CANTAB. (School of Architecture, University of Cambridge and the Architectural Association) (London); Hitch, Richard Alston Brook (Architectural Association) (London); Hodge, Frank Stanley (London); MacKay, James Campbell, DIP.ARCH. (GLASGOW) (Glasgow School of Architecture) (Polmont, Stirlingshire); McQueen, Alastair Norman Leigh (Dalbeattie, Scotland); Manson, Ben Murray, DIP.ARCH. (EDINBURGH) (School of Architecture, Edinburgh College of Art) (Edinburgh); Muhr, (Miss) Elsa (King's College, University of Durham, Newcastle-upon-Tyne) (West Hartlepool); Ogilvie, John (School of Architecture, Edinburgh College of Art) (Edinburgh); Saunders, John Gower (Architectural Association) (Eastcote, Middlesex); Shepherd, Edwin (London); Winsor, Ronald Louis (Fareham, Hants). (*Overseas*): Green, James Gladstone (Capetown); Ross, Henry Sheldon, B.ARCH. (School of Architecture, McGill University, Montreal) (Granby, P.Q., Canada).

As Licentiates (9): Boutall, Richard Taunton (London); Fagg, Ernest William (Hythe, Kent); Fitzsimmons, Arthur (London); Gowen, Harry Josiah Thomas (Norwich); Harper Walter Geoffrey (Birmingham); Harris, Sidney Wesley (London); Lawson, Geoffrey Forsyth (Banbury, Oxon); Milne-Davidson, Major James Milne, I.S.O., F.S.A. (London); Wenning Victor Jacques (London).

COMPETITION FOR MUNICIPAL BUILDINGS, YEOVIL



DESIGN PLACED FIRST: BY T. CECIL HOWITT



Mr. C. Cowles-Voysey, F.R.I.B.A., the assessor of the competition for Town Hall, Municipal Offices, Public Library and Museum, Yeovil, has made his award as follows :

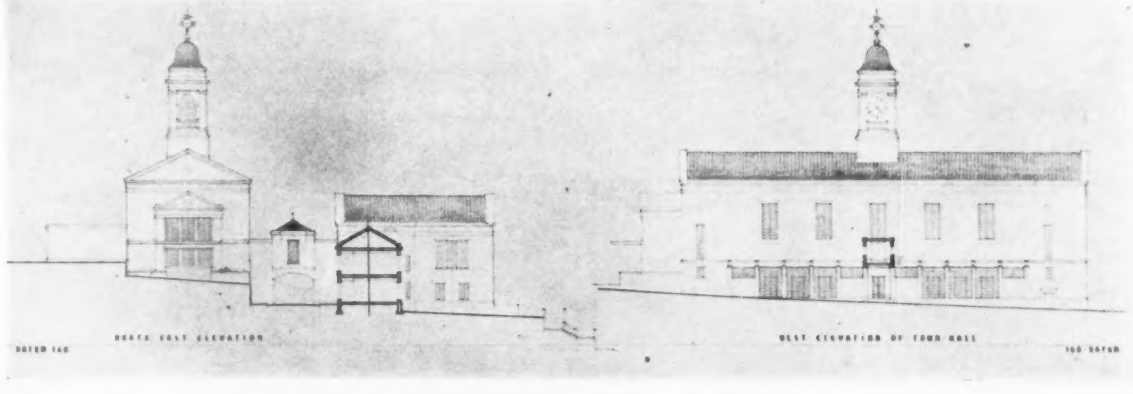
Design placed first (£200) : Mr. T. Cecil Howitt, F.R.I.B.A., St. Andrew's House, Mansfield, Nottingham.

Design placed second (£150) : Mr. Robert Lanchester, A.R.I.B.A., 19 Bedford Square, London, W.C.1.

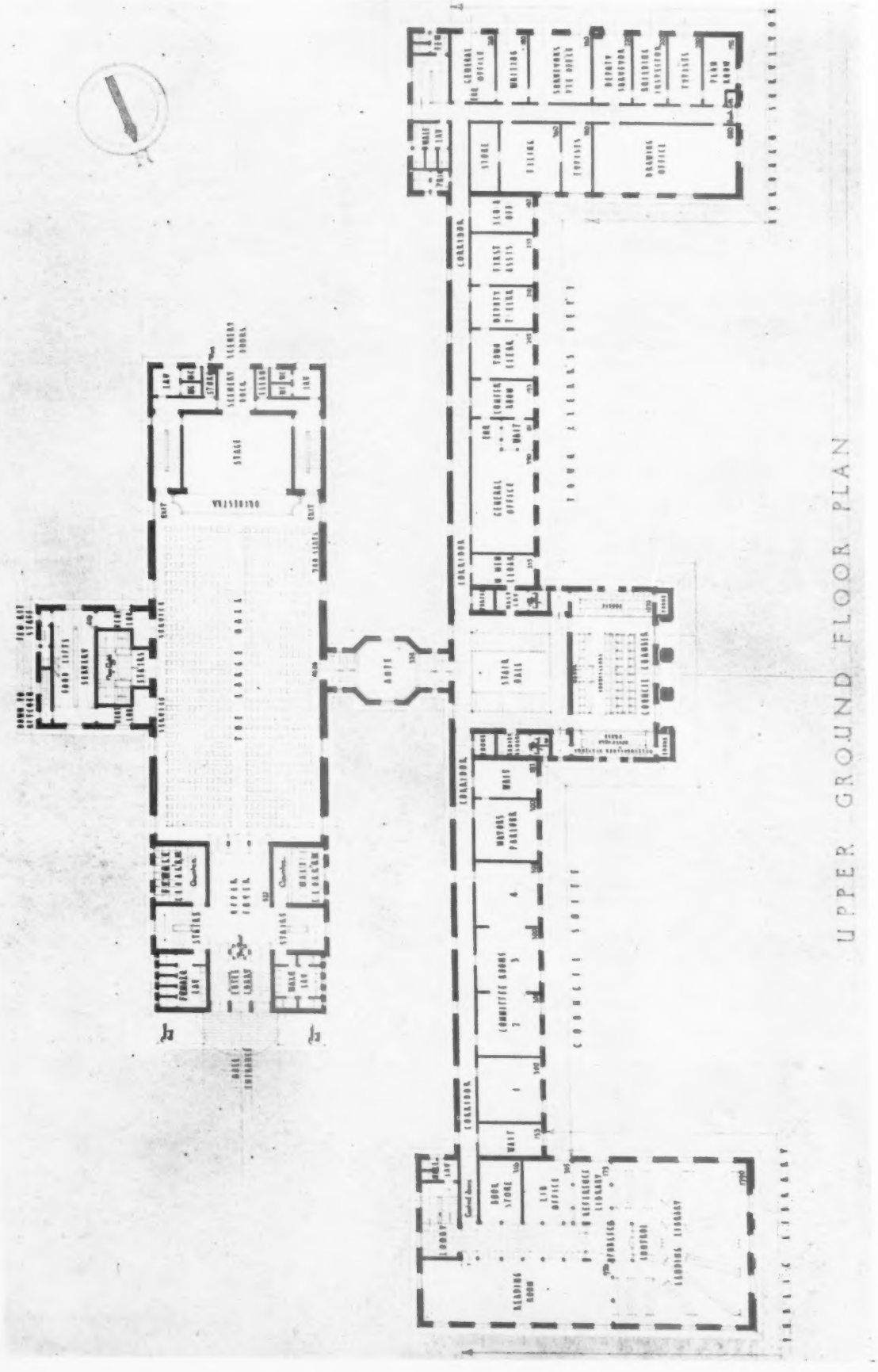
Design placed third (£100) : Messrs. Richard C. James and Meredith, F/L.R.I.B.A. (in collaboration with Mr. P. N. Taylor), 31 Nicholas Street, Bristol.

Design placed fourth (£50) : Messrs. Ernest Harold Cornes and George Allan Coutts, AA.R.I.B.A., c/o Messrs. Quiggin and Gee, FF.R.I.B.A., North House, North John Street, Liverpool 2.

An exhibition of the designs submitted in the competition will be held at Braggchurch, Hendford Hill, Yeovil, during the week commencing Monday, August 8.



COMPETITION FOR MUNICIPAL BUILDINGS, YEOVIL:



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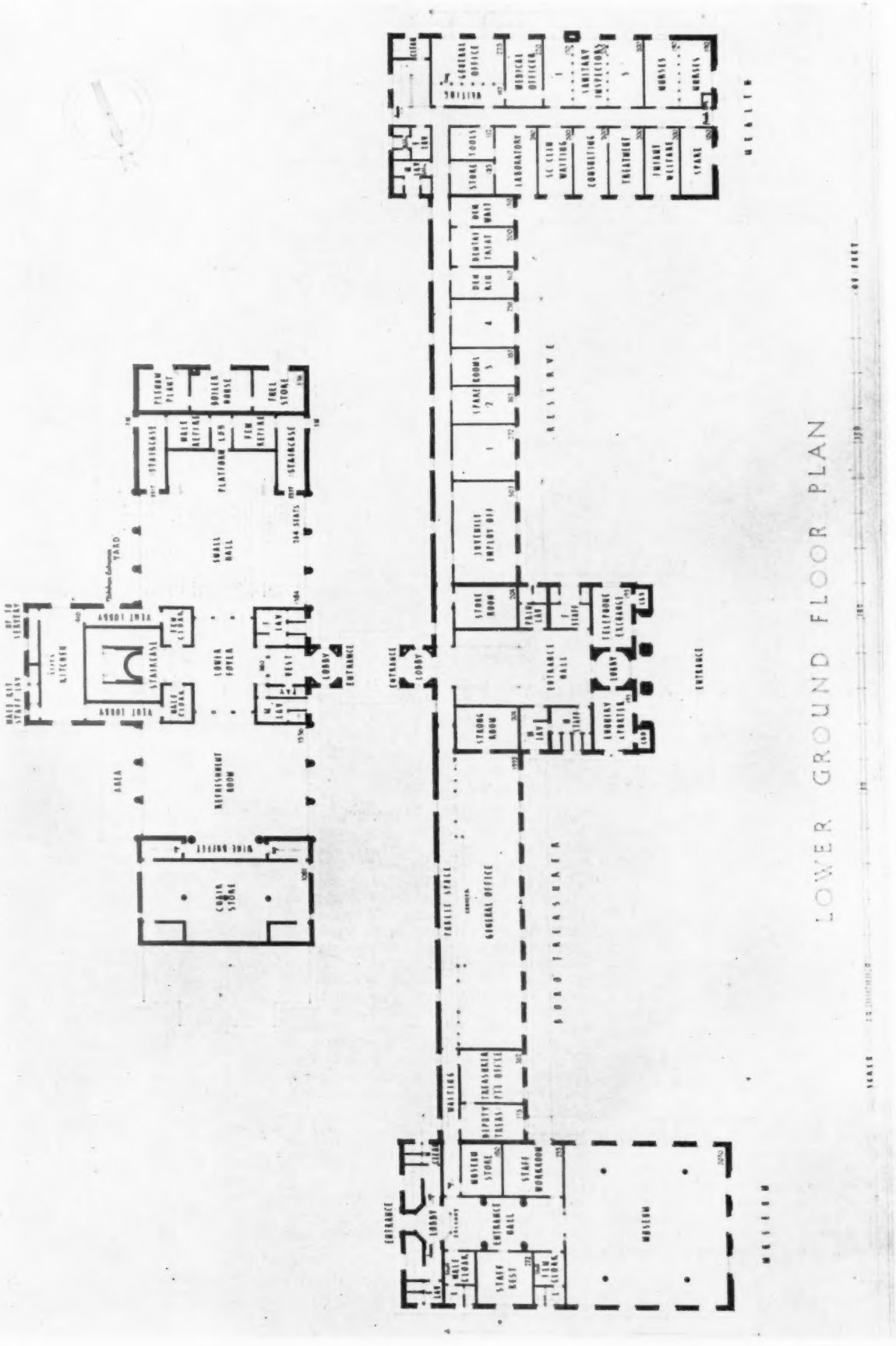
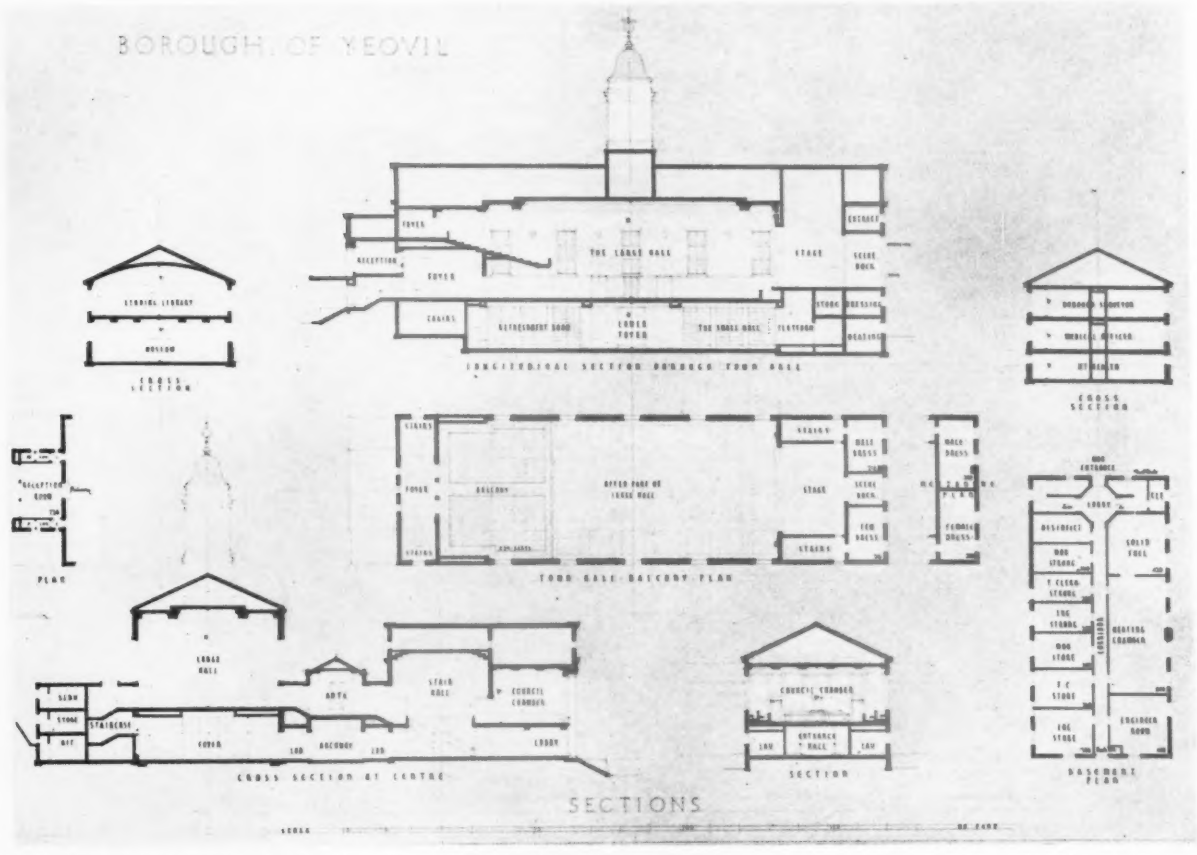


COMPETITION FOR MUNICIPAL BUILDINGS, YEOVIL



DESIGN PLACED FIRST: BY T. CECIL HOWITT

LAW REPORTS

DEMOLITION WORK IN LONDON

Crawford and Balcarres v. *Hill Street Investment Co., Ltd., and Oakley.—Chancery Division. Before Mr. Justice Morton*

THIS was a motion by the Earl of Crawford and Balcarres, of Audley Square, London, W., against the Hill Street Investment Co., Ltd., and Mr. Thomas Oakley, of Hill Street, London, W., for an injunction to restrain the defendants from committing certain acts in connection with demolition of houses in Hill Street.

Mr. Lindsay M. Jopling, for Earl Crawford, said when the motion was before the Court the previous week his client complained bitterly of vast clouds of dust which came from the demolition and also of solid debris which fell on to his premises through the demolition of neighbouring walls, that one brick actually fell through a skylight and hit a servant, and that in the circumstances his client was forced to bring an action. The defendants, however, met his client to some extent and gave an undertaking at the last hearing to keep the work suitably hosed down and to erect screens to the reasonable requirements of plaintiff's architect.

Counsel said he was glad now to announce that the parties had come to terms. The defendants were demolishing 41-49 Hill Street and plaintiff's house was adjacent. The defendants were now undertaking, in carrying on the demolition, continuously and adequately to spray the work with water by means of hoses to the reasonable requirements of his client's architect, to protect the plaintiff's house until the completion of the demolition by erecting and maintaining screens to the architect's reasonable requirements, the screens to be boarded so far as he should reasonably require and to remove forthwith at their own expense, on being given proper facilities for so doing, any dust or debris which should be let loose on the plaintiff's house.

On those undertakings the motion would be treated as the trial of the action and defendants would pay the costs.

Mr. Blanchard Stamp, for the defendants, agreed to those terms, and his lordship made an order staying all further proceedings, with liberty to apply.

LIABILITY FOR DILAPIDATIONS

Aldford House, Park Lane, Ltd. v. *Volz.—King's Bench Division. Before Mr. Justice Charles*

THE point raised in this action was whether the sub-letting of a flat by the widow of the lessee rendered her liable for dilapidations at the expiration of the lease. Mr. Volz was granted a lease of a flat at Aldford House, Park Lane, in February, 1933, for seven years at a rental of £600 a year for the first three years and £800 a year thereafter. Mr. Volz, however, died in July, 1933, and Mrs. Volz sublet the flat, but paid the rent to the plaintiffs. In accordance with the terms of the lease she gave notice to terminate the lease at the end of three years, and possession was then given to the plaintiffs, Aldford House, Park Lane, Ltd.

The plaintiffs brought this action against the defendant, maintaining that she had failed to comply with a schedule of dilapidations. They claimed damages, submitting that they had lost a quarter's rent through defendant's failure to carry out the dilapidations.

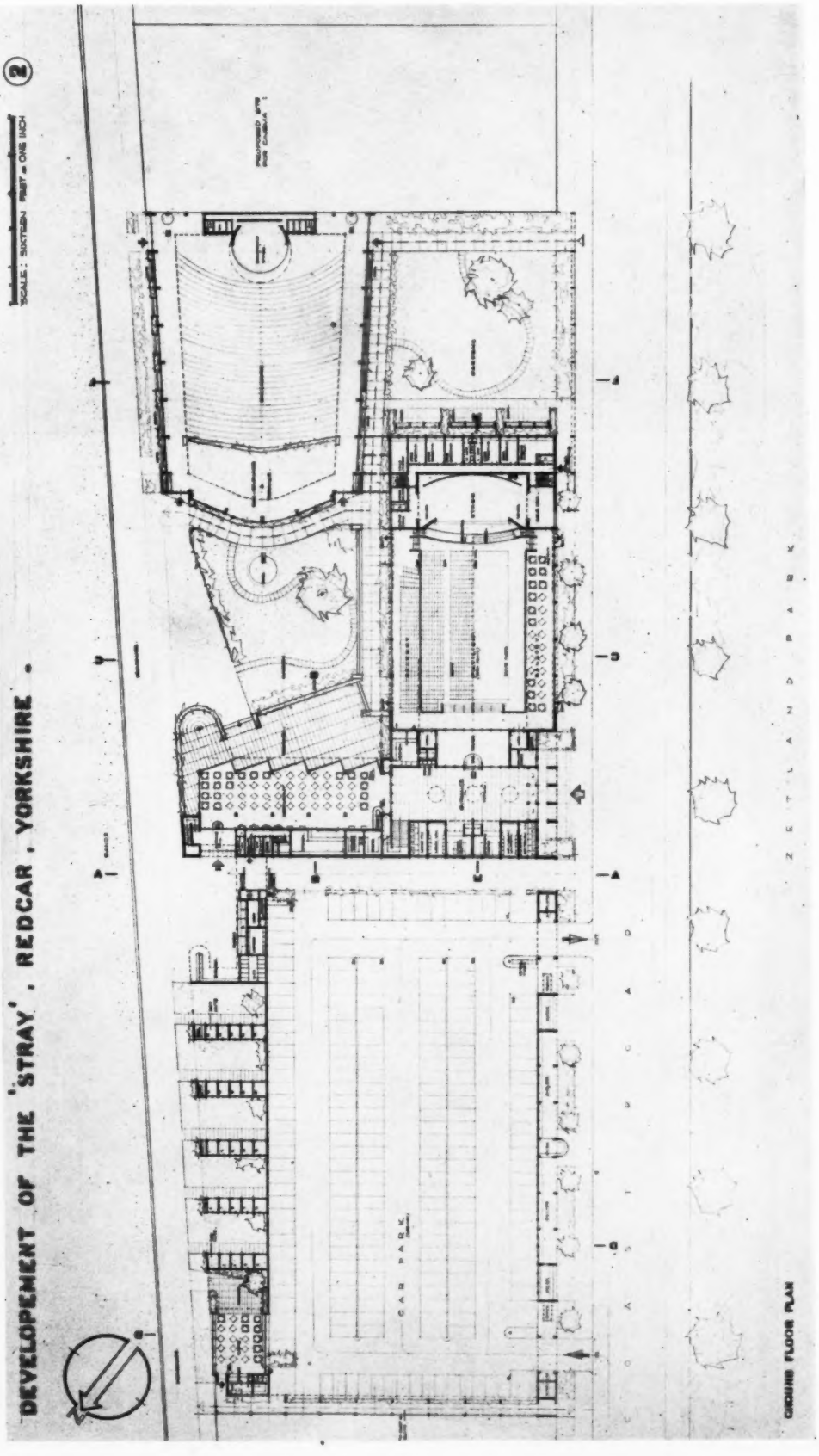
On behalf of the defendant it was argued that she was universal legatee under her husband's will, that there had been no assignment of the lease by the executors to her and that the plaintiffs had failed to prove that she was in the position of holding the lease which had been granted to her husband.

His lordship held that the defendant only held the lease as licensee and that therefore there must be judgment for the defendant, but without costs, as she had failed to inform the plaintiffs of the true position.

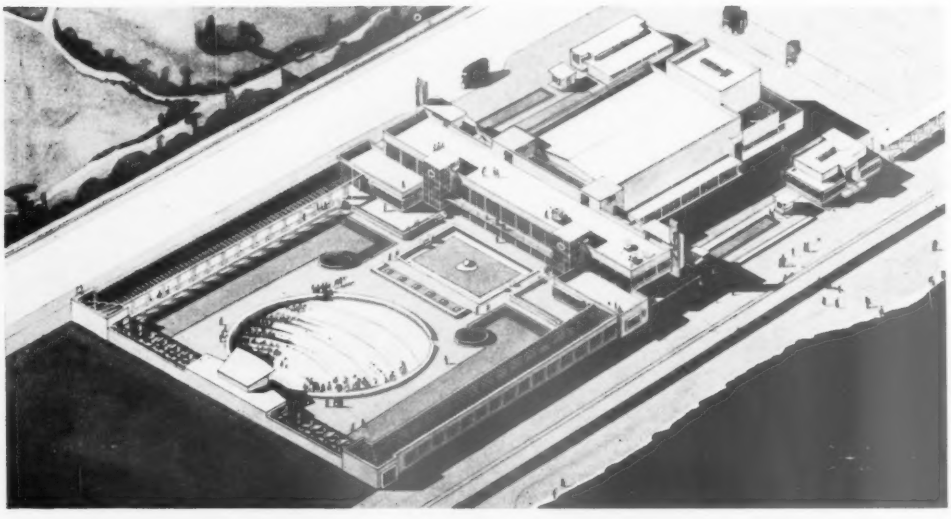
THE REDCAR COMPETITION : DESIGN PLACED SECOND

BY BIRKEN HOWARD

In last week's issue we illustrated the winning design, by Mr. R. P. S. Hubbard, in the competition for the development of the "Stray," Redcar. The names of the authors of the designs placed second and third were not made known until Friday last; the designs are reproduced on this and the following page.
Below, a photograph of a model of the scheme placed second. Right, ground floor plan.

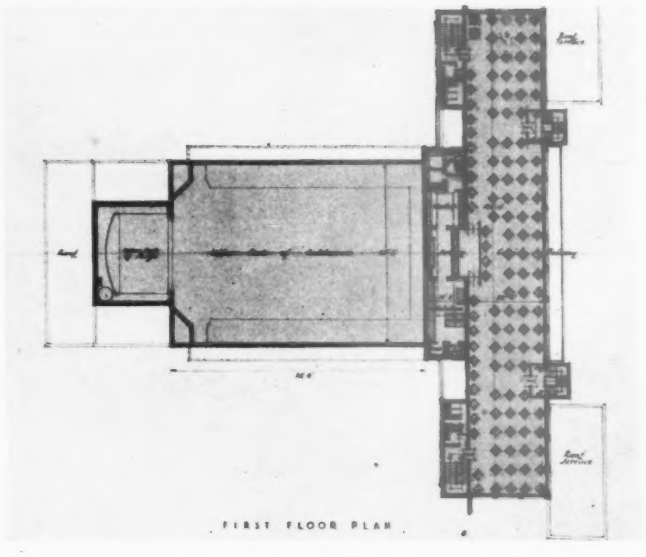


THE REDCAR COMPETITION: DESIGN PLACED THIRD

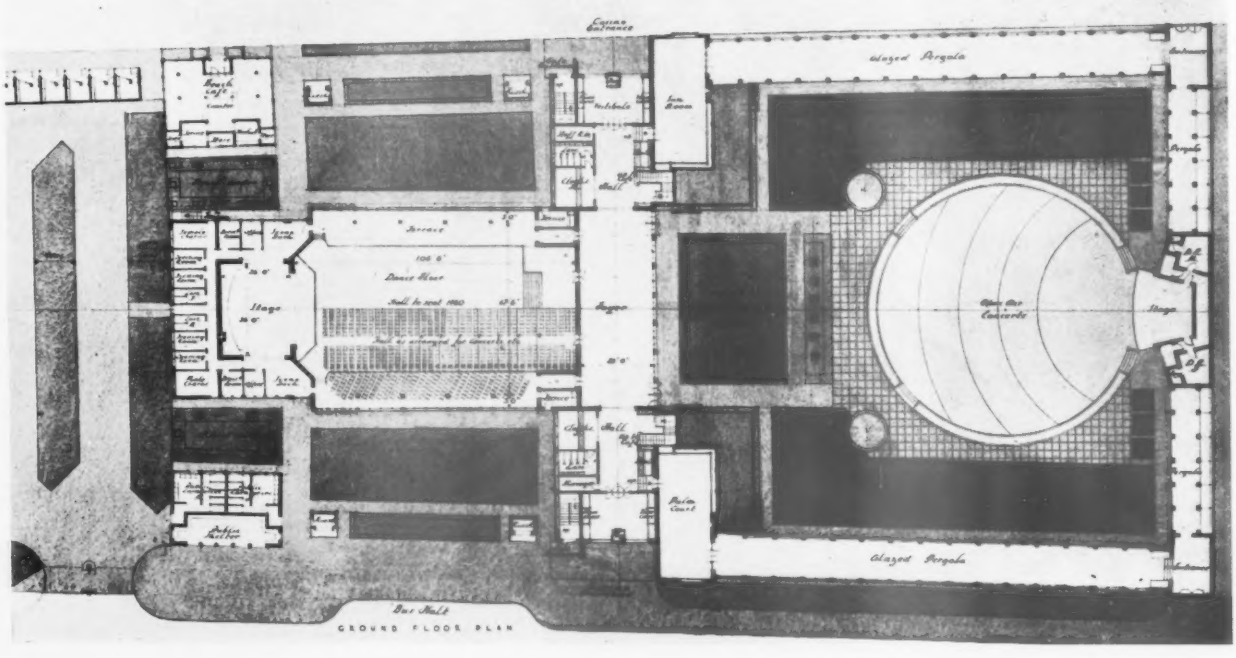


Left, photograph of a model of the scheme.

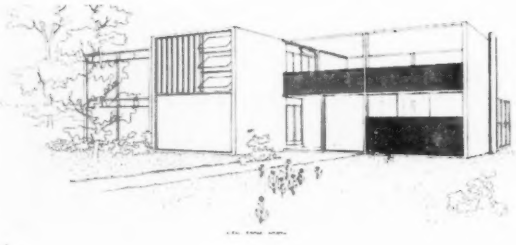
BY CORDINGLEY AND McINTYRE



Left, first floor plan; below, ground floor plan.



THE WORK OF THE SCHOOLS



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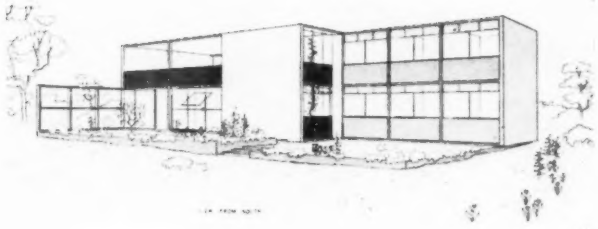

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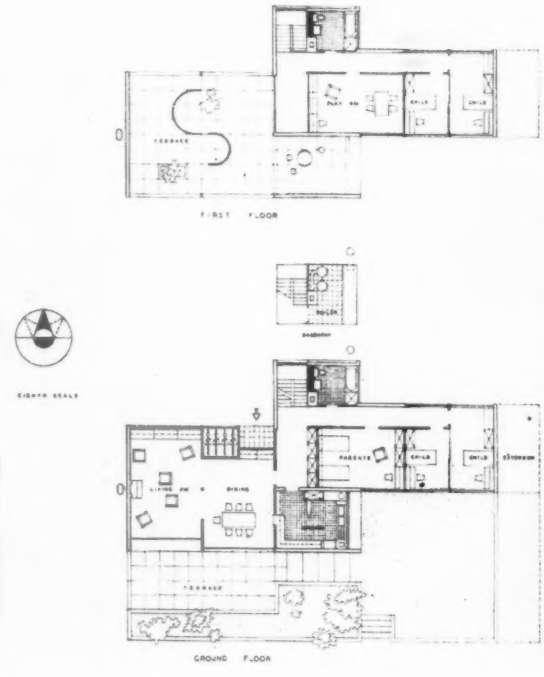

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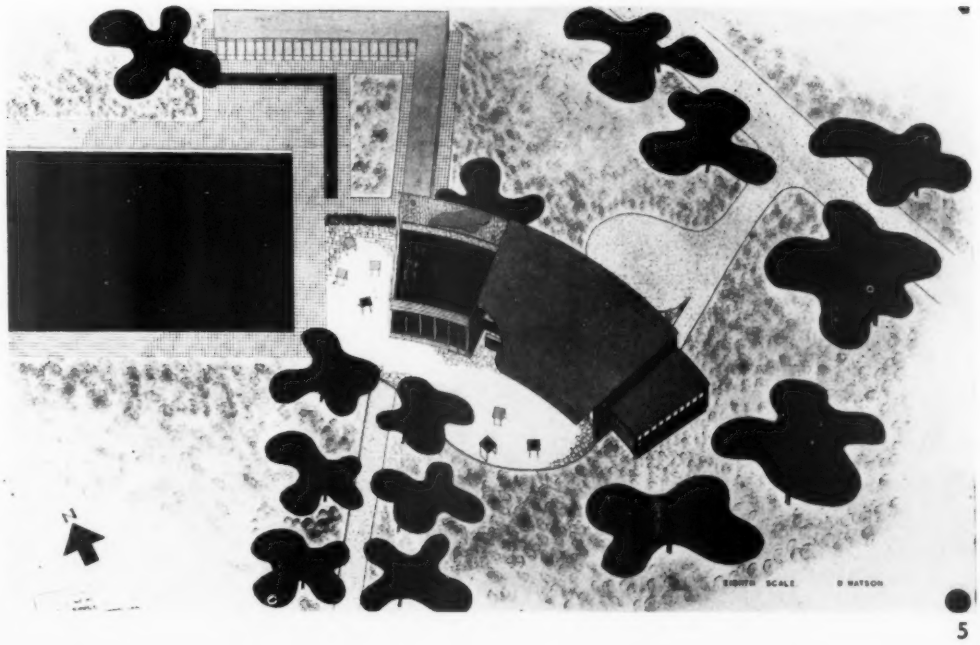
I : A.A. SCHOOL OF ARCHITECTURE

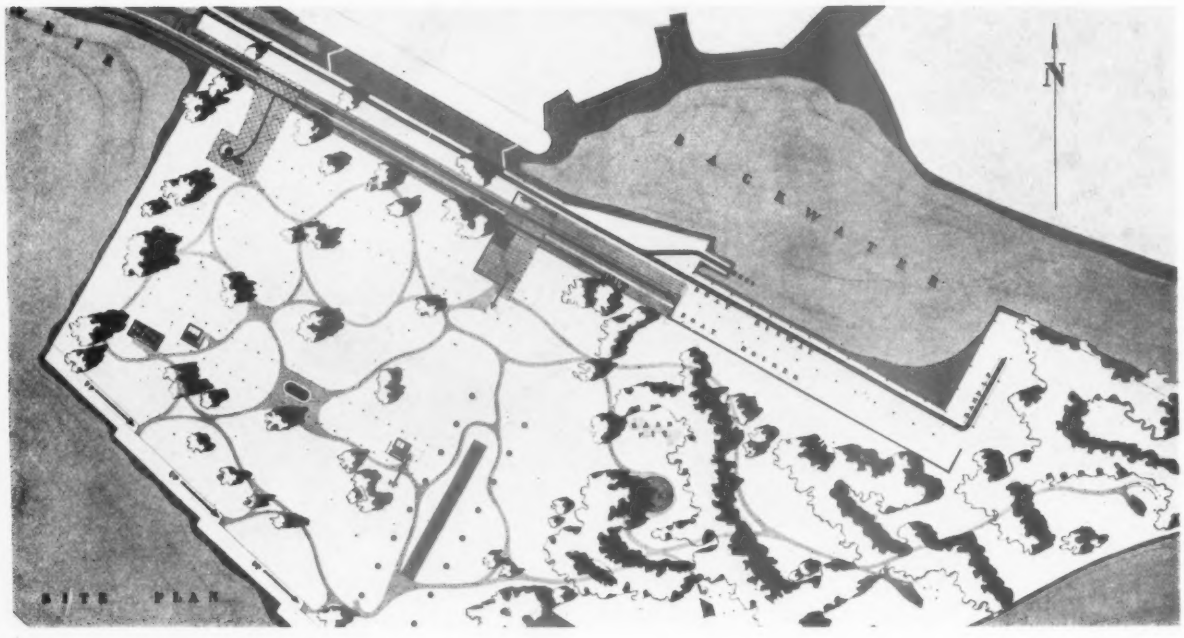


5

The annual exhibition of the work of the Students at the Architectural Association was opened at 36 Bedford Square, W.C., on Friday last by Lord Samuel. Some of the schemes on view are reproduced on this and the following page.

1, 2 and 3: Fifth-Year Group Working on "the Town": detached house type. 4: House at Windlesham showing interior decoration. By Peter Thornton (Fifth Year). 5: Restaurant Decoration. By D. Watson (Second Year).

THE WORK OF THE SCHOOLS



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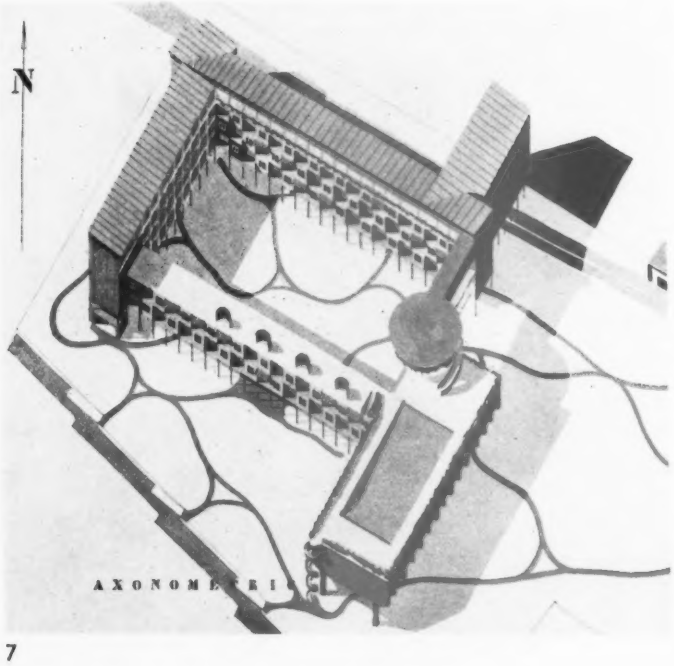
I: A. A. SCHOOL OF ARCHITECTURE



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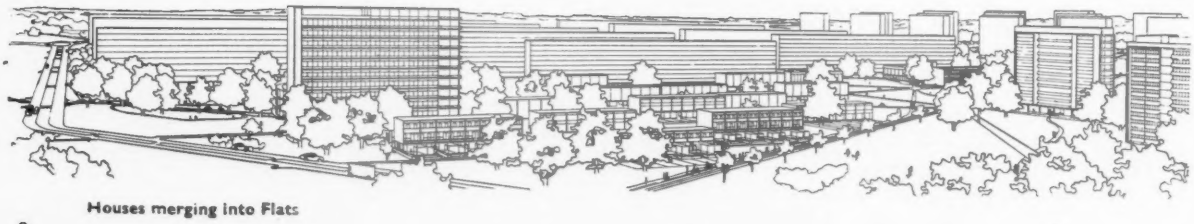
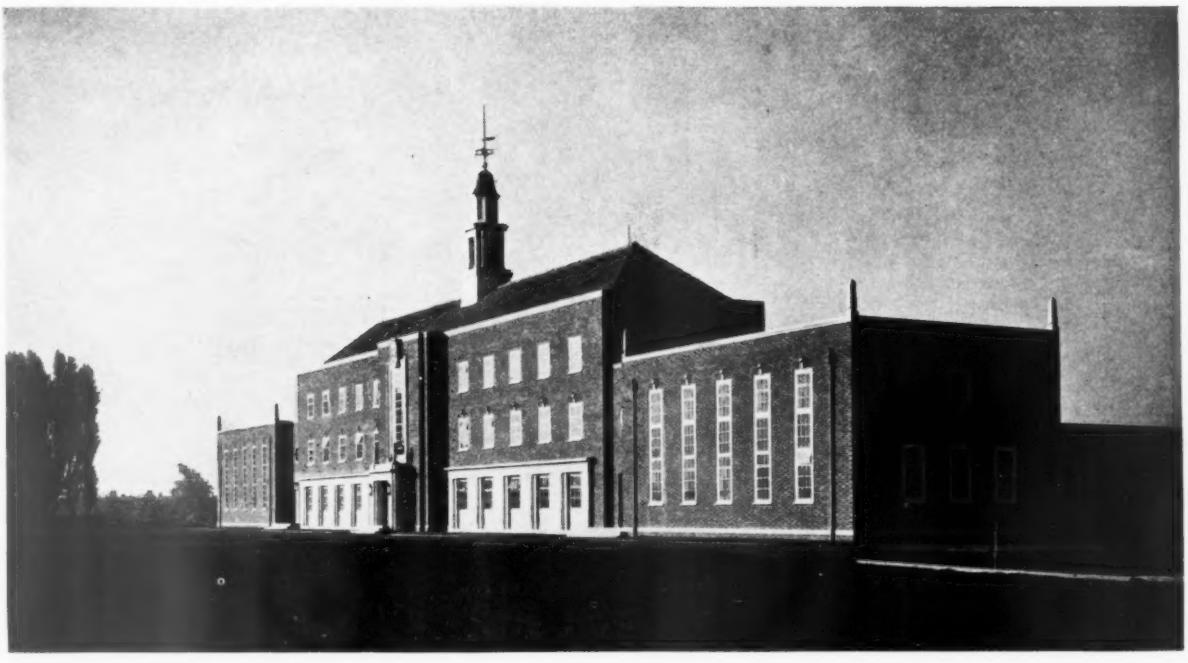
6 and 7: Boating Club at Marlow. By J. P. Tingay (Fifth Year). 8: Fifth Year Group working on "the Town"; the Flats zone of the Town.



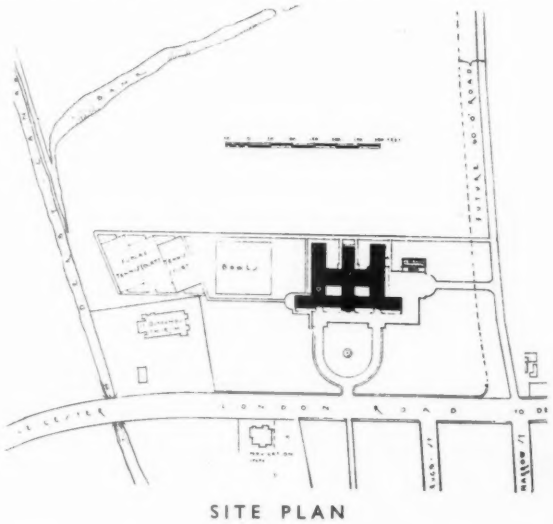
Houses merging into Flats

8

L.M.S. SCHOOL OF TRANSPORT, DERBY



DESIGNED BY
WILLIAM H. HAMLYN
(Principal Architect, L.M.S.)



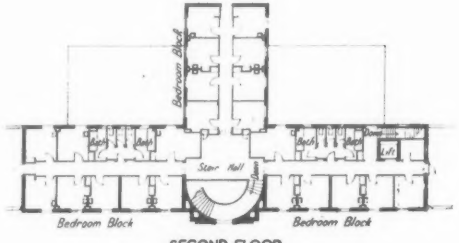
SITE PLAN

GENERAL—*The purpose of this scheme is explained in the caption to the frontispiece on page 152.*
SITE—*The School, built on a site in Osmaston Park, is placed 200 ft. from the road and surrounded by ample open space which later in the year will be formed into lawns and ornamental shrubberies, a portion being laid out for bowling green and tennis courts. Trees of various kinds will also be planted.*
Top, a view of the main front taken from the north-west. Right, the main entrance; the small sculptured panels, by Mr. Denis Dunlop, shown on the right symbolize some of the principal activities of the railway company.

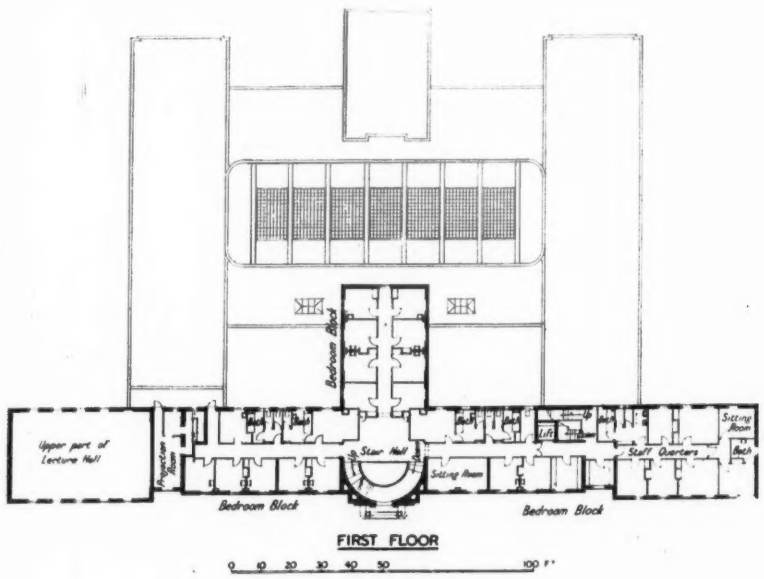
L.M.S. SCHOOL OF TRANSPORT, DERBY: BY WILLIAM H. HAMLYN

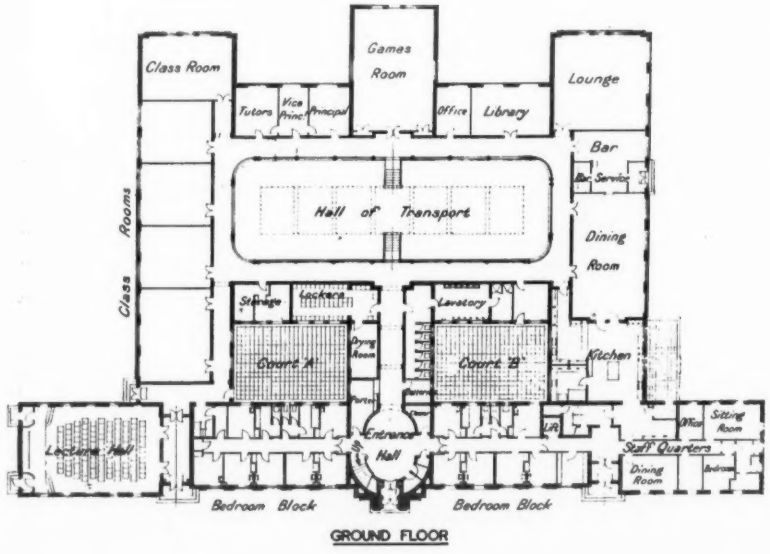
PLAN—*The plan, although designed as one unit, consists of three sections, namely, educational, domestic and social.*

Top, the large mural painting in the lounge entitled "One Hundred Years"; it indicates the portico at Euston together with, on the right, a portion of Drummond Street as it existed when "Euston Grove Station" was built, and on the left the street as it exists today with a portion of a new building to suggest the new Euston being erected. This panel was designed by the architect and painted by him with the assistance of three members of the architectural staff, Messrs. J. F. Cooper, H. H. Matthews and J. Carter. Right, the hall of transport and the lecture theatre. The hall of transport is 118 ft. long and 47 ft. wide, and is surrounded by an aisle divided from the central space by a colonnade. The central space is sunk 3 ft. 6 ins. below the floor, and in it will be placed an electrically operated model railway, together with complete full-scale signalling instruments and other apparatus for demonstrating train operation.



SECOND FLOOR





CONSTRUCTION AND FINISHES — *Brick walls, faced with selected sand-stock multi-coloured facing bricks in quiet tones and pointed with a light cream mortar finished flush. Dressings of Portland stone are used throughout. The construction of the roof of the main block is of steel principals covered with weather boarding and tiles. The flat roofs of the building are covered with special insulation, the whole of the roof and supporting columns in hall of transport being reinforced concrete. The turret is constructed of teak with a copper cupola and flashings and a gunmetal weather vane, the "rocket" pointer being fitted with enclosed and lubricated ball bearings. The constructional floors are reinforced concrete covered with smooth cement screed to take the floor coverings which with the exception of the lounge and certain of the offices are laid throughout with cork tiles. Each of the floors is constructed to bear on the external walls and the partitions dividing the rooms are of hollow molar blocks. The building is plastered throughout, a certain amount of low relief ornamental fibrous plasterwork being incorporated in the design of the principal rooms. All windows are of steel.*

Above, the classroom equipped for educational film projection.

OFFICE BUILDING, WORCESTER

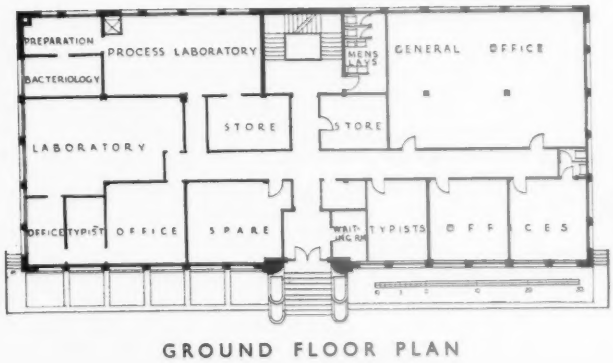
DESIGNED BY S. N. COOKE

GENERAL — *New building at Penry Wood, Worcester, for the Metal Box Co., Ltd., incorporating offices, mess and recreation room, kitchens, cloakrooms and laboratories. The building was planned to adjoin a factory at the rear, overlooking tennis courts and a roadway in front.*

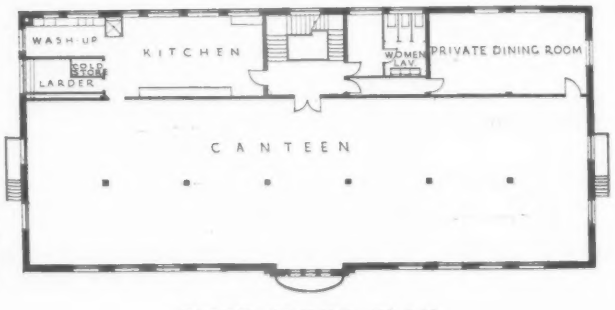
CONSTRUCTION AND FINISHES— *Steel frame construction with wood floors. Facings are in hand-made bricks, with reconstructed stone dressings. Finish internally is of plaster with wood block floors throughout.*

Left, a view of the entrance front.

For general and sub-contractors, see page 185.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

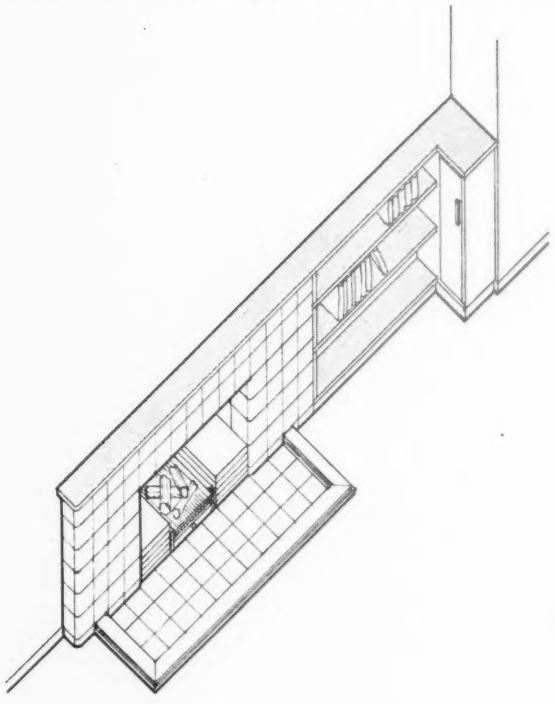
WORKING DETAILS : 669

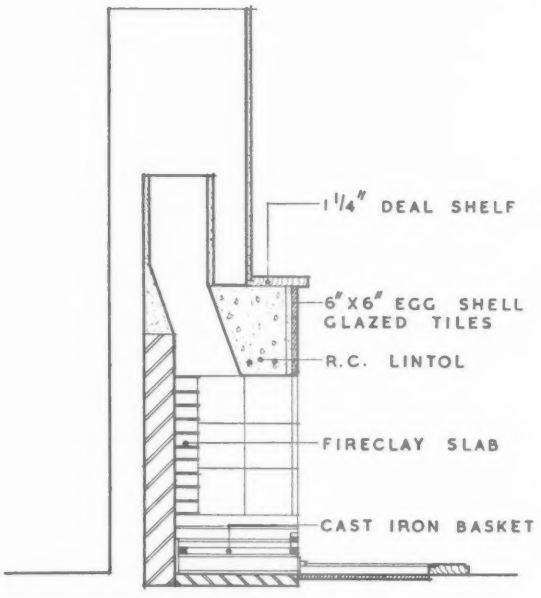
FIREPLACE • HOUSE AT TEWIN, HERTS • MARY CROWLEY

The fireplace is in the living room. It has a fireclay back and hobs, with surround and hearth in egg-shell glazed tiles. Adjoining the fireplace is a row of book shelves and small cupboard in deal, painted. The hearth has an oak surround.
Details are shown overleaf.

WORKING DETAILS : 670

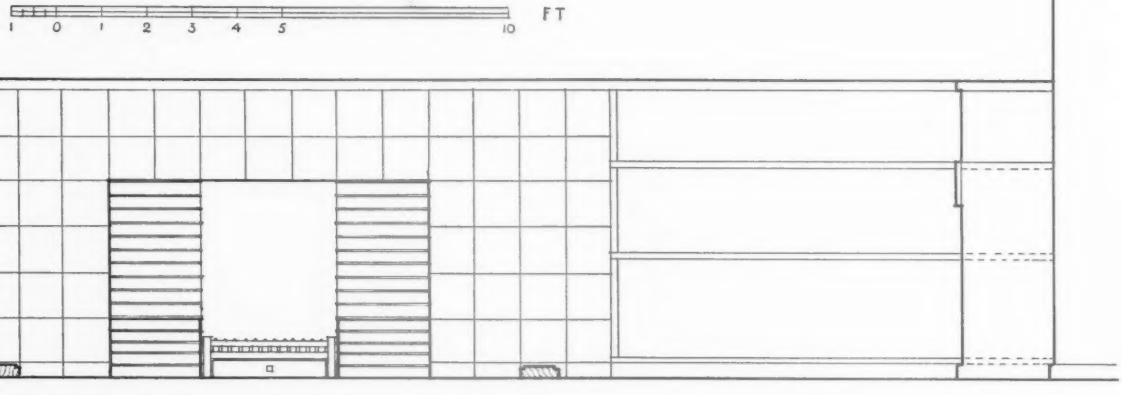
FIREPLACE • HOUSE AT TEWIN, HERTS • MARY CROWLEY



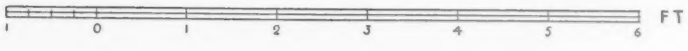


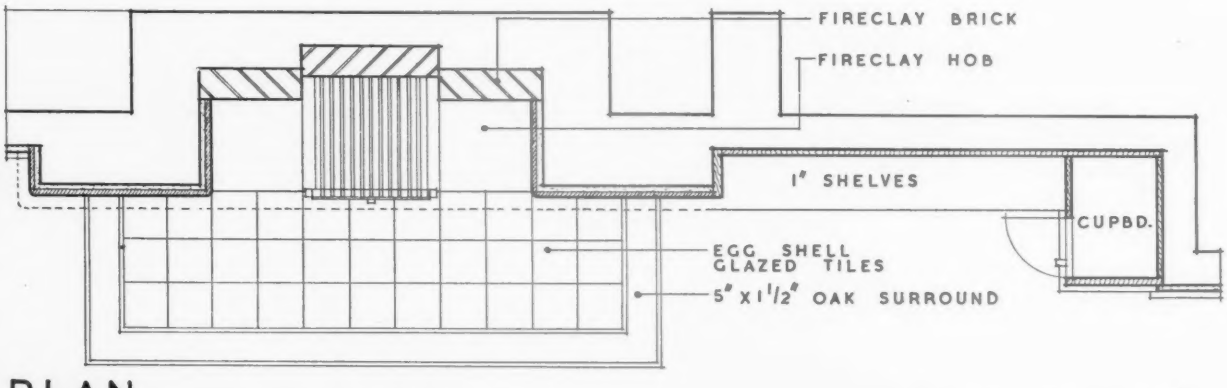
SECTION

AXONOMETRIC



ELEVATION





PLAN

Axonometric and details of the fireplace illustrated overleaf.

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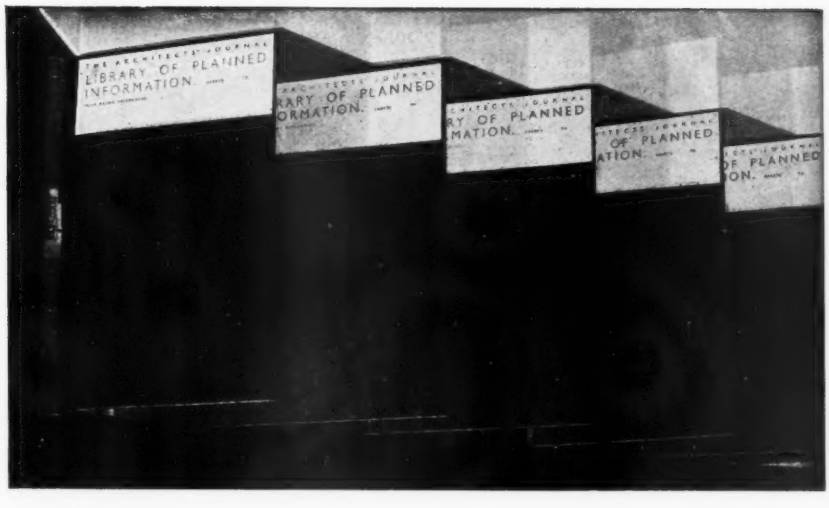
INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

647 Veneers

648 U.S.A. Plumbing—V



In order that readers may preserve their Information Sheets, specially designed loose-leaf binders are available similar to those here illustrated. The covers are of stiff board bound in "Rexine" with patent binding clip. Price 2s. 6d. each post free.

Sheets issued since Index :

601 : Sanitary Equipment
602 : Enamel Paints
603 : Hot Water Boilers—III
604 : Gas Cookers
605 : Insulation and Protection of Buildings
606 : Heating Equipment
607 : The Equipment of Buildings
608 : Water Heating
609 : Fireplaces
610 : Weatherings—I
611 : Fire Protection and Insulation
612 : Glass Masonry
613 : Roofing
614 : Central Heating
615 : Heating : Open Fires
616 : External Renderings
617 : Kitchen Equipment
618 : Roof and Pavement Lights
619 : Glass Walls, Windows, Screens, and Partitions
620 : Weatherings—II
621 : Sanitary Equipment
622 : The Insulation of Boiler Bases
623 : Brickwork
624 : Metal Trim
625 : Kitchen Equipment
626 : Weatherings—III
627 : Sound Insulation
628 : Fireclay Sinks
629 : Plumbing
630 : Central Heating
631 : Kitchen Equipment
632 : Doors and Door Gear
633 : Sanitary Equipment
634 : Weatherings—IV
635 : Kitchen Equipment
636 : Doors and Door Gear
637 : Electrical Equipment, Lighting
638 : Elementary Schools—VII
639 : Electrical Equipment, Lighting
640 : Roofing
641 : Sliding Gear
642 : Glazing
643 : Glazing
644 : Elementary Schools—VIII
645 : Metal Curtain Rails
646 : Plumbing

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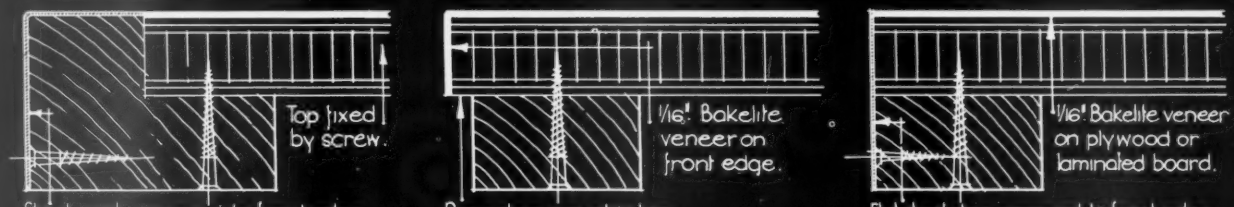
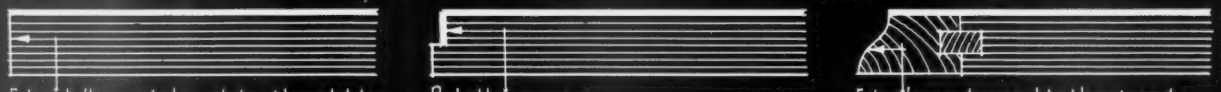
DETAILS SHOWING METHODS OF APPLICATION OF BAKELITE VENEERS ON PLYWOOD

Ⓐ HALF FULL SIZE SECTIONS SHOWING CONSTRUCTION & EDGINGS OF COUNTER & BAR TOPS & FRONTS:
For counter & bar tops ·BAKELITE· sheet is used as veneer on plywood or laminated board.



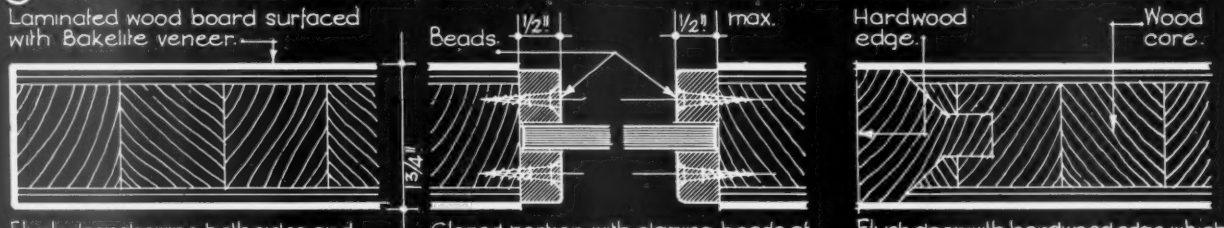
Steel angle screwed to front edge. STAINLESS STEEL ANGLE ON FRONT EDGE.
Projecting counter top. BAKELITE VENEER ON FRONT EDGE.
Flat steel strip screwed to front edge. STAINLESS STEEL STRIP ON FRONT.

Ⓑ HALF FULL SIZE SECTIONS SHOWING CONSTRUCTION AND EDGING OF TABLE TOPS:
For table tops ·BAKELITE· veneer may be used as a surface on 3/4" plywood.



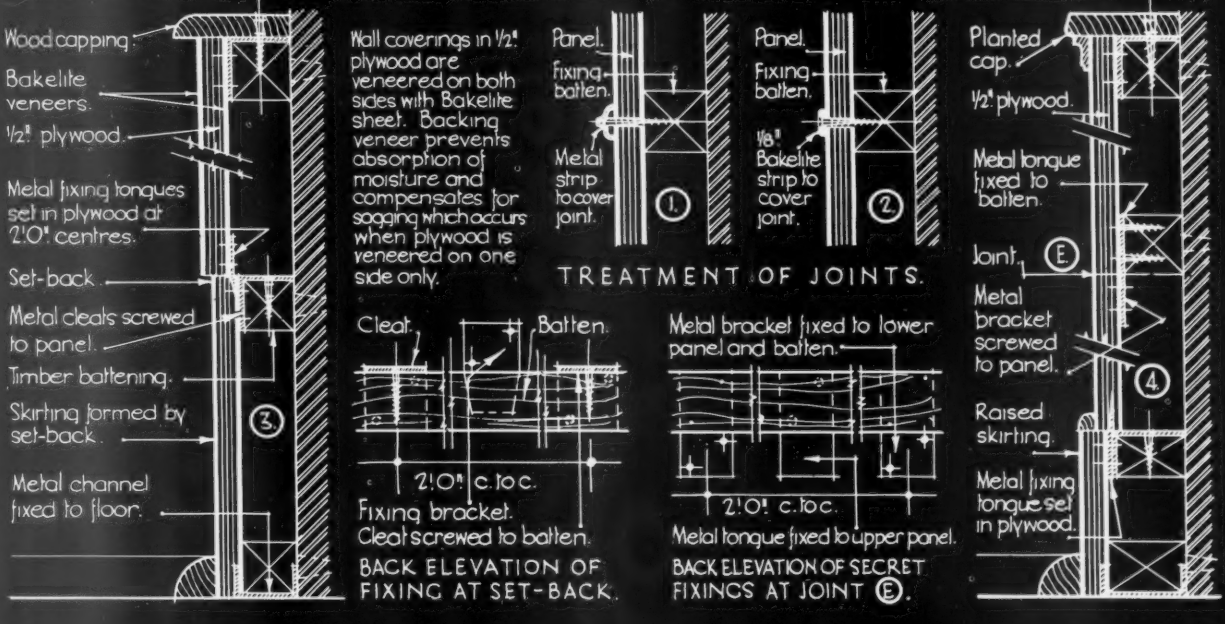
Edge left open to be polished to match top. BAKELITE VENEER ON ONE SIDE ONLY.
Bakelite veneer. BAKELITE VENEER ON EDGE.
Edge formed in moulded hardwood. MOULDED HARDWOOD EDGE.

Ⓒ HALF FULL SIZE TYPICAL SECTION THROUGH LAMINATED WOOD CORED FLUSH DOOR:



Flush door showing both sides and edge surfaced with Bakelite veneer.
Glazed portion with glazing beads of wood, metal, or Bakelite sheet.
Flush door with hardwood edge which may be polished to match Bakelite.

Ⓓ QUARTER FULL SIZE SECTIONS & ELEVATIONS SHOWING TYPICAL CONSTRUCTION OF WALL PANELLING:



BACK ELEVATION OF FIXING AT SET-BACK.
BACK ELEVATION OF SECRET FIXINGS AT JOINT Ⓔ.

Information from Bakelite Limited.

INFORMATION SHEET: BAKELITE VENEER ON PLYWOOD & LAMINATED BOARD.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar A. Bayne

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 647 •

VENEERS

Product : Bakelite veneers on plywood and solid wall panels

General :

This Sheet deals with the methods of application of Bakelite veneers to plywood and laminated wood board surfaces.

Description and Properties :

Bakelite veneers are light in weight and strong. They possess a hard non-brittle surface, resistant to acids and mild alkalis, and will not mark through contact with hot liquids, alcohol and steam condensation. A special grade known as Bakelite blisterproof veneer is available and this will not blister on contact with burning cigarettes. The veneer is easily cleaned by wiping with a damp cloth, does not crack or break and has a permanent finish. There is no maintenance cost.

Veneered plywood can be worked in the same way as wood. It can be sawn, drilled, planed and machined with ordinary wood-working tools.

Uses :

The veneers can be used for purposes such as those suggested below, where strength, durability and decorative appearance are desired.

(*a*) Counter and bar-tops can be made to any length by butt-jointing 7 ft. or 8 ft. lengths of Bakelite veneer. Edges can be of hardwood polished to match, or formed by a stainless steel angle or metal strip screwed to the front edge of the counter. The veneer can be used to form the front edge.

Fronts may be flushed or panelled, with kicking plates of Bakelite sheet.

(*b*) Table tops may be of $\frac{3}{4}$ in. ply with veneer on the top side only. The edges may either be left open for polishing to match the top or frame, covered with veneer, or the edge may be formed in moulded hardwood.

Inlaid designs, incorporating two or more colours, trademark designs, etc., can be made if desired.

(*c*) Flush doors with laminated wood cores may be veneered on both sides to provide a door which will stand severe use without finger or kicking plates. These doors are particularly suitable for hospitals, public buildings, bathrooms and lavatories.

Edges may also be covered with the veneer or may be of hardwood polished to match. In a glazed door, glazing beads may be of Bakelite strip up to a maximum thickness of $\frac{1}{2}$ in.

Surface designs may be inlaid in various colours.

(*d*) Wall panelling and skirtings may be formed by using interlocking fixing devices as shown on this Sheet.

Where butt joints in veneered plywood panelling are not desired, the joints should be left open far enough to admit screws fixing a cover strip of metal, hardwood or $\frac{1}{8}$ in. Bakelite sheet. Battens fixed to the wall are placed behind the joints in the panelling to take the fixing screws. Diagram D (3) illustrates the method of constructing and fixing a set-back skirting to veneered plywood wall panelling.

A metal channel is fixed to the floor and a batten which rests in the channel is plugged to the wall. Intermediate battens are fixed at suitable heights.

The veneered plywood skirting is pushed down on to the free end of the channel, and metal cleats, previously screwed to the back of the skirting at 2 ft. centres, are fixed down to the middle batten.

Cleats and metal brackets are fixed to the top and lower edges of the panel. The tapered tongues of the fixing brackets are then pushed down into the plywood of the panel or skirting below and the cleats screwed to the top-most batten and covered with a wood capping.

Diagram D (4) illustrates secret fixing for butt-jointed panels by means of inter-locking tongued brackets.

The fixing for the raised skirting is similar to that shown in D (3) with the exception that the tongued brackets as well as the cleats are screwed to the top edge of the skirting. Metal brackets at 2 ft. centres are fixed to the top edge of the next panel, which is then pushed down on to the tongue projecting above the skirting. The brackets are then screwed to the intermediate batten.

The upper panel, which has cleats and tongues fixed to the top and bottom ends, is then placed on to the middle panel so that the tongues slide down between the face of the batten and the back of the lower panel. This gives a butt joint. The top of the upper panel is then fixed and covered as described in D (3).

Among other uses of Bakelite veneers are hospital table and locker tops ; X-ray couch tops; panels for electro-medical equipment ; telephone switchboards ; telephone call-box backboards ; advertising displays ; finger and kicking plates for panel doors.

Finishes :

The veneers are obtainable with highly polished, satin or egg-shell finishes, and in a wide selection of colours and patterns. Colours range from light pastels to jet black. Veneers are also obtainable with wood-grain effects, imitation marble and coloured mottles, and with inlaid designs in contrasting colours and patterns.

Sizes :

Sheets are supplied in two sizes, 84 ins. by 36 ins., and 100 ins. by 50 ins. Veneers are $\frac{3}{64}$ in. thick, except the blisterproof veneers, which are $\frac{1}{16}$ in. thick. Solid wall panels are supplied $\frac{5}{32}$ in. thick, and finishes can be made in thicknesses up to $\frac{1}{2}$ in.

Manufacturers : Bakelite, Limited

Address : London, S.W.1

Telegrams : Bakelite, London

691. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

TABLE SHOWING THE FREQUENCY OF RECURRENCE OF PEAK LOADS ON PLUMBING SYSTEMS.

The table below is based on the findings of the U.S.A. Department of Commerce Sub-committee on Plumbing, and was evolved in order to establish a standard by which the sizes of waste stacks might be criticised. A similar table relating to waste systems in private houses was dealt with in the preceding sheet of this series.

PUBLIC SYSTEMS.

The table given here deals with public systems, which are defined as comprising public conveniences, railway toilets, factory and office building toilets, schools etc. in which each fixture is enclosed in a separate compartment and is accessible for use at all times.

APPLICATION OF THE TABLE TO MIXED INSTALLATIONS.

The water-closet is taken as a typical unit throughout the table for the purpose of simplifying the calculations, but the figures are equally valid for systems carrying a variety of fittings.

To apply the tables to a mixed installation, the fixture unit value for the desired combination of fittings should be found and referred to the nearest corresponding figure in the column which shows the fixture unit values of the various combinations of water-closets. The peak load recurrence figures will correspond with those given for the W.C. installation of the same total fixture unit value.

PROBABLE RECURRENCE OF OVERLAPPING DISCHARGES OF WATER-CLOSETS IN PUBLIC SYSTEMS. Average duration of flush 10 seconds. Interval between flushes 5. minutes. Overlap of discharges 4 secs. min.

NO OF CLOSETS IN ONE SYSTEM.	EQUIVALENT FIXTURE UNIT VALUE.	No. of closets discharged.	Equivalent Fixture Units.	RUSH PERIOD OF 2 HOURS PER DAY.		RUSH PERIOD OF 3 HOURS PER DAY.		RUSH PERIOD OF 10 HOURS PER DAY.	
				Overlap once in (Days.)	Overlap once in (Years.)	Overlap once in (Days.)	Overlap once in (Years.)	Overlap once in (Days.)	Overlap once in (Years.)
3	18	2	12	1·4	•	1·0	•	0·3	•
		3	18	208	•	139	•	41	•
4	24	3	18	52	•	35	•	10	•
		4	24	•	28	•	19	•	6
5	30	4	24	•	6	•	4	•	1
		5	30	•	1,427	•	950	•	285
6	36	4	24	•	1·9	•	1·2	•	0·4
		5	30	•	1020	•	680	•	204
8	48	4	24	140	•	93	•	28	•
		5	30	•	23	•	15	•	5
10	60	5	30	•	6	•	4	•	1
		6	36	•	339	•	226	•	67
12	72	5	30	658	1·9	438	•	131	•
		6	36	•	77	•	51	•	15
25	150	7	42	•	7·4	•	•	•	•
50	300	9	54	•	3·5	•	•	•	•
120	720	13	78	•	1	•	•	•	•
180	1,080	18	108	•	76	•	•	•	•

For notes and tables relating to the Fixture Unit System and its application see the 2ND sheet of this series.

Extracted from a report made by a sub-committee on Plumbing. U.S.A. Dept. of Commerce.

INFORMATION SHEET: EXPERIMENTS ON THE EFFICIENCY OF WASTE PLUMBING: 5.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Olca A. Bayne

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 648 •

U.S.A. PLUMBING—V

Subject : Plumbing Systems

This series of Sheets is based on extracts from a report, "Recommended Minimum Requirements for Plumbing," issued by the Sub-committee on Plumbing of the United States of America Department of Commerce, which carried out a series of tests on plumbing systems specially erected for experimental purposes.

This Sheet summarises certain conclusions of the committee with regard to the peak loads liable to be carried by waste plumbing systems.

Determination of Peak Load :

The tables on this Sheet and the preceding Sheet of the series show the probable frequency of recurrence of the maximum or probable highest working loads on waste systems, in order to establish a standard by which the sizes of waste stacks may be criticised scientifically. This Sheet deals with public systems, and the preceding Sheet dealt with private systems. (A definition of public systems is given on the front of the Sheet.)

Mixed Systems :

Although the water-closet has been chosen as the typical unit for the purpose of simplifying the calculations, the tables are also valid for installations comprising a variety of fittings (such as baths, sinks, shower-baths, etc.). While it would have been possible to have made separate calculations relating to these other fittings this was considered unnecessary as it was found that for two systems having the same total combined rate of discharge, one composed entirely of water-closets, and the other a mixed system of water-closets and smaller fittings, the probability of a given volume discharge is greater for the system composed entirely of water-closets than for the mixed systems.

When mixed systems are under consideration, the total fixture unit value of any given combination of fittings should be ascertained. (Sheet No. 2 of this series deals with the theory and application of the fixture unit system), and the figures that apply to the group of water-closets having the same, or next higher total fixture unit rating can be taken to apply to the mixed system in question.

Analysis of Determining Factors

The chief factors determining the frequency of recurrence of high loads on water-closet waste systems are the duration of the flush, and the interval between flushes.

In practice these two factors show wide individual variations, depending on conditions such as location, the kind and condition of the apparatus, the supply system, etc., but a certain average was established by observation of many separate installations which is considered to give a good working basis for calculations regarding any normal public installation. These are as follows :—

(*a*) Average duration of flush 10 seconds.
(*b*) Interval between flushes 5 minutes with daily rush periods averaging 2, 3 or 10 hours daily.

An overlap of discharge of two fittings is also taken into consideration wherever the period of coincidence equals or exceeds 4 seconds.

Method of Probabilities

The tables were worked out on a system based on a study of the theory of probabilities. The variable factors are so many, and in themselves so little amenable to standardisation that the tables are to be taken rather as indications than as rigidly determined facts, and they are considered more applicable to large installations than to small ones. They do, however, it is considered, provide a criterion more reliable than the custom of establishing the probable peak load by arbitrarily taking a given fraction of the combined discharge of all the fixtures on a system.

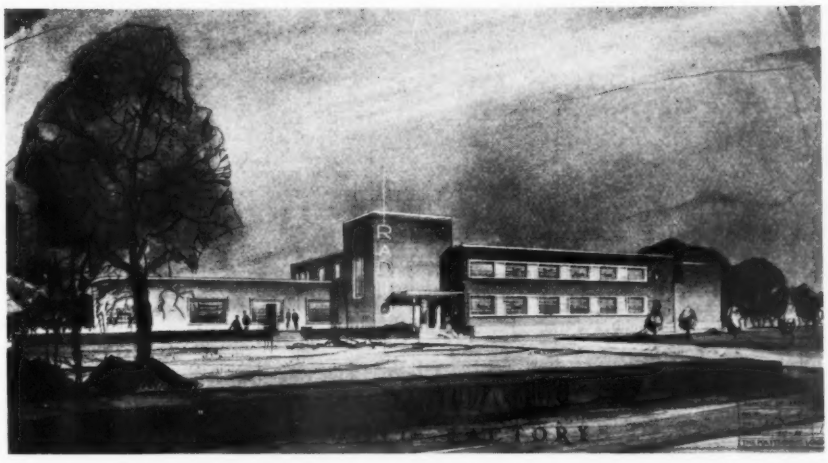
Previous Sheets :

The first four sheets in this series are Nos. 484, 518, 547 and 551.

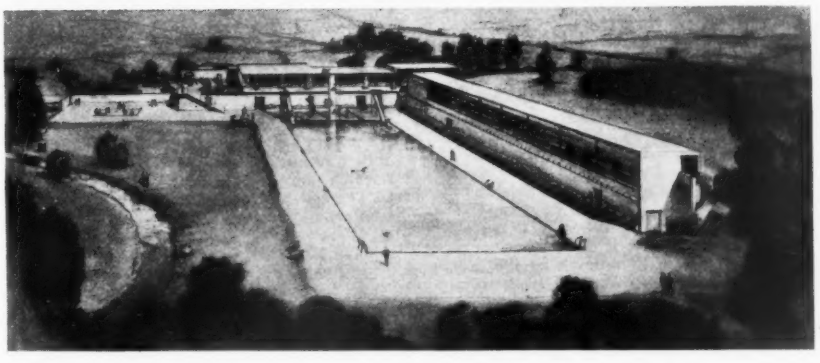
THE WORK OF THE SCHOOLS

2: POLYTECHNIC SCHOOL OF ARCHITECTURE

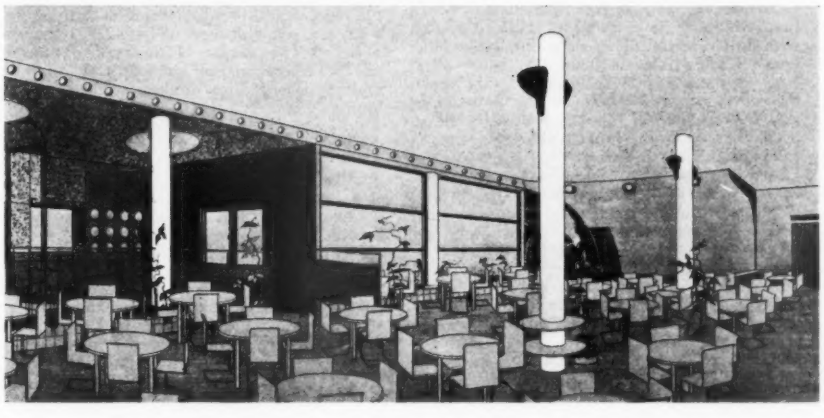
An exhibition of the work of the students of the Polytechnic School of Architecture is now being held at the Building Centre. It will run until August 26. Four of the schemes on view are illustrated on this page.



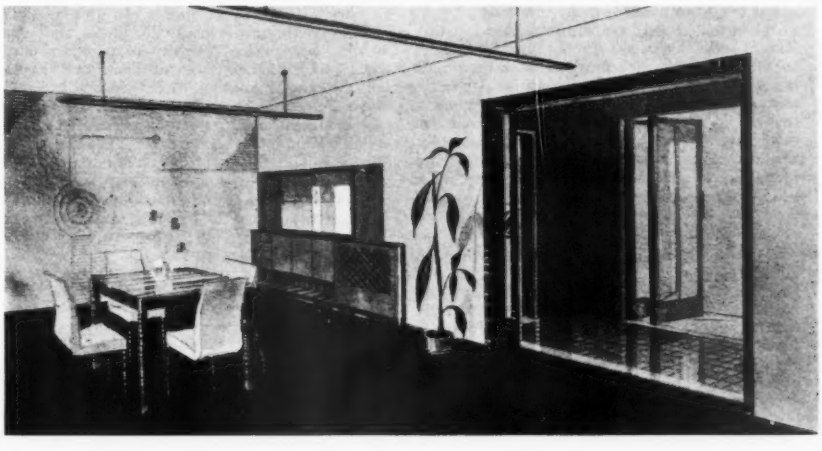
Radio Factory. By S. F. Walde. (Third Year).



Open Air Swimming Pool. By H. L. Gloag. (Third Year).



Restaurant in Town Store. By D. F. Lebensold. (Fourth Year).



Living Room Interior. By R. Rosner. (Second Year Interior Design).

IN THAT CONTINGENCY

Notes from the Building Research Station on*

THE DESIGN OF CONCRETE FLOORS

(1) *Preliminary*

IN considering the design of concrete floors to reduce the transmission of sound it will perhaps be useful to recall that in their Final Report issued in 1936 the Ministry of Health Departmental Committee on "The Construction of Flats for the Working Classes" stated that an insulation against impact noises of some 15–20 phons was a desirable standard for flats. The phon, it may be noted, is a measure of loudness as heard by the human ear, and need not be defined for the purposes of this note beyond stating that for sounds of medium pitch and loudness a reduction of 10 phons gives an impression to the listener of the noise being halved.

(2) *The Problem Defined*

The problem under consideration has mainly to do with noises arising from impacts upon the floor such as footsteps, or from machinery resting on the floor, rather than with air-borne sound such as that of conversation, the gramophone or wireless. The reduction of air-borne sound is governed largely by the mass of the construction, and concrete floors are usually so heavy that they are at least moderately satisfactory in this respect. But when impacts occur upon it *the floor itself acts as a source*, and the sound permeates the building structure to such an extent that it is common for the occupants of neighbouring rooms to suffer, whether rooms by the side and above or those beneath.

Many instances to illustrate this come to the notice of the Building Research Station. Perhaps one of the most interesting of recent cases was that of a squash racquets court in a luxury block of flats, which was built in contact with an old house. The occupants, both of the house and the flats, complained that they could hear the impact of the ball in play in the court. The court was in the basement of the building and separated from the house by a corridor, as well as a brick wall totalling 32 ins. in thickness. The sounds of the impacts were clearly audible both in the house and flats, however, and it was discovered ultimately that a most remote and unexpected path was being taken by the vibrations. The cure was a matter of some considerable expense, but the possibility of trouble could have been eliminated during construction at a small cost.

The cure for such problems as these lies in the localization of the noise in any way practicable. If the vibrations can be confined to the surface on which they start, no nuisance or difficulty need be anticipated. This can be done by isolating the floor surface from the rest of the structure, but in building construction it has been the practice to require that all parts of the structure shall be firmly bonded together. The introduction of the discontinuities necessary to afford the desired localization of the noise is a marked departure from traditional practice and it is with the methods of doing this, as regards floor construction, that the present note deals. It should be noted as well, however, that any construction to improve the reduction of impact sounds can normally be expected to reduce the transmission of other sounds also.

(3) *Methods of Construction*

In the investigations on the subject which are being conducted jointly by the National Physical Laboratory and the Station, the National Physical Laboratory being responsible for the physical measurements, four particularly successful and useful treatments of the concrete structural floor to localize noise have been developed. These are all of what may be termed the "floating floor" type, where the wearing surface is carried upon a resilient material which serves to insulate the main structure from the vibrations. The various types are illustrated in Figure 1 and of these, types 1 and 3 are very simple and cheap, while types 2 and 4 give slightly better results at somewhat greater cost and are more certain to give satisfaction. Types 1 and 2 are suitable for finishing with screed and lino, cork, rubber or wood blocks and similar materials, while 3 and 4 are of the timber-on-batten type, having a wood finish in the usual manner.

The characteristics and details of construction of these floors are as follows :—

Type 1

Construction : Nominal ½ in. thick quilting of glass silk, eel grass or slag wool is laid upon the bare structural concrete, the joints of the quilting being lapped, and the whole covered with a waterproof building paper. A screed from 1½–2 ins. thick, slightly reinforced in mid-section, is poured directly upon the prepared quilting. The surface is then prepared to receive the wearing finish.

Comment : In general, the thicker the quilting and the thicker the screed the better the insulation, although the minima suggested are quite effective.

The waterproof paper is intended simply as a precaution against concrete leakages through the quilting for these can establish rigid bridges which short-circuit the insulation.

The cost of this treatment is little in excess of an ordinary screed and lino.

There is no doubt that this floor merits popularity. Its effectiveness and economy together are probably unequalled as far as the present knowledge goes, and it can be adapted to suit almost any type of building.

Insulation value : This type of floor would be classified as "fairly quiet" to "quiet" (ranging from 15–20 phons insulation), depending on the type of quilting (preferably of an inorganic type) and the thickness of the slab (preferably 2 ins.). The nature of the wearing surface affects the overall insulation only slightly, but most floor coverings produce a further slight improvement.

Type 2

This floor, which is one developed at the Building Research Station* consists essentially of a slab which is cast *in situ*, and later lifted on to rubber cubes, which themselves rest on the structural floor.

Construction : Paper is first laid on the structural floor to prevent the adhesion of the concrete screed. Upon the paper, at the proper spacing (usually about 2 ft.), are placed banded sockets of a dimension to suit the desired thickness of the screed, which is preferably about 2 ins. The concrete is placed, with light reinforcement about mid-section. When the concrete has thoroughly set, wooden blocks are dropped into a *limited* number of sockets, and plugs are screwed down upon them. In this way the independent slab is gradually lifted, and when it has been raised slightly more than 1 in., plugs with rubber cubes attached are inserted in the empty sockets. The wood blocks are next removed and similar plugs inserted in these sockets, and the screws adjusted until the whole floor is evenly supported on the rubber blocks. The thickness of the air-space should be about 1 in. when the floor is complete. Covers can be fitted to the sockets, and a finish screed to receive the wearing surface can be placed.

Comment : In making this floor no great skill is required, but care should be taken to ensure by plugging or other means that concrete is not allowed to get into the grooves of the sockets. A very slight greasing of the inside of the sockets seems advisable as well. The spacing of the sockets is determined by the strength of the slab rather than by the load which is placed on the individual cubes.

The cost should be moderate, but is, of course, in excess of type 1.

Insulation value : With this floor the insulation value is high, and it would be termed a very quiet floor. Moreover, the process of lifting ensures that no rigid contacts will take place, and the insulation is therefore practically guaranteed. Insulation tests have shown values ranging from 20 to 25 phons.

Type 3

Construction : The usual 1-in. tongued and grooved or plain edge boarding is nailed to battens, recommended to be 2 in. square in section at least, which in turn rest upon the resilient element. The latter may consist of rubber cubes (countersunk to permit of nailing them to the battens without forming rigid contacts) or strips of quilting, or an entire blanket over the structural floor.

Comment : Whether the quilting is of eel grass, glass silk or slag wool appears to make no difference whatever to the insulation, and the choice as between these depends therefore upon other factors. Double thicknesses of quilting are usually more effective, but seem to be rather too springy. Slag wool is perhaps an exception. Rubber cubes are very efficient.

The cost of this floor, over and above an ordinary method of holding the battens appears to be negligible.

Insulation value : These floors are about the equal of type 1 (say 15–20 phons).

Type 4

This type differs from type 3 only in the finish and is simply an alternative. In this case, the 1-in. tongued and grooved boarding can be replaced by the cheapest of rough boarding, overlaid with a stout, soft building paper and a thin strip hardwood wearing surface.

Comment : The rough under-boarding is probably best laid diagonally, and the wearing surface related to the walls of the room in the normal manner. This ensures that each board in each layer can cross the supporting battens. The building paper provides a certain amount of damping, and frequent secret nailing of the wearing surface to the under-boarding should not affect the insulation adversely. The cost of this floor is not excessive and depends principally on the finish.

Insulation value : This floor appears to be slightly better than type 3 and can, in general, be considered a quiet floor.

(4) *Materials for Insulation*

All these floors depend for their insulation value upon the nature of the resilients used (i.e. rubber cubes, quilting, etc.) as well as the method of construction. In general it may be said the materials should be such as "give" under impact. No test data are as yet available on the life of these materials, under load, but the indication seems to be that inorganic materials are the more satisfactory, and are probably less inclined to change with time than the organic types.

Rubber requires special comment. If protected from light, oils or grease, and other deteriorating elements, it can probably be depended upon to act efficiently for from 20–40 years.

It should be mentioned that in addition to rubber, glass silk, eel-grass and slag wool quilting, many other materials have been tried including felt, clinker, cork granules, fibre board and asbestos, none of which however appear to be as desirable.

(5) *Skirtings*

The effect of a floating floor can largely be defeated if a skirting rigid with the structure is adopted. Skirtings have been devised, therefore, which avoid any rigid edge effect, and which incidentally do not allow access of vermin.

Where the floating floors are of concrete, such as types 1 and 2, the skirtings will depend partly upon the chosen finish. Supposing this

* British Patent No. 466044. Inquiries regarding the use of the patent should be addressed to the Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1.

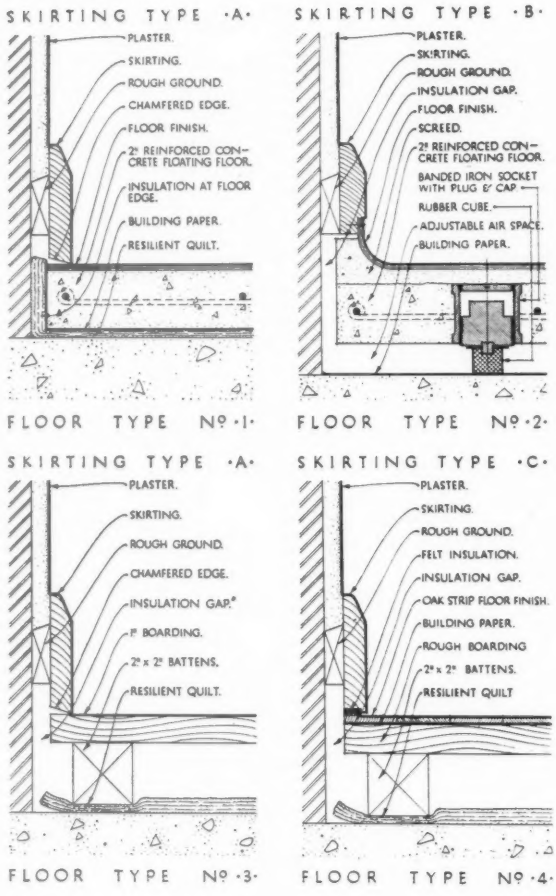


Figure 1

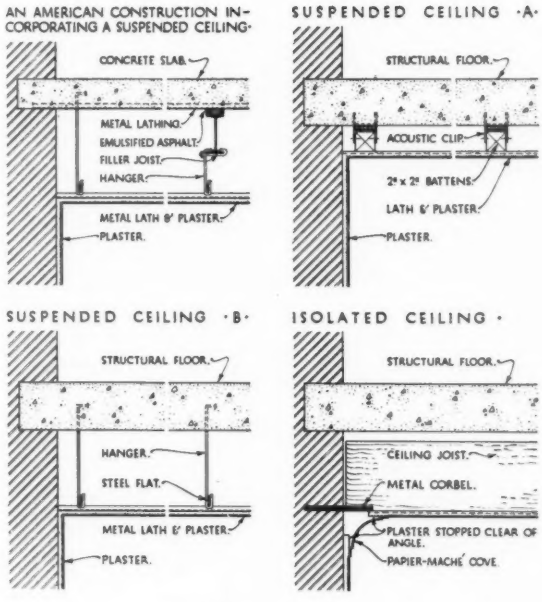


Figure 2

to be of lino, rubber or cork blocks, for instance, the edge of the floating portion can be treated either in the normal manner, with a skirting resting on the finish, or else can be designed to incorporate a cove skirting forming, as it were, a tray. These are represented by skirtings "A" and "B" respectively in Figure 1. In the former, the finish itself will provide the insulation, although it is to be noted that the bottom edge of the skirting board is chamfered to a point in order to reduce the area of contact, which is itself a factor. The second type, "B," is more complicated. The cove of the skirting is incorporated with the floating screed and the upper portion of the skirting is of wood, applied to the wall. The lino or rubber is continued up the cove, and is made to adhere above and below the gap between the two parts. A similar and simpler, but less satisfactory, method is to construct the entire cove skirting on the floating screed, avoiding any contact with the wall, and providing an adhesive strip to cover the resulting open joint between the two.

With floating floors constructed of timber, such as types 3 and 4, a strip of felt or similar insulation material should be inserted between skirting board and floor finish. The skirting should then be pressed down to provide a clamp at the floor edge. This is illustrated in skirting "C" of Figure 1.

Skirting "A" should also be effective with timber floating floors, according to experiments made on the Continent and it is shown in connection with floor type 3 as well as floor type 1 in Figure 1. No experiments with this skirting have been tried in this country, but the effect is probably dependent in this instance solely on the reduction of area of contact. The floating floors themselves should on no account make rigid contact with the walls. An air gap or insulation should be left between floating floor and wall.

(6) *Other Sound Reduction Treatments for Floors.*

Wearing Surfaces

Ordinary lino, wood blocks, cork or rubber placed directly upon the structural floor give a maximum of probably 5 phons reduction. The more expensive forms involving sponge rubber and under felts may give 10 phons. In no case do they approach the minimum insulation obtainable by a floating floor, although they are often more expensive than the latter.

Suspended Floors

Suspended floors, in which design the structural floor is itself mounted upon insulation, have been suggested at various times. These have, however, an immediately discernible fault, in that the floor is still the source of sound, and although some degree of localization occurs, the occupants of the room below often suffer to a greater degree than before.

Ceilings

To give any useful insulation effect, ceilings must be either suspended or entirely isolated. Neither suspended nor isolated ceilings can take the place of floating floors, however, due to the fact that the latter localize the sound, and the former merely impede one source of entry to any one room. As a protection in addition to floating floors they are of some use, the insulations being approximately additive, and they are also a protection, to some degree, against air-borne sound.

Suspended ceilings can be constructed either of battens held in clips close to the structural floor, or suspended from hangers. In either case felt should be introduced in some convenient way between the battens and the hangers at the point of contact. Patented devices of this nature are available. The insulation that can be achieved by these constructions is usually of the order of 5–10 phons.

Isolated ceilings of plaster carried by lathing on joists which themselves rest on corbels at the wall are usually more effective than suspended ceilings by some 5 phons, but a considerable loss of room height will probably be entailed.

A small loss of insulation occurs when the wall and ceiling plaster are continuous. This is probably not serious but can be avoided if so desired by leaving a gap between the two, and covering it over with a papier-mâché cornice of some kind.

An American development consisting of a suspended floor and a suspended ceiling combined, utilizes light steel joists carrying a 2–3 in. reinforced slab as a structural floor. Between the concrete slab and the steel joists is ½ in. of emulsified asphalt. A ceiling is suspended from the steel joists and the whole design is said to be quite effective, although no opportunity has arisen as yet to test it in England. Illustrations of the above designs are given in Figure 2.

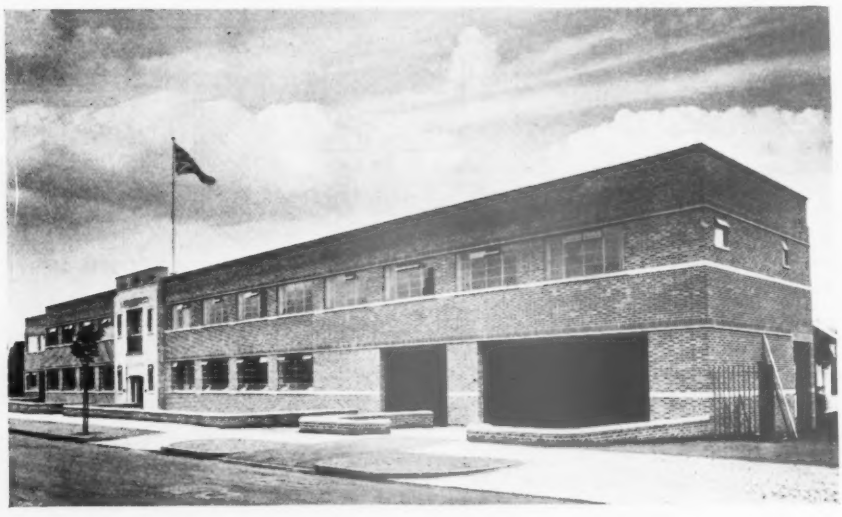
The use of sound absorbents on ceilings will have no effect upon the actual transmission, but will, of course, contribute in a normal way to the comfort of the room.

(7) *General*

As a result of the investigations made, it can be said that there are practical and reasonably economical methods of preventing undue transmission of sound through concrete floors. In many instances the use of a floating floor will be cheaper than a good wearing surface alone, which, at best, can only give about half the sound reduction obtainable by the former. It may be added that timber joist floors, which in the bare condition are some 10–15 phons noisier than concrete, have not so far been given adequate attention, but work on them is now in progress, and it is hoped that a great deal more knowledge concerning them will be available in the near future.

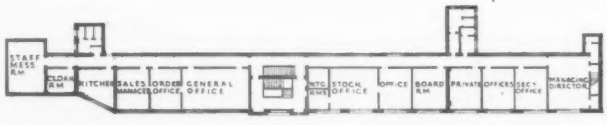
With regard to differences in the structural concrete floors themselves, it may safely be said that ordinary hollow block floors, solid concrete, and concrete combined with hollow clay tiles will all display equal qualities in respect of the transmission of impact sounds.

NEW OFFICE BLOCK AND EXTENSION

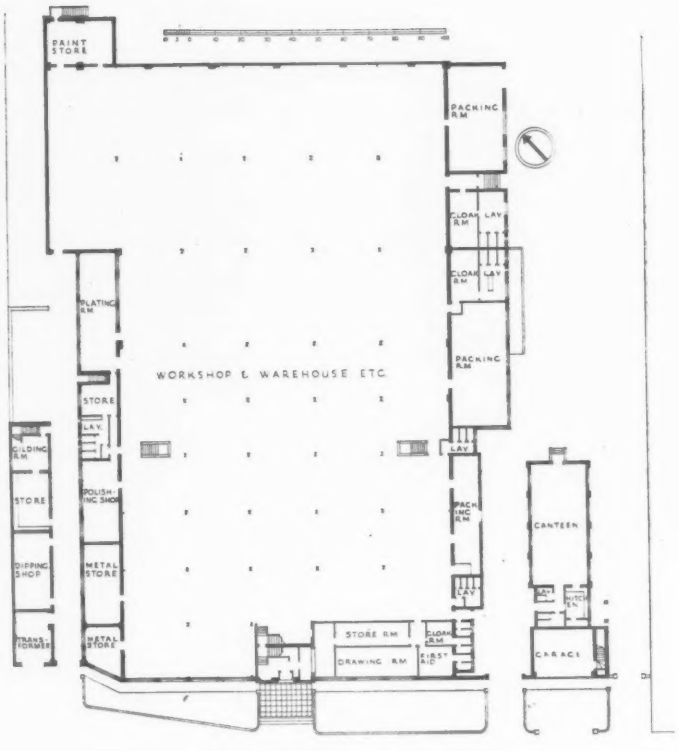


GENERAL AND SITE — *New offices and extension to factory for C. H. Parsons, Ltd., manufacturers of electrical accessories. The whole of the accommodation was required to be under one roof, free from any supporting cross walls, excepting the side blocks which form separate isolated departments for special work. All other departments in the main building are sub-divided by means of steel partitions. The first process commences on the left of the building at the front with each succeeding process of manufacture following on one after the other until the packing rooms are reached on the right. The main offices are at the front of the building with direct access to the works in the centre, behind the main entrance.*

Left, general view of entrance front. Centre, looking down the main entrance stair. Bottom, the sales manager's office.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

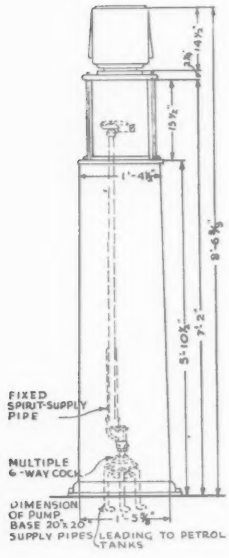
TO FACTORY, BIRMINGHAM: BY H. PETER HING

ELEVATIONAL TREATMENT—*The main elevation is carried out in 2½-in. Bidford-on-Avon hand-made multi-coloured bricks with full-rubbed jointing, and re-constructed Portland stone dressings.*

INTERNAL—*All walls and ceilings to the factory are finished in stone colour, with window frames painted a light blue. The principal offices are decorated in plastic paint in various shades.*

Above, drawing office.

For list of general and sub-contractors see page 185.



TRADE NOTES

[*By PHILIP SCHOLBERG*]

Multiple Petrol Pumps

MANY motorists regard the multiple petrol pump as a snare and a delusion, as a device for serving a mysterious fluid under any trade name to suit the whims of the customer and the pocket of the garage proprietor. A moment's thought, however, will show that such an outlook is really quite unjustified, for the petrol companies are very jealous of their reputations (in spite of the fact that all brands seem to give approximately equal performance) and they would never consider applying their seal to a pump which did not supply their product pure and unadulterated. From the garage proprietor's point of view there is much to be said for a pump of this kind, for the savings in first cost are considerable (about £350 for a garage with pumps supplying the six different brands which can all be obtained from the multiple Theo) and the annual expenses of running are also considerably less, what with interest on capital, rates, depreciation and insurance. The financial figures are so conclusive that one would assume that all pumps would be the multiple type, and the fact that they are not is presumably due to the prejudice of the general public. This is, in a sense, justifiable, for one would naturally be suspicious of a public house in which all kinds of beer came out of the same barrel, but provided that the brewery companies gave the thing their seal of approval, it would probably be only a matter of time before the whole system came to be taken for granted. The parallel between this and the Theo multiple pump is a perfectly fair one, and the public preference for the more usual type of pump must be entirely due to the fact that they have been brought up to expect different fuels only from different pumps, without any thought that some other method might be possible.

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It should by now have become apparent that this Note is intended to be about the Theo multiple pump, which is arranged to supply six different kinds of petrol from six different tanks, but from the same pump standard. From an examination of the valve system with which this pump is fitted it is quite obvious that there is no danger of being supplied with the wrong brand of spirit, an even more powerful argument being the fact that the petrol companies, as I have suggested before, are just as prepared to affix their official seals to this pump as they are to the pumps which supply only one brand. A complete installation consisting of a single pump and six supply tanks works out at about £270, and for the comparatively small garage the saving already referred to would seem to be well worth while. The proprietor may need a certain amount of convincing that he will not lose custom to the man who provides the more usual service with separate pumps, but many garages have a series of illuminated globes fixed on brackets instead of on top of the pumps themselves, and the visitor has no means of telling whether the pumps are normal or multiple until he gets inside, and few people have the courage to go away. This method of grouped petrol globes seems to be a perfectly legitimate way of overcoming the public prejudice against the multiple pump.

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Mechanically these pumps are quite straightforward, and are operated electrically, or by hand if the current fails. Essential dimensions are shown in the diagram at the head of these notes, and the pipe runs to the different tanks lead out fanwise at the bottom. On the debit side the only disadvantage of this pump is that the fuel delivery rate seems likely to be slightly slower than the ordinary type, for the petrol has first of all to be drawn up into the metering chamber at the top by the suction pump, after which it flows through the hose to the tank by gravity. Current consumption is low, about 700 gallons being served with one unit of current.—(*Theo & Co., Ltd., Tarleton Street, Liverpool, 1.*)

Timber Squash Courts

Carters Sports Courts have discovered a way of making composite non-sweating renderings adhere to the timber framed walls of squash courts, and they have now designed a whole series of sectional courts which can be bought in much the same way as one buys a seaside bungalow. In the opinion of various experts these courts play in much the same way as ordinary brick courts, and Carters (who make both kinds and therefore ought to know) say that the timber courts are about 20 per cent. cheaper, with the added advantage that they can if necessary be dismantled and moved to another site. As can be seen from the section, the composition is carried up the walls only as far as the play lines, where it is stopped off against patent deflecting lines at the standard height. Above this level the walls are covered with ¾-in. galvanized iron wire. Floors are generally Columbian pine laid on bituminous felt, but maple can be supplied, though it is recommended that it should not be used except in very dry districts.

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It is worth mentioning that although the process for applying the composition was evolved mainly for use in the all timber court, it is naturally just as good on timber partitions, which can be used for converting existing buildings into courts. Where the courts are on an upper floor the saving in weight may make all the difference between costly structural alterations and a fairly cheap job.

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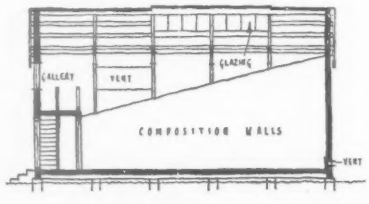
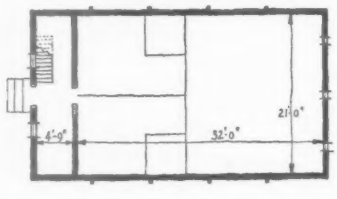
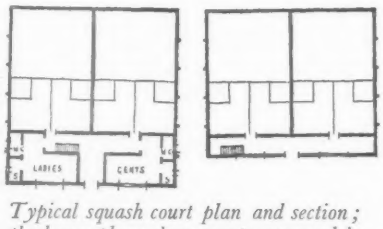
For the sectional court, five different designs have been evolved, and any of them can be built up in ranges with or without dressing rooms; all courts have galleries for spectators.—(*Carters Sports Courts, Ltd., Clissold Works, Green Lanes, London, N.16.*)



LONGITUDINAL SECTION



PLAN



Typical squash court plan and section; the lower plans show courts arranged in pairs, with and without dressing rooms.

Aluminium for Insulation

Some months ago I referred to a firm who are producing thin aluminium sheet for heat insulation purposes, the principle involved being the same as for the crumpled foil type. The sheet is made up with two thicknesses of aluminium, a flat layer to which is stitched a concertina layer, the result being rather like corrugated paper on a large scale, with a continuous row of triangular air spaces to reduce heat transmission after the aluminium has done its job reflecting. Performance figures show that this sheet is very efficient, but it seems possible that with timber framed buildings the width of the rolls of sheet may not coincide with the stud spacing, and there may therefore be a certain amount of cutting and waste on the job. A possible improvement has recently been introduced in America where the principle is more or less the same, save that the flat sheet is replaced by another corrugated sheet. The result of this is that the double sheet can be pulled out sideways like a concertina, and a standard sheet of say 16 ins. width can therefore be pulled out or compressed to suit a stud spacing of from 14 to 18 ins. without making any great difference to its heat resisting properties.

Electric Cooker Design

I have been delighted to read a most excellent article in one of the electrical papers by Mr. L. W. Oliver, an engineer in the service of the Torquay Electricity Undertaking. Writing on electric cookers and cooking he criticizes manufacturers for having been so long in providing thermostatic oven control, a feature which the gas companies have, of course, been boosting for several years now. On the question of external appearance Mr. Oliver has little to say, but he quite rightly sees no reason why manufacturers should produce so many different models. In his own words, " it is not unusual for a firm to produce 20 or 30 variations of a particular model, apart from differences resulting from voltage complications." Not, when one comes to think about it, at all a satisfactory state of affairs, but the blame lies partly at the door of some of the smaller supply companies, who have difficulties in selling cookers at all and demand so many detail refinements or modifications to suit their particular district that the manufacturers hardly know where they are. All of which tends to keep prices higher than they should be.

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Apropos different models I remember finding myself next to a foundry owner some years ago at a Steelwork lunch, and he told me that he made a point of keeping in stock flushing cisterns to suit the demands of every water board in the country. As a result of this policy he had to keep no less than 130 different fittings in stock, none of which were very important, but all of which were essential if his products were to pass the regulations. He maintained firmly that, even allowing for different sizes of tank, the number of different models could easily be reduced to a tenth of this figure without anybody being any worse off.

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Electric cooker design is still in the stage where every manufacturer maintains that *his* way is the only way. One or two of them may be right, but there must be plenty who are wrong. When a supply engineer like Mr. Oliver gets up and, instead of maintaining that electricity is the perfect servant for every conceivable purpose, actually suggests that things might be better, it seems possible that something may one day be done about it. If only one were sure that the industry would take the slightest notice.

THE BUILDINGS ILLUSTRATED

L.M.S. SCHOOL OF TRANSPORT (pages 167–169). Architect, W. H. Hamlyn. The general contractors were Holliday and Greenwood.

NEW OFFICE BLOCK, PERRY WOOD, WORCESTER (page 170). Architect: S. N. Cooke. The general contractors were Collins and Godfrey, and sub-contractors and suppliers included: La Brea Asphalte Co., Ltd., asphalt; Proctor and Lavender, bricks; Empire Stone Co., artificial stone; Horseley Bridge and Thomas Piggott, Ltd., structural steel; Hoskins and Sewell, Ltd., partitions and casements; Mason, Martin Dunn, glass; Hope's Heating and Lighting, Ltd., central heating; Abel and Smith, electric wiring; D. Wiseman and Sons, plumbing; J. W. Rains, sanitary fittings; Messrs. Neale, door furniture; Haywards, Ltd., iron staircase; G. Prince, Ltd., plaster; Bayliss, Jones and Bayliss, Ltd., railings, etc.; S.G.B. (Dudley), Ltd., wall tiling; Jas. Gibbons, Ltd., cloakroom fittings.

NEW OFFICE BLOCK AND EXTENSION TO FACTORY, BIRMINGHAM (pages 182–183). Architect: H. Peter Hing. The general contractors were: C. Bryant and Son, Ltd., who were also responsible for demolition, excavation, foundations and dampcourses. Sub-contractors and suppliers included: La Brea Asphalte Co., Ltd., asphalt; The Bidford-on-Avon Brick and Tile Co., Ltd., bricks; Lyne and Sons, Ltd., artificial stone; Redpath, Brown & Co., Ltd., structural steelwork; Siegwart Fireproof Floor Construction, Ltd., fireproof construction; Moler Products, Ltd., partitions; E. Shawell Trickett, glass; Henry Hope and Sons, Ltd., patent glazing; Korkoid Decorative Floors, patent flooring; Hope's Heating and Lighting, Ltd., central heating; Griffin Foundry Co., grates; Baxter and Impey, electric wiring; Troughton and Young, electric light fixtures; W. Weate, plumbing; Binks & Co., Ltd., sanitary fittings; Alfred Brown & Co., Ltd., door furniture; Henry Hope and Sons, Ltd., Siemens Bros. & Co., Ltd., casements; Birmingham Guild, Ltd., metalwork; Ward and Croft and St. George's Guild, Ltd., tiling; Aston Cabinet Co., furniture, office fittings; Gaskells and Chambers, Ltd., furniture; Gent & Co., Ltd., clocks; C. H. Parsons, Ltd., " Britmac " Electrical Accessories and Equipment.

Manufacturers' Items

The directors and employees of Messrs. John Hall and Sons, paint and glass manufacturers of Bristol and London, celebrated the one hundred and fiftieth anniversary of the foundation of the firm by a day's outing at Ryde, Isle of Wight.

Mr. Romilly Hall, the chairman of the company, speaking at the luncheon held in the Town Hall, said: Throughout the country the General Post Office used six-and-a-half tons of red paint, one-and-a-quarter tons of black paint, and seven hundred gallons of varnish for pillar boxes, besides one-hundred-and-forty tons of paint and enamels for kiosks, buildings, and other property of the Post Office. Seventy thousand gallons of paint, he said, were used, inside and out, in painting the *Queen Mary*, since the area to be covered was no less than fifty acres. Her greater, younger sister, *The Queen Elizabeth*, he said, was expected to demand a further two thousand gallons of paint—making 72,000 gallons, which would add fifteen tons to her weight. With the need for paint everywhere on such a colossal scale as that, it was not surprising that the industry had grown to be one of the greatest in the country, nor that John Hall and Sons had grown with it Above all, he concluded, they could be proud that though they had become a great modern firm they were not just an association of employers and employed. After a hundred-and-fifty years they were still a unity of friends and colleagues.

During lunch a silver salver was presented by the directors to Mr. H. Morris, an employee with fifty-six years' service, and a board room table and an illuminated address were presented to the chairman by the employees.

Mr. S. Romilly Hall, Chairman of John Hall and Sons. Mr. Richard A. Hall, Director. Mr. H. Morris, an employee of the Bristol branch with 56 years' service to the firm. Mr. W. Hudson, one of the employees of the London branch. (See note above).

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Copies of the loose supplement containing the labour rates for the principal towns and districts throughout the country can be obtained from the JOURNAL, price 2d. to cover postage.

PRICES

Below is the second of the series of special articles describing the reasons for the fluctuations in the prices of timber. The first appeared in our issue for April 7 and was devoted to a general review of timber prices. The author is a member of a well known firm of importers.

DOORS

[*By T. P. COPELAND*]

THE question, "What is the price of doors today?" has become such a common one that few people stop to think why the price of such a standard commodity should vary at all, let alone ask how such variations occur. The majority of door merchants themselves take the rise and fall in the value of doors as a matter of course without seeking an explanation. One of the most extraordinary things is that it is the price of the standard or "Stock" doors that varies and not that of the "Special" ones. These latter vary comparatively little as, in general, the cost is worked out at a foot super price and as the cost of the wood out of which they are made varies very slightly at any one given time between one manufacturer and another, as does the cost of labour, the difference in the final figure quoted is usually the difference in the profit added. This, however, is not so with the stock door. With this door there seems to be no relation whatever between the cost of manufacture and the selling price to the consumer. This applies in particular to Columbian pine doors and to a less degree to deal doors. In 1931 figures as low as 6s. 9d. were quoted for first grade B.C.P. doors by reputable merchants, yet similar doors were fetching 9s. in 1933. In the spring of 1937 they were fetching 13s. 6d., yet by the autumn of that year they had dropped to 11s., Today the price varies between 9s. and 7s. 9d., depending on the quantity, and prices even lower than these have been quoted.

How can these fluctuations be explained? Does the quality of the door drop in proportion to the price and vice versa? The answer to that is quite definitely "No." When the price falls the widths of the stiles and rails remain the same, and a door sold at 13s. 6d. has no thicker panels than a similar pattern sold at 6s. 9d. On the face of it it seems entirely irrational yet an explanation can be found.

Until comparatively recent times all doors were made in the English workshops of the various builders and contractors, and a door industry as such did not exist. In the year 1870 a certain London firm of timber merchants started to import a number of ready-made doors from Sweden. These imported doors were found to be nearly as good as the English-made ones and were considerably cheaper. Before long only very special jobs used English-made doors, and the Swedish product became the standard door of the country. They became so universally used that even the Swedish catalogue numbers were quoted in specifications.

Soon after the War, however, a new type of door appeared on the market. This was the Columbian pine door. It was dowelled and not morticed and tenoned as were the Swedish, and it had plywood panels in place of the solid panels of its Baltic counterpart. Nevertheless, its stiles and rails were knotless and it could be stained or painted, though the grain was inclined to rise in the latter process.

This newcomer had to overcome a great deal of prejudice. The supporters of the Swedish doors maintained that a dowelled door would not stand and said that the plywood panels were bound to blister. When blistering occurred, which certainly did happen occasionally, the point was heavily stressed. In spite of this the B.C.P. door became more and more popular, and before long had a very marked effect on the imports of Swedish doors. In order to regain some of their lost trade the Swedes began to drop their prices, but this seemed to have very little effect. Whatever prices the Swedes quoted the Americans appeared to be able to undercut them. There was, however, no unity amongst the American manufacturers, and before long the various American mills were competing with one another in the English market. This market was not

NOTES ON PRICE CHANGES

There are several changes this month. Steel prices have fallen generally, a number of joinery prices have fallen also. The prices of lead, copper and zinc, however, have risen slightly.

O. A. DAVIS, P.A.S.I.

★ *ANSWERS TO QUESTIONS*

While the JOURNAL, naturally, cannot presume to undertake the responsibilities of a quantity surveyor, it has arranged with the authors of this Supplement to answer readers' questions regarding any matter that arises over their use of the Prices Supplement in regard to their work, without any fee. Questions should be addressed to the Editor of the JOURNAL, and will be answered personally by Messrs. Davis and Belfield. As is the normal custom, publication in the JOURNAL will omit the name and address of the enquirer so that it is unnecessary to write under a pseudonym.

inconsiderable. Between one and a-half and two million doors were being used annually, and the normal prices quoted were so low that no English firm could set up in serious opposition. Added to this was the fact that there was no import duty and, if necessary, doors could be "dumped" in this country. The natural result of the competition amongst the American mills was a drop in prices over here.

In 1929 the slump struck America and building practically stopped in that country. England immediately became the dumping ground for practically the whole output of the American door mills and prices started to drop at an alarming rate. Doors sold to consumers at 10s. dropped to 9s., and a few months later to 8s. 6d., then to 8s. By the middle of 1931 prices below 8s. were offered, and finally came to rest between 6s. 9d. and 7s. 3d. The mills were running at a dead loss, but it was a case of doing this or closing down entirely, as a number of them had to.

As the American prices dropped the few Canadian mills that were in competition had to follow suit, and their position was as unhealthy as that of their competitors. However, on March 1, 1932, an import duty of 10 per cent. was imposed on doors imported into this country from countries other than the British Empire. This was a result of the Ottawa Agreement, and its immediate effect was to help the Canadians considerably. It also raised the price of doors in this country. However, an extra 10 per cent. loss did not seem to worry the Americans, and within a month their doors were undercutting the Canadians' again. On April 26 of the same year it was found necessary to raise the import duty by a further 5 per cent., bringing the total up to 15 per cent. Door prices increased again in this country, only to start falling back again within a few months as the Americans somehow got back into the English market. In July, 1933, the duty was altered again; this time doors imported from countries other than the British Empire had to pay a rate of 2s. a door, where its height and width was not less than 6 ft. by 2 ft., or 20 per cent., whichever was the greater.

The new import duty had the desired effect, and for some considerable time the import of American doors stopped. But it also had the effect in England of raising the prices, and 10s. became a basis price. The increased duty had another important effect on this country. With the Americans out of the market several firms were tempted to set up mills for the manufacture of doors in England itself. Large plant was laid down and production started.

However, all was not well in the Canadian mills. Fierce internal competition started and before long prices began to drop. The lower the Canadian prices fell the less chance the Americans had of getting back into the English market, but equally so the harder the English joinery firms found it to compete. On January 31, 1935, the duty was increased by another 6d., making a total amount of 2s. 6d. a door payable on non-Empire products. This increase was imposed more as an attempt to help the English firms than to exclude the Americans. It was argued that if an additional 6d. were added to the duty the Canadians would probably increase their prices by that amount all round and in like manner the English firms would be able to sell their products at a higher price. Whatever was the intention, the result was a sudden rise in the selling price of doors, and in consequence better prices were obtained by the manufacturers both at home and abroad. The desired result had been obtained, but it was a case of effect being the cause.

This increase in price was a tremendous fillip to the English manufacturers, and within a year they had become serious rivals to the Canadians. They had an especial advantage over their competitors in that on a large number of contracts English manufactured doors were specified. Added to this was the fact that they did not confine their activities to selling, through agents, to merchants, but went in a number of cases direct to the contractor. This threw the merchants back on to the Canadians, and the latter responded by cutting their prices in order to take as much business as possible away from their English competitors. Price cutting developed to an alarming degree, and by the summer of 1936 doors as a commodity were scarcely worth handling.

The English joinery manufacturers had concentrated their energy mainly upon Columbian pine doors as these now had a larger sale than deal ones. The Swedish mills, therefore, had only to face their own internal competition and the prices of deal doors in this country rose as each additional tariff was imposed. The low prices ruling for pine doors, however, had a very serious effect on the total imports of deal doors, and before long Swedish prices started dropping back as each mill strove to get whatever orders were going. By the end of 1935 Swedish prices were back at almost their pre-tariff level.

About this time, however, rumours kept occurring of an imminent rise in the cost of raw materials, and by November of that year these rumours proved to be true. Notes began to appear in firms' minute books, such as: ". . . as door prices were rising the minimum price for pattern 66 was to be 9s. 6d. and not below." By the end of 1936 builders and contractors had become accustomed to rising prices, not only in doors, but in nearly all building materials.

At this time occurred something that was responsible for a greater rise in door prices than had probably ever happened before. The principal door manufacturers and merchants of the country met together and made an agreement whereby all B.C.P. doors were to be sold at not below a fixed minimum rate. This scheme worked extremely well to begin with. Price-cutting stopped and buyers, although they had to pay more for their doors, did at least know that the prices were stable which is a great advantage to any buyer. However, once the manufacturers and merchants saw that such a scheme did work they began to increase their agreed prices slowly. Pattern 66, which is the door that sets the price for all the other patterns, rose to 11s. 6d., then later to 12s. 6d., and finally came to rest at a price of 13s. 6d. net, where small quantities were required. The unfortunate buyer did not know where he stood, while the sellers of doors did their best to kill a very good scheme by being too greedy.

Business up till May was good and competition eased off in proportion. Selling on a rising market is always easy and for the time being the members in the agreement held together, but after the month of May business began to drop off, and door sales dropped in proportion. However, the prices being obtained by the door sellers were so good that they were content to do less business provided their total profits were maintained, but as business grew worse in the building trade reports began to be current of prices being given below those agreed upon. The agreement had been after the manner of "a gentleman's agreement," and it seemed as if the manufacturers and merchants were willing to be "gentlemen" only as long as it paid them. By the autumn the agreement had completely broken down and prices had dropped back to about an 11s. basis. By November, 10s. 6d. had become the normal price and a fresh "war" was being fought between the English and Canadian manufacturers. By February of this year it was possible to buy a moderately large specification of B.C.P. doors at 10s. In March, the Canadians dropped their prices still further and the English firms followed suit, keeping their prices a little below their competitors. Today a price varying between 7s. 9d. and 9s. will be offered, depending on the quantity.

A falling market always scares off buyers, and the question today is: "Has the market reached bottom?" It is, of course, impossible to answer that question with any degree of certainty, but it is interesting to note that at the time of writing a report has come in from Canada that the c.i.f. price has just advanced 5d. a door. There is no doubt that the English mills will follow suit, taking advantage

of this rise, but whether it can be called a pointer it is impossible to say. It is possible, however, to estimate how other outside influences will affect door prices. Building in this country is undoubtedly slowing down, and this will make competition for what orders are going all the fiercer and prices will drop in proportion. On the other hand, there comes a time when prices have fallen to such an extent that it does not pay to manufacture or market a commodity. The time that point is reached is the time when "rings" and trading agreements are made and as soon as these occur prices rise. Broadly speaking, it would seem as if the door trade is already very near that point where it is uneconomical to manufacture. True, it is very often cheaper to run a mill at a loss than to stop production, but it cannot be done indefinitely. The cost today of the timber in a door of the pattern 66 variety is about 6s 10d. Labour is between 8d. and 10d. This makes the net cost between 7s. 6d. and 7s. 8d. To this must be added cost of delivery, sales overheads, warehousing, etc. In a number of cases the buyer will take 2½ per cent. discount which, on a door sold at say 9s., is very nearly 3d. It will be seen from these figures that there is very little profit for anybody in a door sold at 9s. and any price under that is getting within the danger area of "No Profit," or worse, of "Dead Loss." If the English and Canadian manufacturers continue to wage war against each other, prices may fall to any low level. This, however, seems scarcely likely. A price-cutting war fought to the bitter end generally means bankruptcy for both sides, and the Canadians and English know this. It seems extremely likely that an agreement will be reached very shortly between the two and that of course will mean a rise in prices generally. If an agreement is reached, however, between these two it seems highly likely that a third party will have to be considered, and that is the Americans. Doors are renowned to be amongst the items mentioned in the Anglo-American Trade Agreement, and if the existing duty is removed and the Americans decide to come back into the English market prices may fall even more violently than they have up till now. There is talk, however, of a three-million-house-building scheme for the U.S.A. This idea has met with some scepticism both here and in the U.S.A., but if it does materialize it will draw nearly ten million doors a year from the American mills. This would keep their works running at top speed, and in all probability they would have to draw from the Canadian mills as well. Should this happen door prices throughout the world will rise considerably.

As regards Swedish doors, it seems highly improbable that the deal door will ever become a serious rival of the pine door again, and prices for Swedish doors have remained constant for the last five months. It would appear as if the present prices will be maintained while the demand in this country stays at its present level. When that begins to show a drop, however, Swedish prices are likely to drop too, following the law of supply and demand.

Lastly, the merchants have to be considered. If they can make no profit in handling doors they will be forced to make another trading agreement. They already regret that the last one broke down through their own fault and would be quite agreeable to start another if they could get a guarantee of unity. Their chance of unity increases as their profit on doors decreases.

PART 2

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD, P.A.S.I.

JOINER

Prices are for standards in one delivery; when less than a standard is required, or special lengths, add £1 per standard

Joinery Timber

			Per standard £ s. d.	Per foot cube £ s. d.
*3″×9″ Scantling	2nd	Archangel	41 0 0	4 11¾
3″ × 9″ ,,	3rd	,, ...	28 10 0	3 5½
*2″×9″ ,,	2nd	,, ...	46 10 0	5 7¾
*2″×9″ ,,	3rd	,, ...	28 10 0	3 5½
*3″×8″ ,,	2nd	,, ...	32 0 0	3 10¾
*3″×8″ ,,	3rd	,, ...	25 0 0	3 0½
2″ × 8″ ,,	2nd	,, ...	34 0 0	4 1½
*2″×8″ ,,	3rd	,, ...	25 0 0	3 0½
*3″×7″ ,,	2nd	,, ...	31 10 0	3 10
*3″×7″ ,,	3rd	,, ...	24 0 0	2 11
2″ × 7″ ,,	2nd	,, ...	34 0 0	4 1½
*2″×7″ ,,	3rd	,, ...	24 10 0	2 11¾
*2″×6″ ,,	u/s	,, ...	23 0 0	2 9½
1¼″×11″ ,,	3rd	,, ...	39 0 0	4 8¾
1¼″×9″ ,,	u/s	,, ...	35 0 0	4 3
1″×9″ ,,	2nd	,, ...	46 10 0	5 7¾
*1″×9″ ,,	3rd	,, ...	35 0 0	4 3
1″ ×11″ ,,	2nd	,, ...	49 0 0	5 11½
*1″×11″ ,,	3rd	,, ...	39 0 0	4 8¾
1¼″ × 9″ ,,	2nd	,, ...	46 10 0	5 7¾
1¼″×9″ ,,	3rd	,, ...	35 10 0	4 3¾
1 ¼″×11″ ,,	2nd	,, ...	49 10 0	6 0
1¼″×11″ ,,	3rd	,, ...	40 10 0	4 11

JOINER—(*continued*)

Flooring

		⅞″	1″	1½″
*Yellow deal, plain edge in batten widths ..	per square	19/9	23/–	29/6
*Ditto, T. & G.	per square	20/3	23/6	30/–
*T. & G. rift sawn B.C. pine in 4″ widths ..	per square		29/–	
*T. & G. random grain, in 4″ widths	per square		17/6	

Wall Linings

Deal Match Boarding :—

1″×6″ T.G.B.	per square	25/–
1″×4½″ T.G.V.	per square	24/–
¾″×6″ T.G.B.	per square	19/–
¾″×4½″ T.G.V.	per square	18/–
⅝″×6″ T.G.B.	per square	16/6
⅝″×4½″ T.G.V.	per square	16/–
½″×4½″ T.G.V.	per square	12/6

Asbestos-Cement :—

1/12″ Semi-compressed flat building sheets, grey	per yard super	1/3¾
1/8″ Ditto	per yard super	1/4½
¼″ Ditto	per yard super	1/11
¼″ Metal reinforced flat building sheets	per yard super ..	3/4

Prices are for orders of less than 1 ton.

*** Items marked thus have fallen in price since June 23.**

CURRENT PRICES

BY DAVIS AND BELFIELD, P.A.S.I.

JOINER AND STEEL AND IRONWORKER

JOINER—(*continued*)

Wall Boards :—

Asbestos-cement wall board (in sheets 8′ 0″ × 4′ 0″ only) under 5,000 feet super	per foot super	–/2½
Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ only)	per yard super	7/6
Ditto, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ only)	per yard super	8/6
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super	7/6

	300 yards.	300–1,000 yards.	1,000–2,000 yards.
¼″ Fibre board	2/–	1/10½	1/9

	25–75 yards	150–300 yards	Over 600 yards
¾″ Fireproof plaster board (per yard super)	2/2	1/10	1/6
½″ Ditto (per yard super)	2/–	1/8	1/4
Joint tape (approx. 250 feet run) per roll	..	..	1/6
Joint filler ..per lb.	..	..	–/4

Plywoods :—

	4 m/m	5 m/m	6 m/m	9 m/m	12½m/m
Birch (A) per square	22/–	26/6	30/–	42/6	45/–
„ (B) per square	18/–	19/–	—	—	—
Japanese figured oak (A.A.) per square	33/6	37/–	38/6	65/–	—
Austrian oak, figured one side (A.A.) per square	—	71/6	77/6	99/6	117/6
Australian walnut, finely figured one side (boards 72″ × 36″) per square			¼″ 67/6	¼″ 85/–	
Sycamore, figured one side (ditto) per square			75/–	85/–	
Honduras mahogany, figured one side (ditto) per square			75/–	—	
Honduras mahogany, finely figured (boards 84″ × 36″) per square			125/–	—	

Prices are for complete bundles.

Blockboards :—

Alder :—

Thickness	Boards 60″ × 183″	Boards 72″ × 183″
½″ .. .. per square	67/–	73/6
⅝″ .. .. per square	76/–	83/6
¾″ .. .. per square	83/3	91/3
⅞″ .. .. per square	87/3	96/3
1″ .. .. per square	100/6	110/6
1¼″ .. .. per square	122/–	134/–
1½″ .. .. per square	128/–	140/–
1¾″ .. .. per square	160/9	169/9

Birch :—

Thickness	Boards 54″ × 72″	Boards 60″ × 140″
½″ .. .. per square	50/3	52/9
⅝″ .. .. per square	57/3	60/3
¾″ .. .. per square	63/3	67/–
⅞″ .. .. per square	68/–	71/3
1″ .. .. per square	75/–	77/9

Prices are for complete bundles.

Hardwoods

Joinery Quality.

English oak .. .. per foot cube	15/–
American oak (plain) .. .. per foot cube	10/–
„ „ (quartered) .. .. per foot cube	12/–
Australian Silky Oak (plain) .. per foot cube	11/–
„ „ „ (quartered) .. per foot cube	12/6
Walnut, European .. .. .. per foot cube	18/–
Teak, Rangoon .. .. .. per foot cube	15/–
„ African .. .. .. per foot cube	12/–

JOINER—(*continued*)

Mahogany, Honduras	per foot cube	14/–
American whitewood	per foot cube	10/–
Birch	per foot cube	8/–
Cedar (aromatic)	per foot cube	16/–
Japanese oak (plain)	per foot cube	11/–
„ „ (quartered)	per foot cube	13/–
Austrian oak (plain)	per foot cube	12/–
„ „ (quartered)	per foot cube	16/–

Sundries

Slaters or sarking felt	per yard run	–/6
Roofing felt	per yard run	–/8
Bituminous hair felt	per roll	33/–
All rolls 25 yards long by 32″ wide.		
Cork slabs, 1″ thick (3′ 0″ × 1′ 0″) ..	per foot super	–/4½
„ 2″ thick (3′ 0″ × 1′ 0″) ..	per foot super	–/8
Slagwool	per cwt. (approx.)	12/–
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I.80 and L.G.I.80)	per roll	67/6
Ditto, 2-ply, 60″ wide (B.I.80)	per roll	135/–
Ditto, 2-ply, 60″ wide (B.I.20)	per roll	202/6
" Cabots " Quilt :—(Ex Works Twelve roll lots delivered carr. free.)		
Double ply .. per roll 42/–	per half roll	23/6
All rolls 28 yards long by 36″ wide. Special terms for quantities.		
Cut steel clasp nails, 1″ per cwt. 33/6	4″ per cwt.	23/6
„ „ floor brads, 2″ „ 22/9	3″ per cwt.	21/9
Bright oval wire nails 1″ „ 35/9	4″ per cwt.	23/6
Scotch glue	per cwt.	60/–

Floor Clips :—

		£ s. d.
One leg floor clip	per 1,000	8 8 0
2″ short leg floor clip	per 1,000	8 8 0
2″ Regular floor clip	per 1,000	8 15 0
3″ „ „	per 1,000	9 0 0
2″ Regular ceiling clip	per 1,000	8 15 0
Single leg ceiling clip (7½″)	per 1,000	10 10 0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

		£ s. d.
*Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths	per ton	13 0 0
*Extras on above for :—		
9″ × 7″ Section	per ton	0 5 0
4″ × 3″, 5″ × 2½″, 10″ × 8″, 12″ × 8″, 14″ × 8″ and 16″ × 8″ to 20″ × 7½″ sections inclusive	per ton	0 10 0
3″ × 1½″, 3″ × 3″, 4″ × 1½″, 4½″ × 1½″ and 24″ × 7½″ sections	per ton	1 0 0
*Channels, angles and tees	per ton	14 0 0
*Mild steel plates	per ton	14 0 0
Screw bolts	per ton	35 0 0

Fabricated Steelwork

		£ s. d.
*Joists cut and fitted	per ton	17 0 0
*Stanchions, ordinary sections with riveted caps and bases	per ton	20 0 0
*Stanchions, compound	per ton	23 0 0
*Plate girders	per ton	25 0 0
*Framed roof trusses, 25′ 0″ span	per ton	25 0 0
* „ „ „ 60′ 0″ span	per ton	23 0 0

Prices ex stock are higher, and definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets

(Ex London Stocks)

	10 cwt. lots £ s. d.	Less quantity £ s. d.
4 to 9 fts. 18 or 20 gauge, 8/3″ corrugations .. .. per ton	20 0 0	21 0 0
10 fts. 18 or 20 gauge, 8/3″ corrugations	20 10 0	21 10 0
4 to 9 fts. 22 or 24 gauge, 8/3″ corrugations .. .. per ton	20 10 0	21 10 0
10 fts. 22 or 24 gauge, 8/3″ corrugations	21 0 0	22 0 0
4 to 8 fts. 26 gauge, 8/3″ corrugations ..	21 15 0	22 15 0
9 fts. 26 gauge, 8/3″ corrugations ..	22 5 0	23 5 0
10 fts. 26 gauge, 8/3″ corrugations ..	22 15 0	23 15 0

* Items marked thus have fallen in price since June 23.

CURRENT PRICES

BY DAVIS AND BELFIELD, P.A.S.I.

PLASTERER, PLUMBER AND INTERNAL PLUMBER

PLASTERER

Plaster and Cement

		1-ton loads	5-ton loads	
Sirapite (coarse)	per ton	70/–	64/–	
„ (fine)	per ton	78/–	—	
Victorite No. 1	per ton	85/–	78/6	6-ton loads
„ No. 2 or non sweat	per ton	80/–	73/6	
Thistle (browning, haired and pink finish)	per ton	70/–	64/–	
Thistle (fine)	per ton	78/–	—	
Pink plaster	per ton	66/–	—	
White plaster	per ton	78/–	—	
Keene's pink	per ton	112/6	—	
Keene's white	per ton	117/6	—	
Super Carbo	per ton	—	47/6	4-ton loads
Carbo-setting	per ton	—	57/6	

		1 ton upwards £ s. d.
Cullamix No. 2 cream (rendering mixture)	per ton	5 10 0
„ No. 3 cream	„ „	5 10 0
Snowcrete mixture	„ „	5 5 0

Sundries

Sharp washed sand	per yard cube			8/–
Cow hair	per cwt.			40/–
Goat's hair	per cwt.			55/–
$\frac{3}{16}$″ laths	per bundle			2/–
$\frac{1}{2}$″ laths	per bundle			2/4½
Expanded metal lathing, 9′ 0″ × 2′ 0″ $\frac{3}{8}$″ mesh × 26 gauge	per yard super			–/11
Lath nails (galvanised) 1½″ × 14 gauge	per cwt.			44/6
„ (bright wire) „ „	per cwt.			27/–
	Less than 150 yds.	Less than 300 yds.	Over 300 yds.	
⅜″ Plaster board per yard super	1/–	–/11	–/10	
1½″ Galvanized nails per lb.	–/5			
Scrim cloth in 100-yard rolls per roll	2/3			

Wall Tiles

Commercial quality.

Ivory, white, etc., glazed 6″ × 6″ × ⅜″	per yard super	9/9
Angle beads (1½″ wide)	per yard run	1/2¾
„ „ (1″ „)	per yard run	–/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	14/8
Angle beads (1½″ wide)	per yard run	1/4¾
„ „ (1″ „)	per yard run	–/11¼
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/7½
„ „ (1″ „)	per yard run	1/0¾
Rounded edge tiles	per yard run	2/8½

PLUMBER

Lead

• 3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt.	23/–
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/–
• Allowance for old lead delivered to merchant	per cwt.	12/6

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are subject to 20 per cent. trade discount, and the prices of the fittings are subject to 5 per cent. and 20 per cent. trade discount.

Rainwater Pipes

	2″	2½″	3″	3½″	4″	4½″	5″	6″
Round pipes per yard	2/8½	2/9¾	3/7¾	4/0¾	4/9½	6/1¾	7/2½	9/2
Shorts, 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5	–/5
Bends.. .. each	1/9	2/–	2/6	3/–	3/7	5/–	6/6	8/5
Offsets 4½″ and 6″ projection .. each	2/2	2/8	3/–	3/5	4/4	6/3	7/6	9/10
Offsets, 9″ projection each	2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single each	2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes .. .. each	1/6	1/9	2/–	2/8	3/–	4/4	5/5	7/6

PLUMBER—(*continued*)

Square and rectangular pipes.

3″ × 3″ .. .. per yard	6/9¼
3½″ × 3½″ .. .. per yard	8/4
4″ × 2″ or 2½″ .. .. per yard	7/4¾
4″ × 3″ .. .. per yard	7/4¾
4″ × 4″ .. .. per yard	9/0¾
4½″ × 3″ .. .. per yard	8/5½
5″ × 3″ or 3½″ .. .. per yard	9/7

Gutters

	3″	3½″	4″	4½″	5″	6″
Half round gutters per yard	1/9¼	2/1	2/1	2/2½	2/4¾	3/7¾
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/5	1/7	1/9	2/–	2/2	3/1
Stop ends .. .. each	–/5	–/5	–/7½	–/9	–/10½	1/–
Ogee gutters per yard	2/1	2/3½	2/4¾	2/6	2/9¾	3/10½
Straight back and shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra .. per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/11	1/11	2/–	2/4	2/8	3/3
Stop ends .. .. each	–/6	–/7½	–/9	–/10½	1/–	1/3

Mild Steel Rainwater Goods

The following prices should be increased by 5 per cent. and are subject to 7½ per cent. trade discount.

24 Gauge rainwater slip jointed pipes.

	2″	2½″	3″	3½″	4″
Galvanized round pipes with ears per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/7½	3/–	3/4½	3/10½	4/3
Painted or galvanized short lengths with ears, extra each	–/6	–/6	–/6	–/6	–/6

18 Gauge Gutters.

	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters .. per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 10 per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.

2″ .. .. per yard run	1/10
2½″ .. .. per yard run	2/0¾
3″ .. .. per yard run	2/5¾
3½″ .. .. per yard run	2/11¼
4″ .. .. per yard run	3/4¾
4½″ .. .. per yard run	4/10½
5″ .. .. per yard run	5/9½
6″ .. .. per yard run	7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

	3″	4″	4½″	5″	6″	8″
Half round gutters per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters per yard run	—	1/11	2/0¾	2/5¾	3/0½	3/11½

INTERNAL PLUMBER

• Lead pipe in coils, 5 cwts. and upwards	per cwt.	22/6
• Lead soil pipe	per cwt.	25/6
Add if ribbon marked	per cwt.	–/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	7/–
Plumber's solder	per cwt.	85/–
Tinman's solder	per cwt.	111/–

Drawn lead traps with brass screw eye, 6 lbs.

	1″	1¼″	1½″	2″
S. trap .. .. each	1/7	1/9	2/2	3/2
P. trap .. .. each	1/4	1/6	1/10	2/7
Extra for 3″ deep seal .. .. each	–/6	–/6	–/6	–/6

• Items marked thus have risen since June 23rd.

CURRENT PRICES

INTERNAL PLUMBER

BY DAVIS AND BELFIELD, P.A.S.I.

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.		½″	¾″	1″	1¼″	1½″	2″
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9½	1/1	1/4½	1/10
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.							
Elbows, square ..	each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round ..	each	1/2	1/5	1/8	2/4	2/10	4/8
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain ..	each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
Gas	62½%	53½%	57½%
Water	58½%	50%	52½%
Steam	56½%	46½%	47½%
Galvanized gas	53½%	46½%	47½%
,, water	48½%	42½%	42½%
,, steam	43½%	38½%	37½%

Brasswork. Best Quality

		½″	¾″	1″
Chromium plated screw-down bibcocks, screwed for iron ..	per dozen	34/6	56/3	99/–
Ditto, with screw ferrule ..	per dozen	43/–	67/3	105/6
Ditto, with capstan head lettered, screwed for iron ..	per dozen	40/6	62/3	108/–
Ditto, with screw ferrule ..	per dozen	49/–	73/3	124/6

		Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male Screwed End and Iron Unions
½″	per dozen	37/6	43/–	35/–
¾″	per dozen	59/–	65/–	54/–
1″	per dozen	90/–	97/6	84/–
1¼″	each	12/9	13/6	12/–
1½″	each	20/6	21/6	19/–
2″	each	39/9	41/3	37/6

		½″	¾″	1″
Portsmouth pattern ball valve for low pressure, screwed for iron ..	each	3/7	5/5	11/3
Ditto, with flynut and union ..	each	4/3	6/3	12/9
High pressure ditto, screwed for iron	each	3/7	5/5	11/3
Ditto, with flynut and union ..	each	4/3	6/3	12/9

		2″	2½″	3″	4″
Socket thimble sloping shoulder	per dozen	10/–	13/–	15/9	22/3
		1½″	2″	2½″	3″
Flanged ferrule thimble	per dozen	7/9	9/–	13/6	16/–

		½″	¾″	1″	1¼″	1½″	2″
Union joints for lead and iron ..	per dozen	7/6	10/3	14/–	26/–	42/6	92/–
Single nut short boiler screws ..	per dozen	6/–	9/–	14/3	21/–	33/–	60/–
Double nut boiler screws	per dozen	8/3	9/9	15/–	22/6	43/6	69/–

Belfast sink wastes stamped brass with brass plug diameter of outlet 2″ .. .. per dozen 18/–

Galvanized Mild Steel Open Top Cisterns riveted with internal angle iron at top and corner plates

The following prices are subject to 15% and 20% trade discount :—

		14-gauge £ s. d.	12-gauge £ s. d.	¼″ plate £ s. d.	⅜″ plate £ s. d.
50 gallon capacity	each	2 5 11	2 14 5	3 1 7	7 0 8
100 ,,	each	3 8 9	4 2 11	4 16 9	9 10 8
200 ,,	each	6 6 9	6 19 5	7 18 3	13 1 0
500 ,,	each	12 6 0	13 16 1	15 16 3	22 6 9
1,000 ,,	each	—	21 9 4	24 19 5	34 15 4

INTERNAL PLUMBER—(*continued*)

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to a pressure of 1 lb. per sq. inch = 1½ ft. head of water £ s. d.	14-gauge tested to a pressure of 3 lbs. per sq. inch = 4½ ft. head of water £ s. d.	12-gauge ¼″ plate tested to a pressure of 10 lbs. per sq. inch = 10 ft. head of water £ s. d.	¼″ plate tested to a pressure of 7½ lbs. per sq. inch = 15 ft. head of water £ s. d.
20 gallons	each	2 0 3	2 3 11	2 7 8	2 12 9
40 ,,	each		3 1 7	3 9 0	3 16 8
			Tested to a pressure of 5 lbs. per sq. inch = 7½ ft. head of water		Tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water
60 ,,	each		4 19 3		5 5 5
80 ,,	each				7 5 7
100 ,,	each				8 4 5

Screwed flanges or bosses

½″	¾″	1″	1¼″	1½″	1¾″	2″	2½″	
1/8	2/–	2/4	2/11	3/4	3/9	4/8	6/9	Extra per flange or boss.
2½″	3″	3½″	4″	4½″	5″	6″		
8/4	14/3	16/9	19/3	26/11	30/1	45/1		

Galvanized Hot Water Cylinders, Mild Steel Riveted throughout, without Manhole, with usual number of flanges

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to 5 lbs. pressure = 10 ft. head of water £ s. d.	14-gauge tested to 15 lbs. pressure = 30 ft. head of water £ s. d.	12-gauge tested to 20 lbs. pressure = 40 ft. head of water £ s. d.	¼″ plate tested to 25 lbs. pressure = 50 ft. head of water £ s. d.
20 gallons	each	1 18 7	2 2 8	2 8 4	2 15 4
40 ,,	each	2 10 11	2 16 8	3 6 1	3 15 0
65 ,,	each		4 8 7	5 1 8	5 16 1
75 ,,	each		5 1 7	5 15 0	6 11 4
85 ,,	each			6 10 8	7 11 9
100 ,,	each				8 2 5

Cast Iron Soil Pipes and Connections, L.C.C. $\frac{1}{16}$″ metal.

The following prices for soil pipes are subject to 20% Trade Discount, and the prices of the fittings are subject to 20% and 5% Trade Discount.

		2″	2½″	3″	3½″	4″	5″ ½″ metal	6″ ½″ metal
Minimum weights in lbs. per 6′ 0″ length		24	30	35	41	46	78	92
Pipes coated or uncoated	per yard run	3/10½	4/0½	4/5½	5/–	5/8½	11/8	14/0½
Double sockets extra	each	–/11½	–/11½	–/11½	–/11½	–/11½	1/0½	1/0½
Short lengths extra 2′, 3′ and 4′	per yard run	–/3½	–/3½	–/3½	–/3½	–/3½	–/5	–/5
Single spigot branch cast on pipe	each	4/3	4/5	4/7	4/9	4/11	7/6	9/3
Single socket branch cast on pipe	each	10/9	11/–	11/3	11/6	11/9	16/–	19/–
Bends, standard angles	each	3/1	3/5	3/9	4/8	5/3	9/4	12/9
Large radius bends	each	4/–	4/4	5/–	6/–	7/–	13/–	16/9
Inspection bends raised flange door, 4 gunmetal bolts	each	16/1	16/11	17/9	18/8	19/3	31/10	36/6
Swannecks 4½″ and 6″ projection	each	3/9	4/4	5/11	6/10	7/11	14/11	20/1
9″ ditto	each	5/–	5/7	6/10	7/11	9/4	17/1	22/10
12″ ditto	each	5/11	6/10	7/11	9/8	10/7	19/1	27/1
Single branch with two sockets. T. pieces. T. pieces diminishing two sockets, inverted two sockets.		3/9	4/8	5/7	6/6 each	7/6	15/10	21/8
Parallel branch pieces not exceeding 6″ centres. Y pieces. Anti-syphon branches with curved arm.		4/10	5/11	6/10	7/11 each	8/11	—	—
Double branch pieces, three sockets	each	5/11	7/–	7/11	9/–	10/3	20/3	27/3
Inspection branch pieces double oval access door, 2 gunmetal screws	each	12/11	14/–	14/11	16/6	17/9	29/2	36/2
Long branch pieces	each	5/–	6/–	7/3	8/6	9/9	19/–	25/–

CURRENT PRICES

BY DAVIS AND BELFIELD, P.A.S.I.

COPPERSMITH AND ZINCWORKER, GLAZIER AND PAINTER

COPPERSMITH AND ZINC WORKER

Copper

● Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge .. .. per lb.		–/9½
● Copper tube, seamless solid drawn .. .. .. per lb.		1/0½
● Copper wire, 10 and 12 gauge .. .. .. per lb.		–/9½
● Copper nails, 1″ and up .. .. per lb.		–/10

Fittings for Copper Tubes

Compression Type :	½″	¾″	1″	1¼″	1½″	2″	2½″
Straight coupling each	1/1½	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Obtuse elbow each	1/10½	2/2½	3/3	4/1½	7/1½	10/5¾	—
Tees .. each	2/1½	2/5½	4/–	5/9½	9/3	13/1½	19/3½
Crosses .. each	3/–	3/4¾	5/2½	6/3¾	10/11¼	15/3	26/4¾
Reducing coupling each	—	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Bends .. each	1/7½	1/11¼	2/11	3/8¾	6/7¼	9/10¾	14/1·
Brass stop cocks each	3/11½	5/10¾	8/7½	15/11¾	22/3¾	37/8¾	—

Extra for Polishing 25%; Chromium plating 50%; Nickel plating and polishing 50%.

Capillary Type

Straight coupling each	–/7½	–/10½	1/3¾	1/8½	2/3¾	3/4½	5/9
45° elbow .. each	1/3¾	1/8½	2/4½	3/2	4/9	7/1½	11/1
Tees .. each	1/5½	1/7¾	2/8	3/11½	5/7¼	8/3¾	12/8
Crosses .. each	1/10½	2/0½	3/4½	4/9	7/2¼	10/6	18/2½
Reducing coupling each	—	–/6¼	–/8¼	1/0¾	1/7	2/9¼	4/4½
Bends .. each	1/7	1/11	2/9¼	3/9½	5/11¼	8/3¾	11/10½
Pillar tap connection .. each	1/–	1/5½					

Extras for Polishing 15%; Chromium plating 40%; Nickel plating 27½%.

Zinc

	Quantities of less than 3 cwts.	Quantities of more than 3 cwts.	Quantities of more than 5 cwts.
● Sheet zinc, 10 gauge and up per cwt.	33/–	32/–	32/–
		5 sheets and under	12 sheets
8 gauge zinc safe hole perforated sheets, size 8′ 0″ × 3′ 0″ .. per sheet		4/9½	4/0½
7 gauge ditto .. .. per sheet		4/2¾	3/7
6 gauge ditto .. .. per sheet		3/9½	3/3

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

	In squares not exceeding 2 ft.	4 ft.	5 ft.	Over 6 ft.
18 oz. clear sheet .. .. per foot super	–/2¼	–/2¾	–/3	–/3½
24 oz. ditto .. .. per foot super	–/2¾	–/3¾	–/4	–/4¾
32 oz. ditto .. .. per foot super	–/4	–/5⅞	–/6⅞	–/7⅞
Obscured sheet glass net extra	–/1½	–/1½	–/1½	–/1½
⅛″ figured rolled glass, white per foot super	–/6½			
⅛″ ditto, normal tints .. per foot super	–/9½			
Hammered, doubled rolled, Cathedral white .. .. .. per foot super	–/6			
Ditto, normal tints .. per foot super	–/8½			

Thick Drawn Sheet Glass cut to size

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.	6 ft.	8 ft.
3/16″ thick .. per foot super	–/9	–/11	1/–	1/2	1/3	1/4
¼″ thick .. per foot super	–/11	1/–	1/3	1/5	1/7	1/9
	In squares not exceeding 12 ft.	20 ft.	45 ft.	65 ft.	90 ft.	100 ft.
3/16″ thick .. per foot super	1/6	1/7	1/9	—	—	—
¼″ thick .. per foot super	1/10	2/2	2/4	2/8	3/–	3/–

For selected glazing quality add 10 per cent. to the above prices.

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding	Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
1 ft. super .. per foot super	1/–	1/3	1/7
2 ,, .. per foot super	1/4	1/6	1/10
3 ,, .. per foot super	1/10	2/1	2/6
4 ,, .. per foot super	2/6	2/9	3/2
6 ,, .. per foot super	2/10	3/–	3/6
8 ,, .. per foot super	2/11	3/4	3/8
12 ,, .. per foot super	3/1	3/8	3/11
20 ,, .. per foot super	3/1	3/9	4/1
45 ,, .. per foot super	3/3	4/–	4/4
65 ,, .. per foot super	3/7	4/3	4/11

GLAZIER—(*continued*)

British or Foreign Polished Plate Glass cut to size—(contd.)

Ordinary ¼″ Substance In Plates not exceeding	Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
90 ft. super .. per foot super	3/11	4/8	5/1
100 ,, .. per foot super	4/–	4/10	5/4

Plates exceeding 100 ft. super or 160 in. long, or 104 in. wide, at higher prices.

The usual thickness of polished plate glass is about ¼″, but if required of special thickness for glazing purposes, add to the above for :—

	Plates up to and including 4 ft. super	All plates over 4 ft. super
⅛″ to 5/32″ .. .. per foot super	–/2	–/4
5/32″ to 3/16″ exact .. per foot super	–/2	–/3
3/16″ .. .. .. per foot super	No extra	–/1½
¼″ bare .. .. per foot super	,,	–/1½
¼″ exact .. .. per foot super	–/2	–/2
5/16″ to ⅜″ .. .. per foot super	No extra	–/4½
⅜″ exact .. .. per foot super	–/2	–/6

Special quotations should be obtained for other qualities and thicker substances.

Silvering

	Ordinary Quality on Polished Plate, Thick Drawn Sheet, Patent Sheet and Plain Sheet	On Embossed or Decorative Work
12 ft. super or 90 in. long .. per ft. super	9d.	1/4
20 ft. ,, or 100 in. long per ft. super	10d.	1/4
45 ft. super, 50 ft. ,, or 110 in. long per ft. super	1/–	1/5
	1/0½	1/6
55 ft. ,, 60 ft. ,, or 120 in. long per ft. super	1/1	1/6½
	1/1½	1/7
65 ft. ,, 70 ft. ,, or 130 in. long per ft. super	1/2	1/8
	1/3	1/9½
75 ft. ,, 80 ft. ,, or 140 in. long per ft. super	1/4	1/11
	1/5	2/0½
85 ft. ,, 90 ft. ,, or 150 in. long per ft. super	1/8	2/5
	1/11	2/9½
95 ft. ,, 100 ft. ,, or 160 in. long per ft. super	2/2	3/2
	2/5	3/8

For silvering on fluted sheet, figured rolled and cathedral, add 4d. a foot to the prices set out in the first column for polished plate, etc.

Silvering bent glass, double or more, according to bend.

For plates over 100 ft. super, add 3d. per ft. super for every 5 ft. or part of same.

Plates over 160 in. long at special rates.

Stripping for re-silvering, add 8d. per ft. super.

Wired Glass Cut to Sizes

¼-in. Georgian rough cast .. .. .. per ft. super 10d.

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
¼-in. Georgian polished plate per ft. super	2/6	2/8	2/10	3/2
	8 ft.	12 ft.	20 ft.	30 ft.
¼-in. Georgian polished plate per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

PAINTER

White ceiling distemper .. .. .. per cwt.		12/6
Washable distemper .. .. per cwt.		60/–
Petrifying liquid .. .. per gallon		4/6
Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins .. .. per cwt.		68/–
White enamel .. .. per gallon		25/–
Aluminium paint .. .. per gallon		20/–
Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs .. .. per cwt.		48/3
Driers .. .. per cwt.		36/–
Linseed oil raw (5-gallon drums) .. .. per gallon		3/–
,, boiled ,, ,, ... per gallon		3/3
French polish .. .. per gallon		11/6
Knotting .. .. per gallon		16/–
Oil stain .. .. per gallon		12/–
Varnish, oak .. .. per gallon		10/–
,, copal .. .. per gallon		16/–
,, flat .. .. per gallon		20/–
Turpentine, genuine American 5-gallon lots	per gallon	3/1
Creosote, 1-gallon lots .. .. per gallon		1/4
Putty .. .. per cwt.		12/6
Size .. .. per firkin		3/6
Best English quality gold leaf, 23 carat .. per book		2/4½
Extra thick, ditto .. .. per book		3/6

● Items marked thus have risen since June 23.