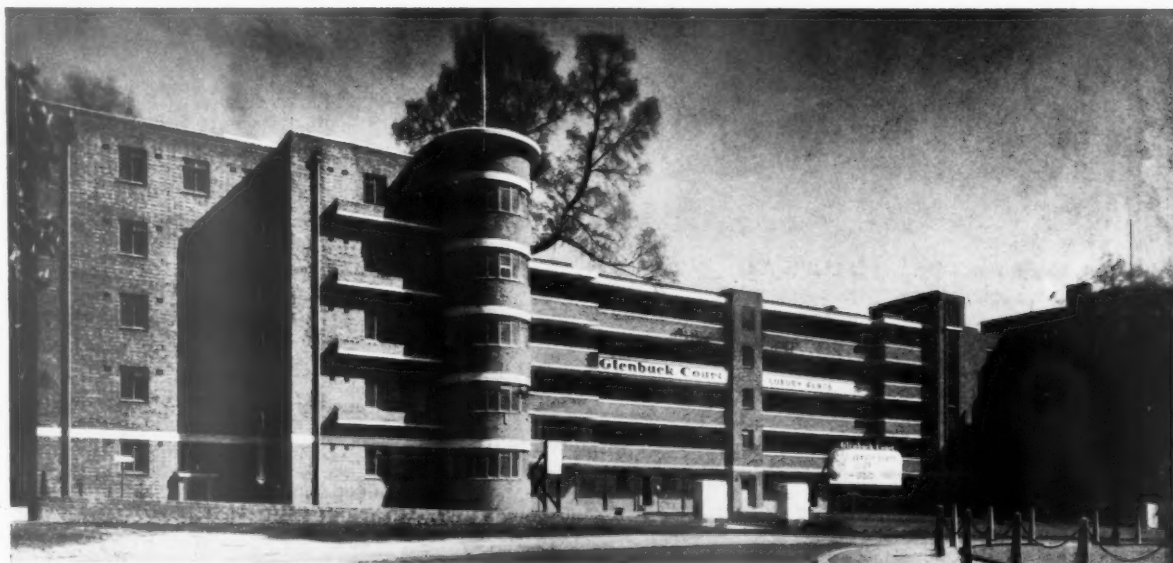


## ECONOMY OF SOLID BRICK CONSTRUCTION WITH REINFORCEMENT



By taking advantage of up-to-date building regulations and using **Reinforced Brickwork** it was possible to reduce the thickness of the external walls by  $4\frac{1}{2}$ " throughout the five storeys of the building.



## GLENBUCK COURT, SURBITON



Architect: Ronald Ward, A.R.I.B.A., A.I.Arb., A.R.San.I.

Contractors: Cussins (Contractors) Ltd.

### CONSTRUCTION:

The construction throughout the building is of solid brick walls (except partitions), brick piers and concrete floors. The bye-laws required the external walls of the two lowest storeys to be 18" and those of the upper storeys to be  $13\frac{1}{2}$ " unless they were properly reinforced.

Reinforcement was used in every fourth course and the wall thicknesses were allowed to be reduced to  $13\frac{1}{2}$ " and 9" respectively, with considerable economy in both material and labour costs.

Phorpres Commons and Phorpres Rustic Facings were used.

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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.*

THURSDAY, OCTOBER 27, 1938

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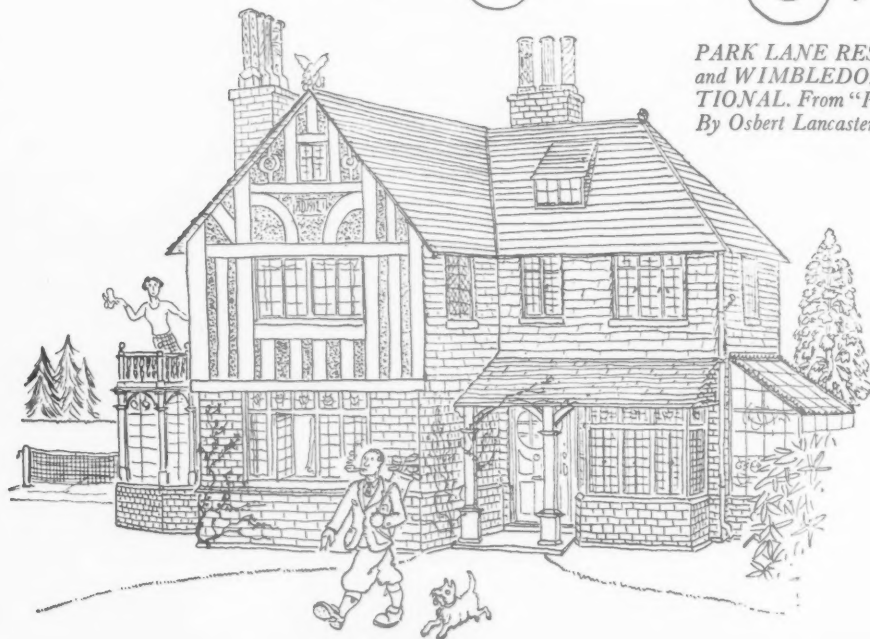
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# L O M B A R D   T E R R A C E ,   C H E L S E A

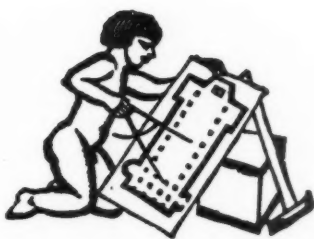


*THE two houses in Lombard Terrace on the river front in Chelsea, which it is proposed to demolish. The Chelsea Society is making efforts to secure their retention as they have no serious structural defects. It is understood that the intention to demolish arose from an agreement to provide a view of the river from No. 1 Petyt Place behind them, and there is some prospect of their being retained.*



PARK LANE RESIDENTIAL  
and WIMBLEDON TRANSI-  
TIONAL. From "Pillar to Post."  
By Osbert Lancaster.





"For of all the arts architecture is the one with which the public are most vitally concerned. A man may never enter a concert hall or a picture gallery, open a book of poems or sit through a play, but we all need shelter, and its provision, save in the case of boy scouts and troglodytes, is the business of the architect. Architecture, therefore, by reason of its two-fold nature, half art, half science, is peculiarly dependent on the tastes and demands of the layman, and whereas in the other arts a neglected genius working in his garret may just conceivably produce a masterpiece, no architect has ever produced anything of lasting significance in the absence of a receptive public."

"Today architecture is an activity about which the average man cares little and knows less . . . This was not always the case; in the eighteenth century every well-educated man considered himself entitled to express his opinion about the moulding of a cornice or the disposition of a pilaster, and in nine cases out of ten, was possessed of sufficient knowledge to lend it weight. But early in the nineteenth century this happy state of affairs came to an end, and architecture was removed from the sphere of everyday life and placed under the jealous guardianship of experts and aesthetes . . ."

" . . . The object of this book, therefore, in so far as it has one, is to induce an attitude towards architecture less reverent and of greater awareness, and to encourage the reader, when driving down the by-pass or riding on the tops of buses or just walking along the street, to take another look at the fantastic collection of buildings on either side."

## INDISPENSABLE HANDBOOK

THE JOURNAL does not often call a book important. It has no hesitation in so describing *Pillar to Post*,\* by Osbert Lancaster.

It is a book which destroys a most pernicious pretence and remedies a great injustice. It destroys—or rather, wittily deflates—the idea that the architect has some high-falutin' social mission connected with aesthetics. And it shows beyond all question how hard the more sensible architects have struggled to give clients what clients want.

This striving—obvious before 1900—has since developed the magnitude of a crusade, in which architects, estate agents, building societies and publicity experts can all claim credit. Its creed is that all elements of a building should be what the client wants at the client's price.

The futility of most architectural historians and critics has never been so underlined as in the neglect of this supreme social need, which has done more to decide the appearance of buildings than all other influences put together.

Architects know this. With British reticence and sensible disregard of the theorist, they have never bothered to put it into words; but they know the tremendous aggregate of self-subordination and quiet doing of what is needed that has gone to give the man in the street what he wants in his buildings.

Mr. Lancaster's greatness lies in the incisiveness with which he shows how the architect, among others, has succeeded in identifying his interests with those of his countrymen.

In a sense *Pillar to Post* is a popular book. It is a picture book, and Mr. Lancaster is not above poking a little sly fun at the public—which will certainly be taken in good part. But this sort of thing will not deceive architects. Nor does it conceal Mr. Lancaster's admiration of the obstacles which the profession has managed to take in its stride—of the ability and sustained effort which resolved cast-iron pillars into

EDWARDIAN BAROQUE or the requirements of a 1930 house into STOCKBROKERS' TUDOR.

*Pillar to Post*, however, is much more than a tribute. With erudition and the pen of a modern Rickards it has undertaken with felicitous success the classification and labelling of the main stylistic developments of our times. The value of this cannot be exaggerated.

Every architect must be conscious of a distressing period in the life of every job, whether cocktail cabinet or bank. The accommodation, the structure, the equipment, the cost—all have been settled; all that remains is what is called style.

In an agony of knowing what he likes, the client stands dumb before his helper. The phrases that spring most readily to his tongue have too often been derided by an irresponsible press. And he knows no others.

Abler architects often get round this by preparing all first sketches in five styles. But those without large offices have hitherto been at a disadvantage. They need be so no longer.

Mr. Lancaster's book enables clients to be as exact in prescribing external effect as in choosing a fireplace in an illustrated catalogue. WIMBLEDON TRANSITIONAL, BANKERS' GEORGIAN, PSEUDISH, BY-PASS VARIEGATED and PARK LANE RESIDENTIAL are the main parallel developments of this new study of architecture on the comparative method. And terms equally expressive are suggested for minor, but still common, variations of architectural expression.

There is only one obstacle to the saving to time and temper by the popularization of these terms. Mr. Lancaster has searched and searched again until he found the *most expressive and instantly recognizable* denomination for each style. He has succeeded admirably; but his very success may, at first, make the public diffident of using his glossary.

In their own interests architects should do all they can to get rid of any such time-wasting shyness. And the best way of doing this is habitually to use the terms themselves.

\* *Pillar to Post*. By Osbert Lancaster. London: John Murray. Price 5s.



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## NOTES & TOPICS

### TOPIC OF THE MOMENT

**J**UST now the Press, the *whole* Press, is solid on two points. It wants to know what the Government is going to do during the next year about aircraft production, and about A.R.P. And it seems clear that the proposals will have, this time, to seem adequate.

Of the two, A.R.P. is far and away the larger and more difficult, and since architects have some knowledge of the technical questions involved, we suffer the most poignant misgivings over the solutions, official and otherwise, which have so far been advocated.

It might even be wise to make a list of these doubts and send them to the Home Office *now*. For instance:

#### TRENCHES

The beginnings of quite large trench systems were made in London parks last month. Since raids may occur at any time of day or night at ten minutes' notice, who is going to get to those trenches; how long are they going to stay; have questions of sanitation, canteens, and panic *en route* been thought of?

#### UNDERGROUND CAR PARKS

Underground car parks which can be converted into shelters are being widely suggested, and are even on the point of being built in one case. Now—subject to expert correction—I believe it is extremely difficult to design a car park which can *rapidly* be converted into a tolerable shelter. And if the shelter be large, the same objections apply to it as to large trench systems in parks.

#### UNDERGROUND "CENTRES"

Schemes have also been suggested for Amusement Centres and other resorts under Hyde Park and elsewhere. The sooner a highly authoritative body puts an end to these fantasies, the better.

#### OTHER METHODS

I suspect that architects will feel inclined to advocate less heroic methods. Such as: a thoroughly worked out scheme of evacuation (each group knowing where and how they are to go); a survey of street densities of those who would

remain, by night and by day; liberal grants towards the cost of making small shelters (or giving other protection) on a spacing of one to every hundred yards of street.

A little memorandum to this effect circulated to the Press would save much costly newsprint.

#### TAXI DRIVER'S PORTIA WIFE

The case of *Bradford Third Equitable Benefit Building Society v. Borders*, which has been proceeding during the past week before Mr. Justice Bennett, is of the greatest interest.

Mrs. Borders, the wife of a taxi driver, is conducting her own case as defendant in a claim for arrears of mortgage payments. She alleges that she has been misled by the society into the belief that her house was good security for the money advanced. The building society denies this.

The case is, I am told, reported elsewhere in this paper (together with a full statement of grounds of action), and being *sub judice* at the time of going to press, is not a fit subject for comment. But its importance to all concerned with house building and purchase is obvious.

#### FINSBURY'S GREAT DAY

One knows so well the usual opening ceremony of a new public building: the bored aldermen; the bored Personage and his formality of a speech that shows no genuine interest in the building or its purpose; the bored public that accepts what it is given and obediently believes that it is good; all these in front of the main entrance to the boring building, whose façade is itself as much a formality as the speech of the Personage—and probably in a drizzle of rain.

In contrast to all this last Friday's opening of Finsbury's new Health Centre was a really inspiring occasion: no one was bored; everyone was enthusiastic because the occasion inspired them with enthusiasm; and I have never known a similar ceremony in this country that was at the same time so jolly—even hilarious. It was like nothing so much as a fête-day in a French provincial town.

The enthusiasm was infectious. Finsbury had fought for this building. Its faith in modern architecture had been put to the test at last year's elections when *Kultur Bolshevismus* had been made an election issue by the Tory opposition. The adventurous Council had accepted the challenge and won, and the new Health Centre was the first-fruit of the triumph of experiment over reaction.

Finsbury itself (*not* merely a few big-wigs) was determined to enjoy its position as a pioneer borough: that and the gaiety of the building itself must have been the reason for the cheerfulness of the occasion.

And finally the speech of the opener, Lord Horder (after he had been presented with the key by Mr. Lubetkin), was remarkable for real insight and knowledge. He, in contrast to the habit of opening speech-makers, knew the importance of the example Finsbury had set.

#### STOWE

I spent Sunday afternoon walking round Stowe, once the seat of the Buckinghams, and now a public school. The transformation has affected it little, although the "plain agreeable face" of the Temple of Bacchus has



disappeared to make way for the school chapel—a building of an unattractive humpiness.

\*

In the pale autumn sun, the park, set with whiskered temples, obelisks, and pavilions, looked much as it must have done to Vanbrugh, Bridgeman and Kent, though the temples themselves have some of them been transformed into armouries, fencing schools, music rooms, or tool sheds, and lately the surrounding grass has been disturbed with trenches.

\*

Within the main house, the State rooms, with their Italian fireplaces and gilded architraves, remain unaltered. It is a tribute to the boys who use these rooms as dining-halls, common rooms, and libraries that they can remain so. Not so long ago it would have been necessary to provide dark green dados and great iron stoves to replace the basket grates. But they must be an unusual lot. The art school was crowded with painters and modellers, and somebody was measuring up an urn.

\*

The one disappointment was that I failed to find the famous notice which is reputed to read: "The Temple of Venus and the Piggeries are out of bounds until further notice."

#### TRADING ESTATES

Most of us believe nowadays that a properly designed Trading Estate is the best way of providing for new industrial development—especially for light industries.

\*

But there are signs that a very good thing is falling in public estimation both by misuse of its name and by exaggeration of its possibilities.

\*

Trading Estate is used to describe the Team Valley development; it is also used to describe any bit of land on which any industrialist is allowed to build anything anyhow. What is more, the Government is falling into a habit of saying "Look what we're doing for unemployment—look at our Trading Estates in the Special Areas." This is pure farce.

\*

Treforest, for instance, is a sound experiment. It is now employing 700 factory workers and a further 600 on construction. When fully developed it will employ 7,000–10,000 people.

This is excellent. But since unemployment in the nearest town alone is 16,000, it must be realized that although Trading Estates may indicate lines on which to attack unemployment, they do not do more.

#### FREEDOM OF THE PRESS

According to a publicity report from New York, they are putting up a statue representing the "Freedom of the Press" at the World's Fair. It will show "a female figure perched high to signify watchfulness, and partially nude to show the unadorned truth, writing on a never-ending sheet what she sees, while an owl, suggesting wisdom, looks on." "One of the figures reading the scroll will be a child, a tribute to the moral standard of the Press."

\*

There will, I am sure, be many unofficial interpretations of this allegorical group. It would be difficult to avoid commenting upon the half-veiled appearance of "unadorned truth," or suspecting that the child represents the average reader.

#### "COTTAGE LOAFING"

The picture reproduced above is not another of those American pencil advertisements, it is the new week-end house for President Roosevelt, and is reputed to be of his own design. It is expected to cost £5,000, but will not be fitted with a telephone.

\*

In contrast to this (and costing only £750) is the "perfect week-end cottage" designed by M. le Corbusier in association with Mr. Clive Entwistle, which is to be shown at the Woman's Fair.

\*

It is a demure, boxy little building, with an outside fireplace and grass all over its roof. Although this would seem to be an unnecessary luxury in the country, it is defended as being good insulation, and perfect camouflage against enemy aircraft. I noticed, however, no provision for getting a lawn-mower up on the roof.

\*

M. le Corbusier was present himself at a party given to launch this latest of his projects, and was looking none the worse for his recent brush with the machine. At the same party were present Mr. Godfrey Winn and Mr. Douglas Byng, and the braver guests were seen to be rehearsing, with muttering lips, a rapidly consecutive sentence in French with which to address the guest of honour.

ASTRAGAL



## NEWS

POINTS FROM  
THIS ISSUE

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- Mrs. Borders' Case .. .. 675
- A New Rawlplug .. .. 699

## EXHIBITION OF SCOTTISH ART

The exhibition of Scottish Art which the Royal Academy is holding from January 6 to March 11, 1939, is designed to display the finest achievements of Scottish Art through the last three centuries, and to make them better known to the British public as a whole.

In order that the exhibition may have the character of a national demonstration of accomplishment in the arts, the exhibits have been chosen mainly from the National Gallery of Scotland and from other Scottish collections; but English owners have also given valuable support by lending a number of important works. Many art treasures in private ownership to which the public have hitherto had no access will be on view for the first time in London.

A series of lectures on Scottish Art will be given in adjacent premises concurrently with the exhibition. Particulars of the dates and terms of admission are obtainable on application to the Secretary, Royal Academy of Arts, Piccadilly, London, W.1.

## SADLER'S WELLS

The first part of the Lilian Baylis Memorial Extension at Sadler's Wells Theatre is now completed. A new opera rehearsal room, a greatly enlarged stage and a new scene dock are now in use. These alterations form a major part of the Memorial Extension for which an appeal was made for £40,000; up to date £21,000 has been raised. The rest of the work, including a ballet rehearsal room, work-rooms and dressing-rooms will proceed without interfering with productions and will take a few months to complete. The architects are Messrs. Stanley Hall and Easton and Robertson.

## B.B.C., GLASGOW

B.B.C. Broadcasting House, Glasgow, is to be opened by Mr. Walter Elliot (Minister of Health) on November 18. There are ten studios. No. 1 is larger than any in Broadcasting House, London, and is second only to the B.B.C.'s largest studio at Maida Vale.

## ON THE AIR

When the Northern Children's Hour provides an afternoon of story-telling on Friday, November 18, one of the interesting items of the programme will be a talk by a plasterer, Mr. Holland, who visited the studio about a year ago, and told stories of some of the children who come and make friends with the workmen when a house is being built. At the microphone on November 18, this speaker will answer some

THE  
ARCHITECTS'  
DIARY

## Thursday, October 27

R.I.B.A., 66 Portland Place, W.1. Small House Exhibition. Until October 29.

SOETY OF ANTIQUARIES, Burlington House, W.1. "Roof Bosses in Peterborough and Ripon Cathedrals." By C. J. Care. 8 p.m.

## Friday, October 28

INSTITUTION OF HEATING AND VENTILATING ENGINEERS, London and District Branch. Annual Supper at 39 Victoria Street, S.W.1. 6.45 p.m. Scottish Branch, 39 Elmbank Crescent, Glasgow, C.2. "Oxy-Acetylene for Heating Engineers." By C. N. Dod. 7.30 p.m.

REIMANN SCHOOL, 4-10 Regency Street, S.W.1. "Exhibition Architecture." By Howard Robertson. 6.15 p.m.

## Monday, October 31

ROYAL ACADEMY OF ARTS, Burlington House, W.1. "Craftsmanship and Painting." By Professor H. J. Plenderleith. 4 p.m.

## Wednesday, November 2

WORSHIPFUL COMPANY OF CARPENTERS, Carpenters' Hall, E.C. "The Manufacture and Use of Ply-wood." By H. Ingham Ashworth. 7.30 p.m.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS, At the Institution of Mechanical Engineers, Storeys Gate, S.W.1. "Air-conditioning Requirements of Cinemas." By L. W. J. Henton. 7 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. "Greek Architecture (3000-146 B.C.): First or Early Period, Architectural Character, Tombs, Palaces." By Sir Banister Fletcher. 6 p.m.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Industrial Holidays." By Rt. Hon. Lord Amulree. 8.30 p.m.

INSTITUTION OF CIVIL ENGINEERS, Manchester and District Branch. At 36 George Street, Manchester. "Road Bridges in Lancashire—A Review of Recent Work." By F. A. L. Wellard and J. H. Deun. 6.45 p.m.

WOMEN'S FAIR AND EXHIBITION. At Olympia. Until November 26.

of the questions children keep on asking when, inquisitively, they wander round a house during construction.

## STUDENTS' COMPETITION RESULT

A meeting of the Manchester Society of Architects was held on October 12, when Mr. W. A. Johnson, F.R.I.B.A., the President, addressed architecture students of the district. He said: "I hope I will not be accused of undervaluing architectural education when I say the most that can be taught is the alphabet and grammar of the art of architecture, the technique of building, certain principles of design and planning, a limited number of facts, where to look for things you don't know, and the right attitude of mind." At the meeting the winners of the Society's Competitions were announced as follows:

Senior Measured Drawing Prize: 1st, K. C. Twist; equal 2nd, T. Howarth and A. Dixon.

Junior Measured Drawing Prize: D. A. Thompson.

Sketches Prize: K. C. Twist.

Essay Prize: K. E. Bradley.

Senior Design Prize: 1st, J. Wilkinson; 2nd, K. H. Haworth.

Junior Design Prize: F. B. Schofield.

The competition is open to the north-west area covered by the Manchester Society.

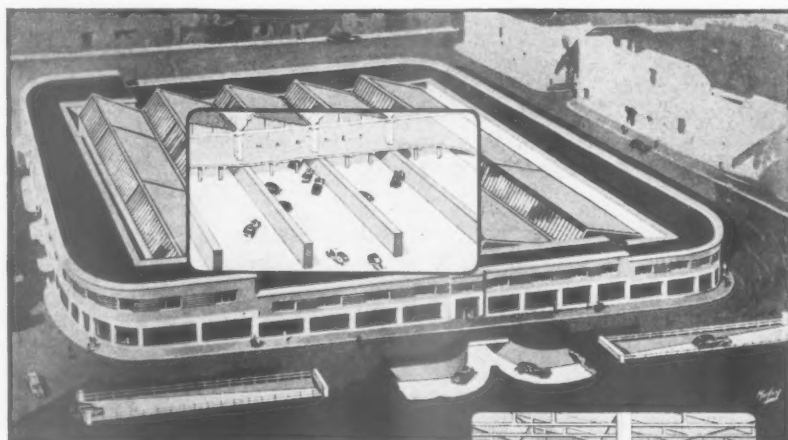
## THE FALKIRK COMPETITION

The sending-in day of designs for the competition for a proposed nurses' home at the Falkirk Royal Infirmary has been extended to November 14. The Hon. Secretary of the Infirmary writes: "In view of representations which have been made to the managers by a number of competitors who were engaged in work of national importance during the recent crisis, the managers have agreed, after consultation with the assessor, to extend the date for lodging plans for a fortnight. Plans will accordingly be received up till and including Monday, November 14."

## HENRY L. FLORENCE BURSARY

Attention is called to the fact that the last date for the receipt of applications for the bursary is December 1, 1938.

Candidates must be members of the R.I.B.A. The bursary is offered in alternate years, and is of the value of £350. The general object is the study of the Greek,



Drawings of the St. Martin's Toll building which is to be built in Birmingham. Situated under the market hall will be a car park for 260 cars, which can be adapted as a public air-raid shelter to accommodate 3,500 persons. The drawings show: The car park in normal use; and as an air-raid shelter.



Hellenistic and Byzantine architecture of the Mediterranean basin with a view to making available for architects, from an architectural standpoint, the results of the more recent archaeological researches. Preference will be given to the Eastern half of the Mediterranean.

The holder of the bursary is required to spend a period of not less than six months in travel and research.

Applications must be made in writing, accompanied by testimonials and a brief outline of the candidate's intention regarding his proposed studies must be included. Candidates should state their qualifications, age, architectural training, works executed and publications, if any. Applications should be sent so as to reach the Secretary, R.I.B.A., 66 Portland Place, London, W.1, on or before December 1, 1938.

#### A.R.P. AND THE A.A.S.T.A.

Mr. John Pinckheard, A.R.I.B.A., addressed a meeting of the Metropolitan Branch of the Association of Architects, Surveyors and Technical Assistants last week on the subject of A.R.P. Mr. Pinckheard is chairman of the A.A.S.T.A. committee which recently produced a report on the design, equipment and cost of air-raid shelters.

The speaker dealt first with poisonous gases. He said that brick and concrete would absorb persistent gases such as mustard gas and that floors of decontamination rooms should be of tiles, which are impervious. There was a new kind of asphalt on the market, which was also impervious. The best method of protecting a room against gas was not, he thought, to attempt to seal it up, as the Government suggested, but to instal a ventilation plant which would provide filtered air and keep the pressure inside the room slightly higher than that outside. A room with such a plant would take three times as many people as a sealed room.

Mr. Pinckheard said that it was in connection with high explosive bombs that the Government's plans were so painfully inadequate. For it was these bombs that would constitute our greatest danger. Gas and incendiary bombs were less important. The provision of trenches was an admirable temporary measure, but it was not a solution to the real problem. He pointed out that in the crowded boroughs only a small percentage of the population could be sheltered in trenches, even if every available inch of open space were utilized. There was some difference of opinion as to which was the best type of bomb-proof shelter. He was of the opinion that the provision of underground tunnels was the only economical and effective large-scale scheme. These tunnel shelters could be constructed for the whole population of England at a quarter of the cost of the Government's armaments plan.

There had been much criticism of the measures taken by the Government and the local councils during the recent crisis. The Home Office booklet was inept and amateurish. Some of the materials that the householder was advised to buy were unobtainable; and the prices of others had soared to ridiculous heights. There would have to be a strict control of prices to prevent this profiteering taking place again.

Mr. Pinckheard concluded by urging all architects to press the Government to take effective action to safeguard the lives of the people.

#### BIRMINGHAM ARCHITECT ON THE MODERN ARCHITECTURE

Mr. John B. Surman, F.R.I.B.A., addressing the Midland Arts Club last week at the Royal Birmingham Society of Artists' Galleries, said: "It appears to me that much modern work quickly grows dull after the first newness has worn off. The old test of a building was that you could go back, see something fresh, learn something of the character of the people who built it. And much modern work, I suppose, will truly indicate the character of its builders—scanty thought, lack of sense of light and shade or harmony, and a blatant utilitarian outlook on life.

"It may be, and it is certainly to be hoped, that what we call today 'modern architecture' is merely a beginning; that architects in the future will not be content merely with grouping elements together for the sake of efficiency and economy of working, but will learn to give some character to their structure and make them symbolical of their purpose.

"Interior decoration seems to have advanced on better lines than most modern structural design, and it is this one note which I think may prove a sign of a healthy architectural spirit. Even here, however, there is too much tendency to use stainless steel and tube and rod furniture, and to think that this only is beauty. Vast hordes

of artists of all sorts—painters, sculptors, modellers, craftsmen in metals—are starving because the man who pays the piper will not pay for their services or the architect is afraid to engage more brains than his own to achieve something worth having. In the past the architect availed himself of brother craftsmen. Today he associates with engineers and fabricators of all sorts."

#### EXODUS FROM THE TOWN

Mr. F. L. Charlton, F.R.I.B.A., in his address to the West Yorkshire Society of Architects last week, said: "An Englishman is a countryman at heart; he likes his flowers and garden. If he had a pleasant town to live in there would not be this enormous exodus from the town to the country every week-end by transport of every kind, turning our country roads into a congested mass of traffic, and thereby defeating the very aim and desire of the town dweller to get out into the country for peace and quiet.

"It cannot be good for a nation, or a large portion of it, to turn out on the roads every Sunday and drive mile after mile in a racket of traffic.

"If we had smaller towns, well-planned for business, industry, and people, with easy access to real country without miles and miles of urbanisation, we should find a more rested and efficient community."

#### LAW REPORT

### BRADFORD THIRD EQUITABLE BENEFIT BUILDING SOCIETY v. BORDERS

The following report is reprinted from "The Times" Law Reports.

THURSDAY, OCTOBER 13

THIS was an action in which the plaintiffs, Bradford Third Equitable Benefit Building Society, claimed from the defendant, Mrs. Elsy Florence Eva Borders, possession, under a mortgage deed, of a house at Kingsway, West Wickham, Kent, on the ground that subscriptions due under that deed were more than three months in arrear.

The defendant denied that her payments were in arrear, and claimed damages, alleging that she had been wilfully and fraudulently misled by the society into the belief that the house was a good security for the money advanced.

The writ in the action was issued in June, 1937, and the hearing of the action, which began in January, 1938, was adjourned, as the services of his Lordship were wanted in the Court of Appeal.

During the interval the defendant obtained leave to amend her defence and counterclaim. By her amendment she challenged the validity of the mortgage deed. She alleged that, as security for the money advanced, the society took not merely a charge on the house but also, by way of collateral security, a charge on money deposited with them by the builders from whom she bought the house. She contended that this was a transaction outside the powers of the society as prescribed by their rules and by the Building Societies Act.

Mr. R. F. Roxburgh, K.C., and Mr. M. G. Hewins appeared for the plaintiffs. The defendant appeared in person.

Mr. Justice Bennett today said that so much time had elapsed since the matter was before him that he thought that the case should be started all over again.

Mr. Roxburgh, for the society, said that the £693 advanced was repayable with 5 per cent. interest by monthly instalments of £4 4s. The

claim for possession was based on the ground that, at the date of the issue of the writ, Mrs. Borders was three months in arrear with her subscriptions, which was a breach of the covenants in the mortgage.

Continuing, Mr. Roxburgh said that Mrs. Borders contended that she was not bound by the rule relating to the method of repayment, on the ground that she had been supplied with a copy of rules which had ceased to be in force. This was contested by the society. She also denied that she had executed the mortgage deed produced by the society. She said that she had signed a deed, but not that one. A witness called by the society had sworn that he saw her sign the deed on which the society relied.

The next point taken by Mrs. Borders was that there was some agreement about quarterly payments. Even if that were so, there would still be 12 guineas owing to the society.

Her third point was that the transaction was *ultra vires* the powers of the directors. He (counsel) submitted that this was not a possible ground of defence, as no borrower was entitled to say that the lender had no authority to lend the money. If Mrs. Borders succeeded on that ground, the society would proceed against her, on the footing of *ultra vires*, for immediate repayment of the whole amount on the ground that it was trust money. On the authorities there would be no conceivable answer to such an action.

The question relating to collateral security was one which affected every building society. It was a matter of policy which had the approval of Parliament. If some member of the society, who had the right to raise the point, obtained a decision that it was *ultra vires*, all building societies would be affected until Parliament put right the muddle. Mrs. Borders's only interest in the society was that she owed money to the



society and she had no power to impeach the transaction.

Mr. Justice Bennett: There must be some limit to the activities of a building society.

Mr. Roxburgh said that the question could only be raised by a shareholder or somebody having a real interest in the society.

Mr. Justice Bennett: Is it the intention of this society to continue to make advances not only on the security of a house, but also on that security coupled with collateral security given by a builder?

Mr. Roxburgh: If such transactions are *ultra vires* their powers under the Statute, which they deny, they do not intend to continue them, but they contend that they are entitled to fortify their freehold or leasehold security by collateral security.

Mr. Roxburgh proceeded to read the evidence given at the hearing in January.

He said that, although the society considered the house to be good value for the money advanced, they would not have lent so much without collateral security.

#### FRIDAY, OCTOBER 14

It was submitted on behalf of the society that Mrs. Borders could not succeed in her contention that the transaction was *ultra vires*, as no borrower was entitled to say that the lender had no authority to lend the money. It was further said that the question relating to collateral security was one which affected every building society; that it was a matter of policy which had the approval of Parliament; and that the society were therefore entitled to fortify their freehold or leasehold security by collateral security.

Mr. Justice Bennett said that he wanted to understand what the collateral security was.

Mr. Roxburgh said that the builders wanted the society to advance 95 per cent. of the value of their houses. The society considered 90 per cent. the maximum that should be given, but eventually agreed. There were three systems of making advances. The original system was to advance 75 per cent. on the security of the house alone. There was a system of advancing 90 per cent., which the society was always willing to do, on the security of the house and an indemnity insurance policy. The 95 per cent. system, with which they were concerned in this case, was one with which the building societies were not enamoured. The amount was advanced on the security of the house and of a pooling agreement between the builders and the building society.

The question of *ultra vires*, continued counsel, might be raised in connection with collateral security of insurance policies, but it did not arise in this case.

Mr. Justice Bennett: In addition to getting a charge on Mrs. Borders's house as security for the money advanced the society also got a charge on a sum provided by the builders. The question is whether that is legal.

Mrs. Borders went into the witness box to complete the evidence which she was giving when the hearing was adjourned last January.

She stated that it would take £500 to make good defects and make the house habitable. The walls of the house were extremely damp. The roof leaked. The floorboards were warped and shrunk and the windows would not open. All the woodwork was alive with a small beetle; they did not bite, but their presence was unpleasant. The front door had collapsed and was mainly boarded up. It would be necessary to have a new front door. The electric wires were misplaced. If a hand was put on the floor shocks would be received. There were serious cracks in the walls and the plaster round the doors and windows continually fell out.

Cross-examined, Mrs. Borders said, in answer to a question whether she wished to remain in the house, that she wanted to have what she had contracted to buy. She agreed that the electric light had been cut off, but said that that had not been done because she had not paid the

account. She did not know why it had been cut off.

Mrs. Borders said that she would call experts to give detailed evidence as to the state of the house. She said that she had been informed by a representative of the society that the house had been inspected and would be inspected again on completion and that it was a good house, well built, constructed in accordance with the local by-laws, and worth the money advanced.

Mr. Roxburgh intimated by his cross-examination that the case for the society was that no representative of the society was in the district at that time.

The witness was then cross-examined with regard to a visit made by a Mr. Young to investigate the complaints made about the condition of the house, and the hearing was adjourned until Tuesday, October 18.

#### TUESDAY, OCTOBER 18

Mrs. Borders, continuing her evidence, said that she made her payments quarterly under protest and without prejudice. She told a representative of the society who called for the money that the house was rotten and that she disputed her liability to pay the money until the house had been put into proper condition. She also sent payments direct to the society under protest.

Her reasons for saying that the mortgage deed on which the action was brought was not the deed executed by her were that the name of one attesting witness was missing and the name of another person who was not present appeared twice. A note written on the mortgage by Mr. Borders was missing and her signature and that of her husband, though very like their signatures, were not exactly the same.

She did not repudiate the document on the ground that it contained other stipulations or that it differed from anything which she recollected in the deed which she did sign.

She did not say that the whole of the house was uninhabitable. The two front bedrooms and the front sitting room were uninhabitable.

Mr. Roxburgh pointed out that last year Mrs. Borders estimated that £131 would be required to put the house in order and that she now claimed £500.

The witness said that £131 was her own estimate before she had obtained expert advice. She was told that it would take considerably more than £500 to remedy the defects. There was damp in every room and the house was badly built.

Mr. Roxburgh: My expert will say that it is a very fair specimen of a house at the price you paid for it.

Mrs. Borders replied that the standard of building on the estate was so low that it was impossible to find a good house for the money.

Mr. Roxburgh: Did you expect to be given a house worth more than the money?—No; worth what I paid for it.

Would it be nonsense to say that anything wrong with the house could be put right for £10?—That is obviously nonsense. Every time it rains, water comes through the walls.

Mr. James Walter Borders, the husband of the plaintiff, giving evidence, referred to an interview with a representative of the society.

He (the witness) asked if the house was well built and if the society were satisfied that it was worth the money advanced. The answers which he received were that, if the society advanced money on the house, it would be because they knew that it would be worth the money. If there were any defects, the society would not advance money until the defects had been remedied. He was informed that the houses were always inspected on behalf of the society before they agreed to make an advance. He was shown the builders' brochure, which stated that the fact that the building society were willing to advance 95 per cent. on the purchase price was proof of the amazing value of the house.

Mr. Borders said that before he signed the mortgage deed, as guarantor, he was given a

written undertaking (now produced) by the managing clerk to a firm of solicitors that defects in the house would be put right and that the deed would not be sent on to the building society until the work was done. On that undertaking he signed the deed and wrote on it words to the effect that "this deed shall have no force or effect until the works specified in the undertaking are carried out and until the society shall have heard from us."

The mortgage deed put in by the society was handed to Mr. Borders, and his Lordship asked him if it was the deed signed by him.

Mr. Borders: This is not the mortgage deed which I signed.

Mr. Justice Bennett: Is it your signature?—The signature looks like mine. I say it is not mine, because I never signed this deed.

Mr. Borders declared that it was impossible for him to have signed the deed produced, as he was away from home at the time when he was alleged to have signed it at his house.

Mr. Borders said that the house was in a bad condition. The whole front of the house was damp, and the wallpapers fell off the walls by their own weight. The foundations were narrow and did not look strong enough to support the house. There were cracks in the outer walls and the windows in front did not fit. Two of the windows would not shut and had been in that state for at least two years. The ceilings were cracked and the roof leaked. The electric wiring was never safe, and the front of the house was cracked in several places and the eaves were open. The glass on the front door had collapsed, the bath had dropped from its original place, and the fireplaces had come away from the walls. The chimneys were defective and the woodwork was infested by a small insect. The party wall did not go up to the full height, and he had shaken hands over it with his next door neighbour.

That was all he could think of for the moment, he added.

#### WEDNESDAY, OCTOBER 19

Cross-examined, Mr. Borders maintained that the representative of the society accepted responsibility for the statements in the builders' brochure as affecting his society. He also said that he was assured that the society would look after the interests of the house purchasers.

At the request of Mr. Roxburgh the witness twice wrote his usual signature on a piece of paper.

Mr. Roxburgh: Is it your evidence that the signature on this deed was not written by you?—My evidence is that I did not sign this deed.

The witness said that he would not agree that, apart from wear and tear, £10 would cover everything which it was necessary to do to the house. He had received assistance from a local residents' association in obtaining expert advice.

With regard to the collapse of the front-door glass, he (Mr. Borders) did not think that this was caused by the banging of the door, as there were many similar instances on the estate.

Mrs. Borders re-examined Mr. Borders.

Mr. Arthur Leonard Marriott, against whom the plaintiff society have also brought an action for possession, was called by Mrs. Borders, and said that in February, 1934, he purchased the house adjoining hers.

At an interview, said Mr. Marriott, with a person who was introduced as a representative of the society, at which Mr. and Mrs. Borders and other people were present, questions were asked whether the houses were worth the money. They were told that their guarantee would be that the society had satisfied themselves in every respect, and that the fact that they were willing to advance 95 per cent. was the finest guarantee that the purchasers could have as to the value of the houses. It was made clear beyond doubt that the society had surveyed the property.

Mr. Justice Bennett: Had the houses been erected then?—They were structurally finished.

How do you know that this person was a representative of the society?—That was how he was introduced.

Mr. Justice Bennett: As I understand it,

Mr. Roxburgh, your case is that the society had no representative of any kind at this interview?

Mr. Roxburgh: Certainly. That is our case.

Mr. Marriott said that he was a taxi-driver and that Mr. Borders was with him at a branch meeting of their union at the time when the society alleged that Mr. Borders signed the mortgage deed (on which the society were suing) at his wife's house in West Wickham.

A minute book was produced in which the signature of Mr. Borders appeared as chairman of the branch meeting on the evening in question.

Mr. Roxburgh said that he did not dispute that Mr. Borders was at the meeting from 7 p.m. until about 10 p.m. on the date in question.

Mr. R. T. Skinner, an architect, said that, in conjunction with another architect, he made surveys of Mrs. Borders's house at the request of the residents' association, and made a report to them.

Mrs. Borders read the report, which stated: "It is our opinion that the house is very badly built and likely to be a constant source of inconvenience to the occupier."

The report went on to say that the condition of the house did not support the statements in the builders' brochure that it was one of the finest houses that skilful architects could devise or competent craftsmen erect, and that no purchaser need fear having to spend money on maintenance for many a long year.

Mr. Skinner said that the window frames of the house were badly fitted and that inferior woodwork was used. The tiling was not nailed on as it should be.

Continuing, Mr. Skinner said that the house was not a house of skilled workmanship. The foundations were not strong enough and there was danger of subsidence and of the house being seriously impaired. The roof was not soundly constructed. It was quite reasonable to say that there was danger that the roof would collapse. The material used in the construction of the house was of inferior quality and there was considerable evidence of damp.

Mr. Skinner agreed with Mrs. Borders that in the building of the house many of the local by-laws had been contravened.

Mrs. Borders: Do you think this house is worth £730?—No.

Do you think it is worth £693?—No. In my opinion the house is not fit for habitation, and I should not like to make an estimate of its value.

Would you advise any of your clients to buy it?—Certainly not.

In cross-examination, Mr. Skinner said that he thought it would take at least several hundred pounds to bring the house up to the value of £640, the site having cost £100. He entirely disagreed with the suggestion, made on behalf of the society, that the house could be put into proper condition (allowing for wear and tear) for a £10 note.

Mr. Skinner agreed that the house could be described as "a specimen of the cheaper speculatively built house."

Mr. Roxburgh: A specimen up to the average of the cheaper speculatively built house?

Mr. Justice Bennett: That means nothing whatever to me. The "average" house does not exist as a thing.

Mr. Roxburgh: It means a house built up to the average of houses at this price. Building societies have lent thousands of pounds on houses of this sort, and the question is whether the security is good, looking at the average.

In reply to further questions, Mr. Skinner said that he did not agree that the materials used were normal for houses of that kind and that the defects were trifling.

THURSDAY, OCTOBER 20

Mr. R. T. F. Skinner, continuing his evidence, said, in cross-examination, that when he made his inspection in January, 1938, the whole house was not fit for habitation.

In re-examination, Mr. Skinner said that there was no reason why good brickwork should not have been put into Mrs. Borders's house, which cost her £730.

He would not, he said, expect to find broken bricks in a well-built house. The paint and wood used in Mrs. Borders's house should not be used in any type of house.

Mrs. Borders: Is the purchaser of a house expected to protect the walls from damp and to repair or replace the floor boards, roof, doors, and windows?

Mr. Justice Bennett: That depends on what the purchaser buys.

Mr. John Albert Pinckheard, architect, said that he was employed by the London County Council. He "alternated between hospitals and fire stations."

Mr. Justice Bennett: What does that mean?—Building and designing them.

The witness said that he inspected Mrs. Borders's house in January, 1938. The concrete used in the foundations was made with unwashed ballast and was consequently very weak. He did not consider the foundations sufficiently strong to bear the weight of the house, but was unable to say whether they were going to let it down. Some of the workmanship on the house was very "slapdash." He found evidence of dampness in most of the rooms. In the front room upstairs the wallpaper hung in festoons, and in the large bedroom upstairs the paper was badly discoloured. He attributed the damp to the penetration of rain through cracks and to badly fitting windows. In his opinion the damp was not caused by condensation.

Mr. Pinckheard said that, in his view, the glazed portion of the front door had collapsed owing to bad design rather than to bad material. The house was built in a slipshod way. It was certainly not the product of skilled workmanship. It was not built of entirely bad material. He preferred to say that the workmanship was bad. Some of the materials were not particularly good. It could have been built a good deal better. He would not advise anyone to buy the house.

Mr. Roxburgh (cross-examining): Do you think you ought to criticize the woodwork, having regard to the price of the house?—I maintain that it was bad joinery.

Mr. Pinckheard admitted that so far there were no signs of subsidence attributable to the defects which he had described.

Further evidence was given by another architect who had visited the house on January 14, 1938, and who said that he noticed dampness which he attributed to the faulty design of the windows. He considered that the house was obviously badly constructed and he would not like to value it.

FRIDAY, OCTOBER 21

Mr. Robert Vincent Boughton, a building surveyor and structural engineer, said that he carefully examined Mrs. Borders's house last March. The general construction of the roof was decidedly unsatisfactory and the brickwork of the party wall was the roughest he had ever seen. The whole of the house required underpinning and some of the windows and doors would have to be replaced. Some of the walls should be pulled down and rebuilt properly and made watertight.

Mr. Justice Bennett.—Your first remedy for the walls would mean pulling the whole house down?—You could shore up the floor and the roof, but it would be an expensive matter.

Mr. Justice Bennett.—From what this witness says, I should have thought it would be much better to pull the house down and build a new one.

In cross-examination, Mr. Boughton said that it would cost 75 per cent. of the price of a new house to do the work required to put Mrs. Borders's house into proper repair. He did not agree that the repairs which he advocated were purely of a precautionary character.

No tiles were missing from the roof, although there had been gales since last March.

Evidence was given by a member of a firm of builders that he had estimated that the cost of carrying out the work required to be done to the house would amount to £591 12s. 10d.

That concluded the evidence on behalf of Mrs. Borders.

Mr. F. Kellett, of Messrs. J. Eaton & Co., Bradford, solicitors to the society, said that the mortgage which Mr. and Mrs. Borders alleged that they had signed was returned to him. Search had been made for it, but it could not be found. He was certain that it was unexecuted and must, therefore, have been destroyed.

Mr. Charles Richard Meeson said that he had been employed by the builders of the houses on the estate. He collected the instalments of the mortgage money.

Mrs. Borders had never complained to him of defects or said that she paid under protest. He never represented to her that he was a representative of the plaintiff society.

In cross-examination he agreed that he gave receipts on behalf of the society.

Colonel Maurice Kershaw Matthews, F.R.I.B.A., said that he inspected the house last January. It appeared to him to be a fair specimen of the cheaper speculatively-built house. It was not badly built. The foundations of the house were adequate, and there was no undue risk of settlement. The damp which he saw was due to condensation and to no other cause. The roof was of light construction and might have been heavier, but there was no sign of sagging. He saw no evil consequence resulting from the roof construction.

The windows were in a reasonable condition, but two or three sashes wanted easing. He saw no justification for many of the repairs suggested, and the matters which wanted adjusting could be put right at a small cost.

With regard to the alleged collapse of the front door the witness said that the door and frame were satisfactory. The somewhat large leaded glass panel had dropped, but a couple of supporting bars would put this right at a cost of about 40s.

He did not agree that the other doors did not fit. One or two wanted easing. He could say nothing about the wood-lice, because he saw no insects. Such small cracks as he saw on the outside walls were not serious. There was no evidence of any maintenance work having been done by the occupier of the house.

Apart from the small items of expenditure which he had indicated no money was required to make the house reasonably fit for habitation.

Mrs. Borders (cross-examining).—Do you think that my house would stand for 200 years?—Yes, if you look after it.

Colonel Matthews said that he maintained his views as to the stability of the house.

Mrs. Borders: I suggest that the springiness of the flooring is a definite defect which will be there so long as the house lasts?

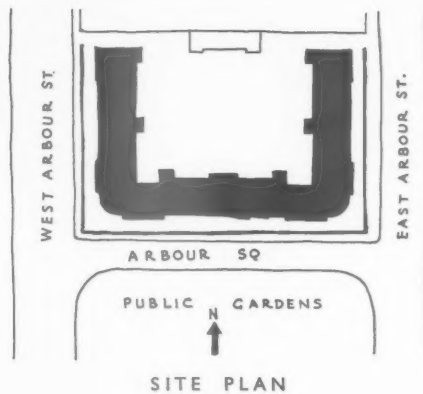
The witness admitted that he would rather be without it.

The hearing is still proceeding.

## Registration

Mr. S. N. Cooke, President of the Birmingham and Five Counties Association, delivered an address at a meeting held recently in Birmingham. Referring to the Registration Bill, he said, the Bill, which had received the Royal Assent, was passed, not for the benefit of architects only, but for the good of the community, and there must be a considerable timelag before its benefits became discernible. In the meantime, it was up to every architect to mitigate the evils that are perpetrated every day—the scandalous ruination of the countryside, ribbon development and the unmaturing schemes of haphazard building in certain cities, of which the layouts are little considered.

## BLOCK OF WORKING-CLASS FLATS:



**GENERAL AND SITE**—This block of working-class flats occupies a corner site of  $\frac{3}{4}$  acre in the centre of the Borough of Stepney; on the south side, facing Arbour Square, is a public garden. It is five storeys in height, with two small portions rising to six storeys. In the courtyard is a covered drying space and a perambulator shelter.

**PLAN**—76 flats. The accommodation provided in each dwelling consists of a living-room, bedrooms, bathroom and a kitchen fitted with the usual appliances. Flats above the ground floor are approached by balconies.

Above, a view of the West Arbour Street front; left, the front to Arbour Square.



## ARBOUR HOUSE, ARBOUR SQUARE, E. 1

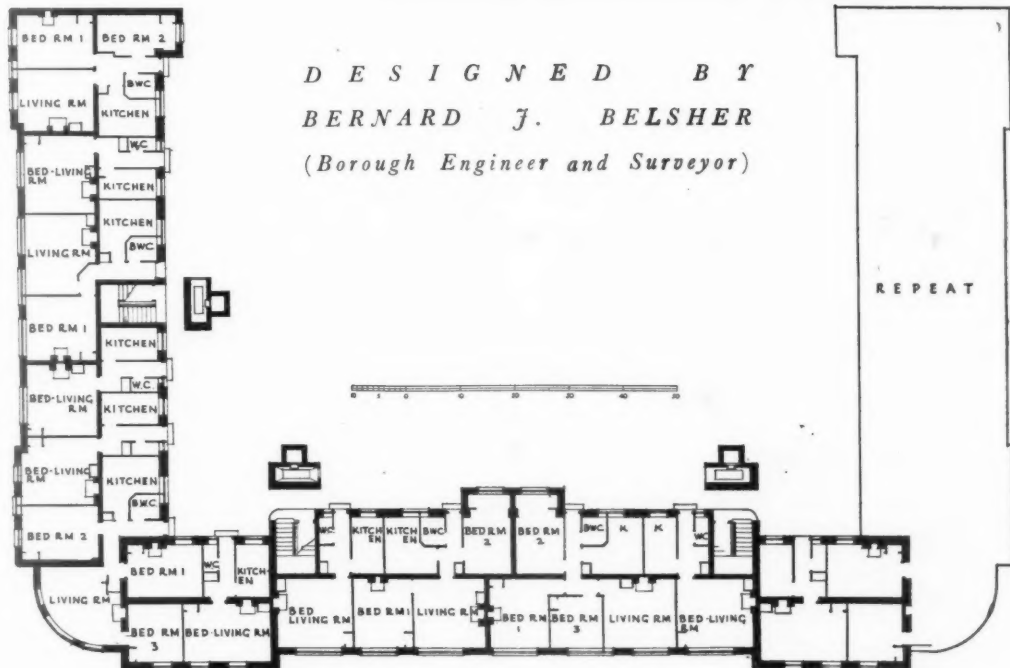
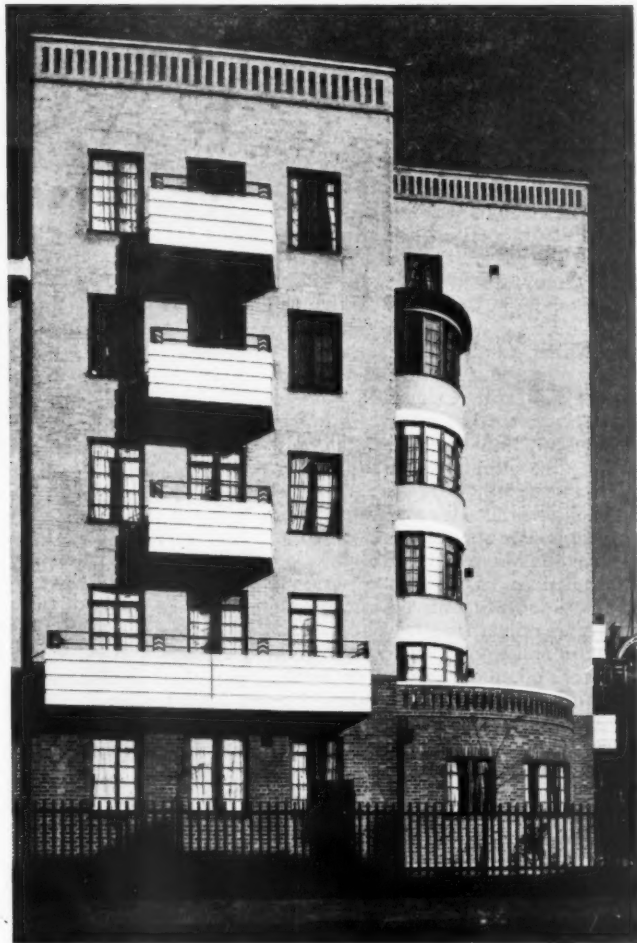


**CONSTRUCTION AND FINISHES.**—Brick with reinforced concrete and hollow tile floors. The sloping roofs are covered with a glazed tile and the flat roofs with asphalt. The window sashes are of steel set into the brickwork without timber frames. The doors are of timber in steel trim. The external concrete balconies have concrete fronts.

**SERVICES.**—Refuse chutes are provided to each floor, and discharge at the lower end into bins which are taken away and replaced by empty ones, thus emptying of refuse into lorries is eliminated. Hot water is provided by a boiler in the living-room with taps to the bath, sink and coppers.

Above, a view in the internal courtyard; right, the end balconies on the West Arbour Street front.

The general contractors were A. E. Symes, Ltd.; for list of general contractors, see page 701.



## LETTERS

## FROM READERS

EDWARD CARTER (*Secretary to the R.I.B.A. Foreign Relations Committee*)

SALARIED ARCHITECT

*Exchange of Young Architects*

SIR,—The R.I.B.A. Foreign Relations Committee is eager to stimulate the exchange of young architects between this and other countries and has been partly instrumental in initiating some exchanges already.

There is frequent difficulty in finding suitable offices in England in which the foreign partner in the exchange can work while an English architect is working or is about to work in a foreign office for a short period.

The Committee has two cases before it at present, and would be obliged if you can give publicity to them with a view to finding:

1. A suitable office for a young Danish architectural woman student who has completed her fourth year of training and has had several months' experience in the Danish Co-operative Association's architectural department. She is now in London and wants to find paid work at £2 10s. od. a week (the exchange salary offered by the Danish Co-operative); the exchange to last for three or six months as agreed.

2. An English architect to work in the Danish Co-operative on these terms. The great advantage from the English point of view to be derived from supporting this exchange is the chance of sending a younger assistant to Denmark to gain some experience in the design of shops and factories in one of the most progressive and experienced offices on the continent.

3. An office willing to pay a Swiss girl who has completed her training in the Technische Hochschule at Zurich under Professor Salvisberg, and is now in London in exchange with an A.A. student working with pay in Switzerland.

Both speak English, and both are acquainted with English scales.

If any of your readers is able to help in either of these cases, I should be obliged if he would write to me at the R.I.B.A.

EDWARD CARTER,  
Secretary to the Foreign  
Relations Committee.

*Assistants' Salaries*

SIR,—I have noticed from time to time letters on the subject of salaries paid to architect's assistants, and how very low these existing wages are. Not once have I seen a proper suggestion of amendment put forward, except for the standardization of minimum wages for various classes of assistants. This

has been done and without result; for we cannot deny that unless employers can be compelled to pay standard salaries, which is not possible, this result cannot come about.

There is no reason why the employer should be compelled to pay higher salaries, especially when he is being forced by economic conditions not to do so. One glance at other sections of the building industry will show few higher salaries compared with a low majority.

It is therefore an undeniable fact that the architectural profession is a crucible of supply and demand and that the demand is far less than that of the supply, which comprises hundreds of unwanted architects' assistants, all tending to keep down the average wages far below that of other professions.

One may ask, what is six pounds a week for a qualified architect with ten or twelve years' experience? This is not a low figure when there are so many substitutes waiting to fill his position. And what is causing all this overcrowding? I blame chiefly the R.I.B.A. and the employer.

It is almost as easy for a youth to enter the architectural profession today as it is for him to enter almost any of the unskilled trades. He is able to obtain the position in an architect's office without any premium and work his way up in a surprisingly short period—he is then given every preference over a properly school-trained man. He may become a probationer of the R.I.B.A. with the passing of a simple entrance examination that would not be accepted by many other professional institutes, and he is able to obtain his architectural education at an evening school at very moderate fees.

I am not a snob, as this may seem. I believe that the right man should be given his chance under all circumstances; but it leaves no doubt in my mind that this superfluous influx of assistants is not only causing great harm to all those concerned, but is also lowering the standard of the profession.

There is only one solution left to help our salaried architect, and that is to take control of the gateway to the profession. It is left for the Institutes to raise the standard of their entrance examinations and to accept as probationers only articulated pupils or day students, and leave the remainder of the public to find their way through by the acquiring of scholarships as is still being practised in other professions today.

SALARIED ARCHITECT

## EXHIBITIONS

[By D. COSENS]

A NEW gallery, the Stafford, has just been opened in St. James's Place, which, together with the Calmann and the Nicholson (also just opened) makes the third recently to arrive in this street. Although this gallery has four rooms for showing painting and sculpture, the owner's intention is to use it primarily for exhibiting murals—an interesting experiment, for mural painters have at present few opportunities of showing what they can do. They can only make preliminary studies, usually much reduced in size, until their work is commissioned. The idea here is to give a large wall-space to a painter; his work will then be shown in its proper setting for three or four months, and then painted out and replaced by another. In his painting for the inaugural exhibition John Hutton, who is perhaps best known for his murals for the new Orient liner, the "Orcades," has taken full advantage of the surfaces at his disposal and has produced a very light and spacious design, entirely suitable for its setting. It is one of the few murals we have seen which adds to, instead of detracting from, the feeling of space and distance in a position which, though very suitable for this type of decoration, is somewhat restricted.

The paintings by Count Uberto Pallastrelli di Celleri at the same gallery are less original. Though it is always interesting to see Continental work, and particularly that of painters who are famous in their own country, this collection is perhaps a thought too conventional—for have we not after all our own John who can do it all rather better: the commissioned portraits, very fashionable, very *soignés*; the portrait studies, less beautiful, more thoughtful, and far more likeable; and the landscapes which nearly always contain passages more sincere than either? Undoubtedly Count Uberto's most interesting work is in such small landscapes as "Ponte di Rialto" (1) and "Rio della Torsello" (24).

For a quick impression of atmospheric conditions, the blurred, rainy windswept landscapes of this country, or the clear distances of Cézanne's "Mont St. Victoire," water-colour is perhaps the ideal medium. A few painters carry on the English tradition in the face of a popular belief that oils are more suitable for serious work. Vivian Pitchforth is one of them. He paints broadly and very fluently, and his work has always shown an exceptional understanding of both the limitations and possibilities of his medium. Since his exhibition at the Redfern about two years ago his range of subject has widened, and his present exhibition at the Wildenstein shows a very remarkable advance. "The Hard, Bradwell" (29) and "Corbière Point, Jersey" (27), to name only two of his paintings, have qualities beyond mere technical skill which until quite recently were almost entirely lacking in his work. He has become a painter whose future will be watched with interest.

Mural by John Hutton, and Paintings by Count Uberto Pallastrelli di Celleri, Stafford Gallery, 13 St. James's Place. Until November 22.

Water-colours by Vivian Pitchforth. Wildenstein Galleries, 147 New Bond Street. Until November 5.



## WARNER THEATRE, LEICESTER SQUARE, W.C.



DESIGNED BY E. A. STONE  
IN ASSOCIATION WITH  
T. R. SOMERFORD

**GENERAL**—The new Warner Theatre in Leicester Square has been built on the site of the old Daly's Theatre. It took exactly a year to complete and was officially opened on October 12.

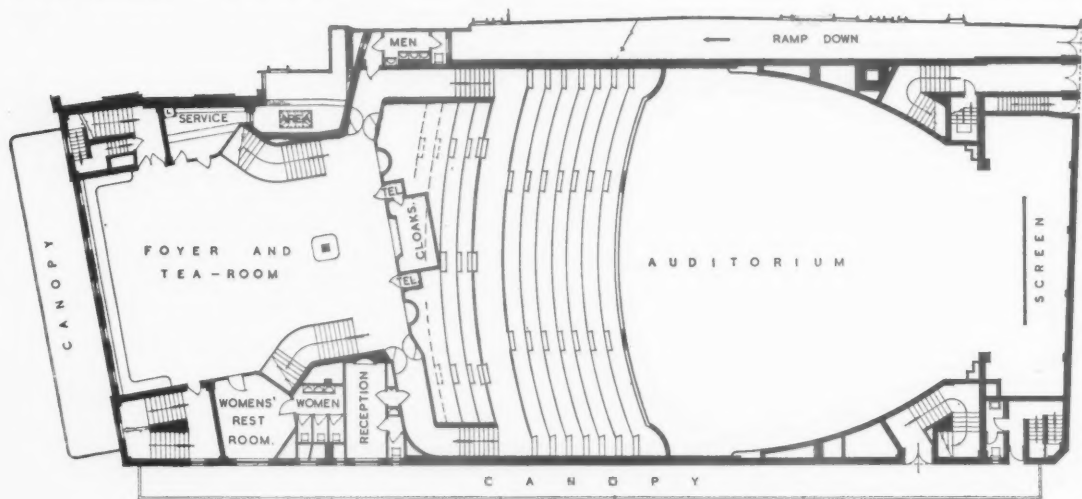
**SITE**—The frontage to Cranbourne Street, Leicester Square, is 68 ft. 6 ins., and the depth 182 ft. to Lisle Street, where the frontage is 84 ft.

**PLAN**—The area of the building is exactly the same as Daly's. In the old building the circle was on the street level and the stalls below; in the new building the stalls are on the street level and the circle above. The space occupied by the stalls in the old building now forms a public reception room and engineering equipment chambers. Seating accommodation is provided for 1,775 persons.

**EXTERNAL FINISHES**—Reconstructed marble blocks, backed with granite concrete and chemically treated to preserve the colour of the face. Side elevations are in brick. The panels on the main front were executed by Mr. Bainbridge Copnall. Above and right, day and night views of the main front.



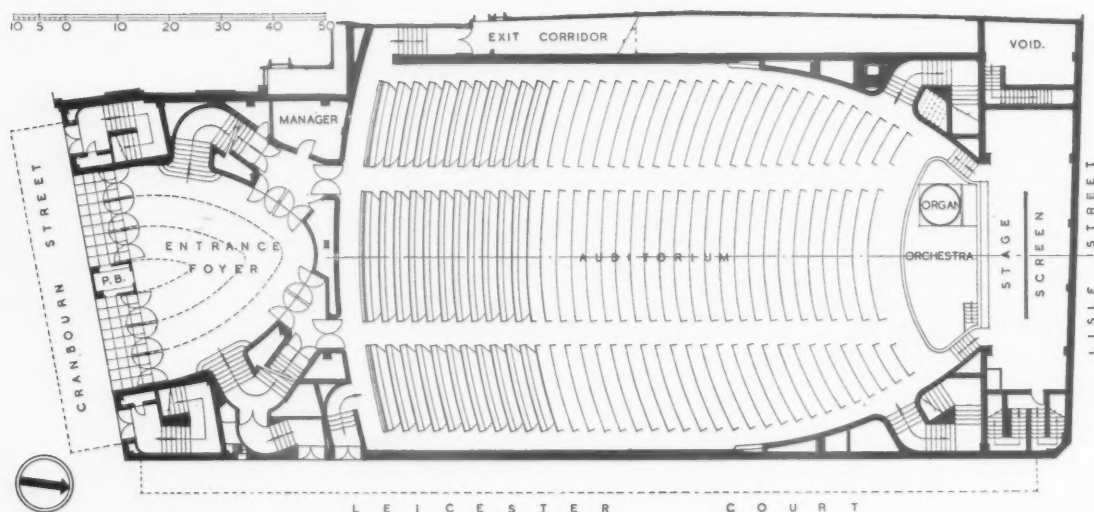
## WARNER THEATRE : DESIGNED BY E. A. STONE



PLAN AT FOYER LEVEL

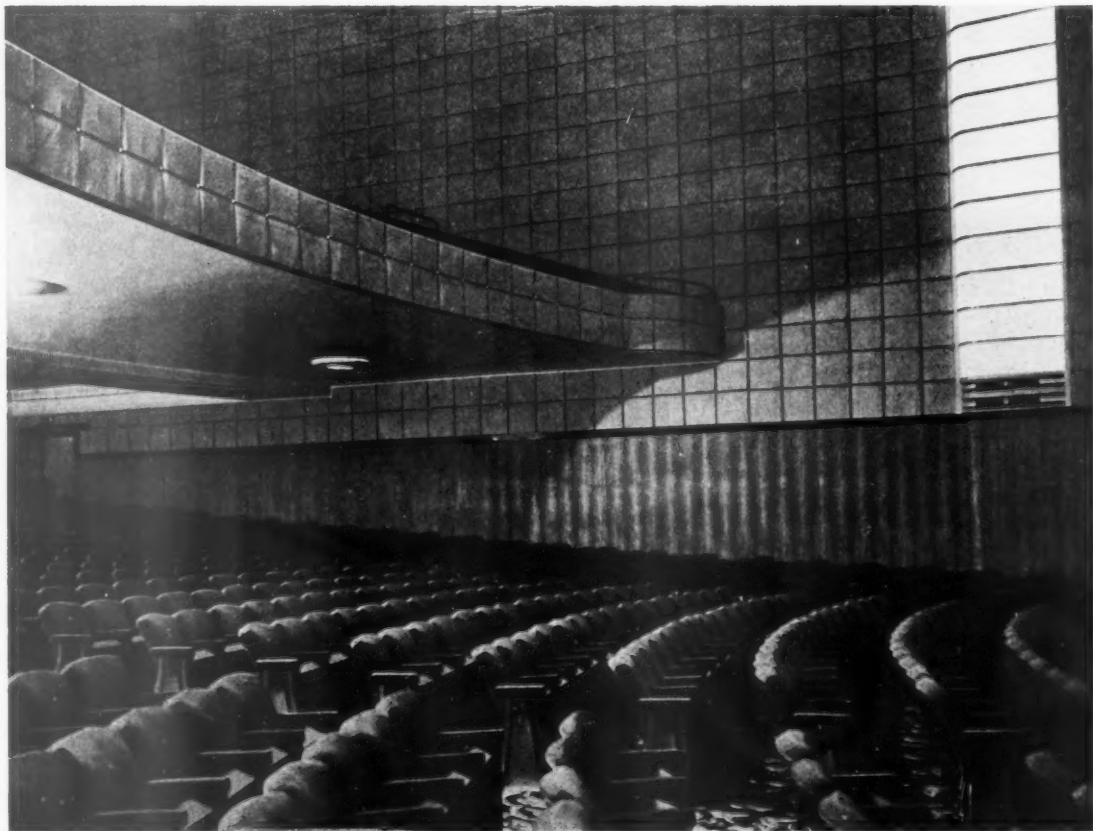


Left, the entrance foyer. Facing page : top, the auditorium from the stage ; bottom, view in the auditorium showing the quilted walls designed for acoustical control. The fabric covering them is of specially woven asbestos applied on top of a blanket 1 in. thick.



PLAN AT STALLS LEVEL

IN ASSOCIATION WITH T. R. SOMERFORD



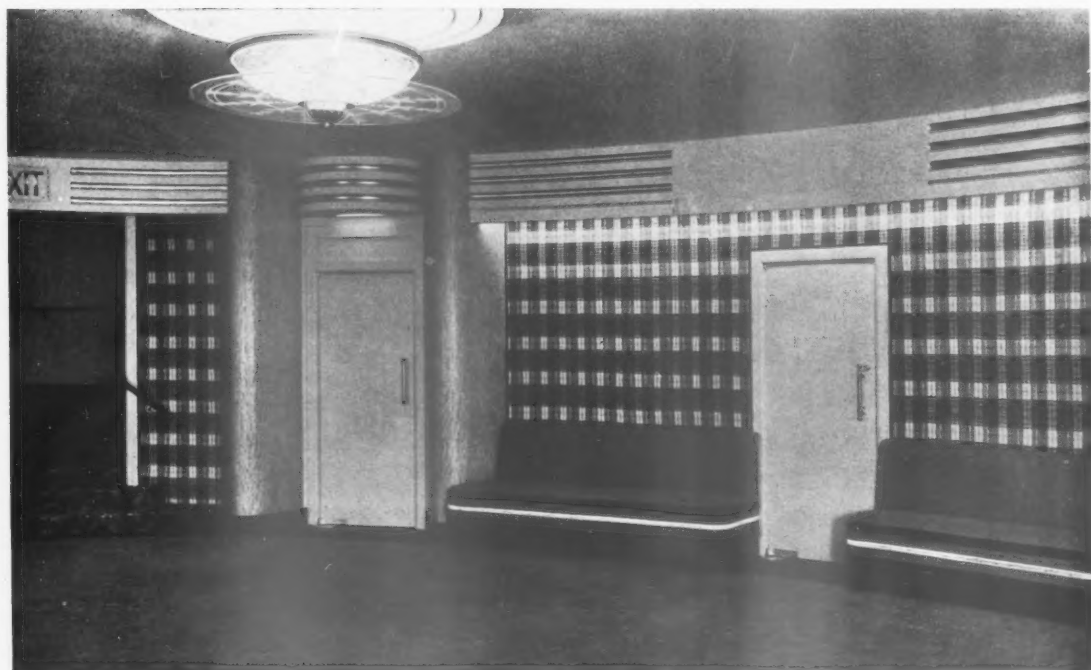
## WARNER THEATRE, LEICESTER SQUARE, W.C.

DESIGNED BY E. A.  
STONE IN ASSOCIATION  
WITH T. R. SOMERFORD



INTERNAL TREATMENT—The colour scheme is in blue, green and beige and eight different types of wood are used in the decorative schemes.

Above, the café; below, the Scotch room; left, two views of the artistes' rooms.





# WORKING DETAILS : 695

ENTRANCE GATES AND PORCH • NEWNHAM COLLEGE, CAMBRIDGE • SCOTT, SHEPHERD & BREAKWELL



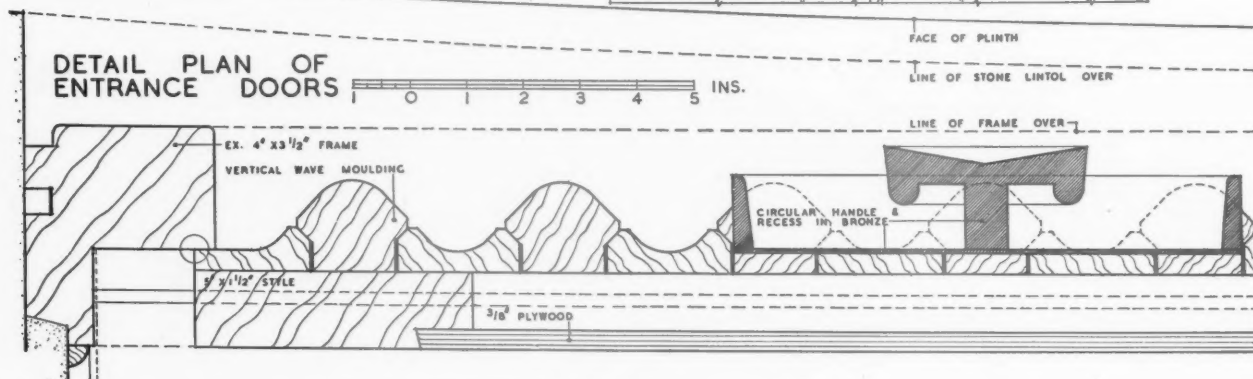
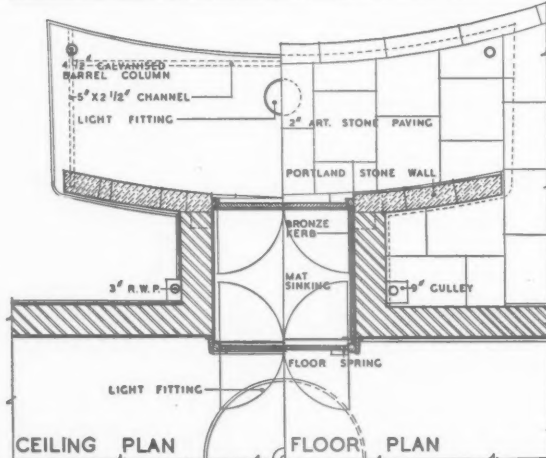
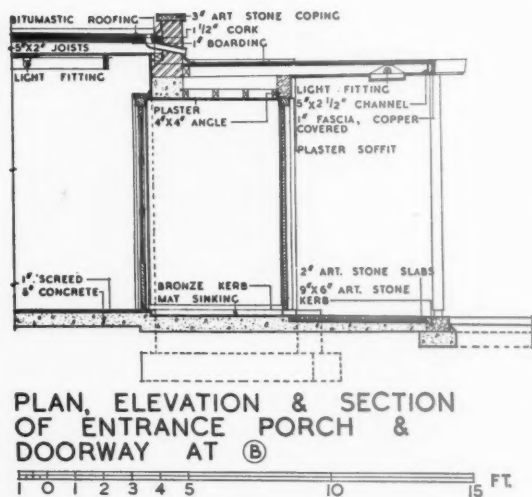
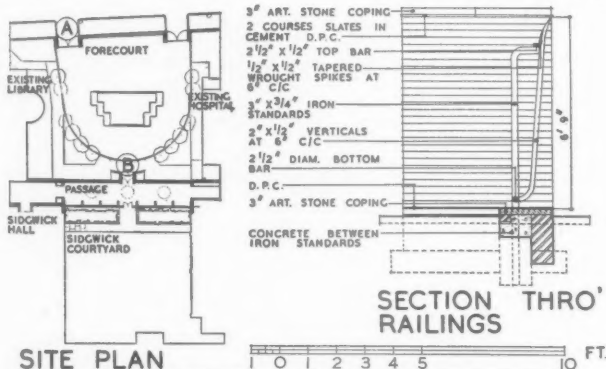
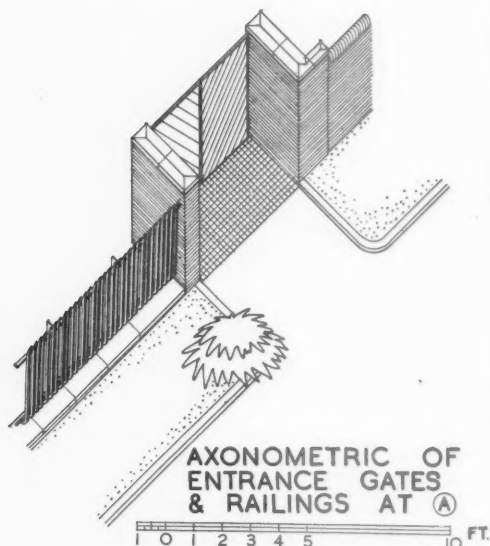
The entrance gates and railings form one side of the main courtyard, which has a semi-circular drive leading up to the main entrance. This consists of a curved canopy supported on two columns and a screen wall in Portland stone. The entrance doors are constructed of mahogany with a vertical wave moulding, with circular recessed handles in bronze. Details are shown overleaf.





# WORKING DETAILS : 696

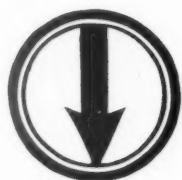
ENTRANCE GATES AND PORCH • NEWNHAM COLLEGE, CAMBRIDGE • SCOTT, SHEPHERD & BREAKWELL



Axonometric and details of the entrance gates and porch illustrated overleaf.

## The Architects' Journal Library of Planned Information

# INFORMATION SHEET SUPPLEMENT



### SHEETS IN THIS ISSUE

**673** Aluminium

**674** Roof Insulation



*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
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- 644 : Elementary Schools—VIII
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- 649 : U.S.A. Plumbing—VI
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- 651 : School Cloakrooms (Boys)
- 652 : U.S.A. Plumbing—VII
- 653 : Plumbing
- 654 : U.S.A. Plumbing—VIII
- 655 : School Cloakrooms (Girls)
- 656 : Ventilation of Factories and Workshops—II
- 657 : Floor Construction
- 658 : Partitions
- 659 : Equipment
- 660 : Asbestos-Cement Decorated Sheets
- 661 : Aluminium
- 662 : Sound Resistance
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- 664 : Sheet Lead Work
- 665 : Building Equipment
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- 667 : A.R.P.
- 668 : Aerodromes
- 669 : Aluminium
- 670 : Metal Trim
- 671 : Rainwater Gutters
- 672 : Waterproofing





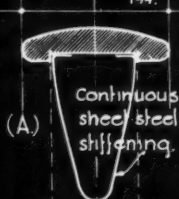


## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## (A) TYPES OF STANDARD AND SPECIAL EXTRUDED ALUMINIUM HANDRAILS:

STANDARD SHAPES.  
Flats, tubes, squares, rounds, hexagons and octagons for general stair and railing work are available in a large range of sizes. For limits see previous Information Sheet (No 3 of this series), No 504.

The use of solid bar up to  $1\frac{3}{4}$ " diameter is cheaper than tube, otherwise economy depends on the amount of metal in the section.

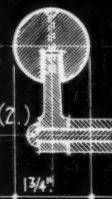
TYPICAL STD. EXTRUDED HANDRAIL SECTN.  $1\frac{3}{4}$ "

For other common standard shapes, see Inf. Sheets 504, 510.

EXAMPLES OF SUITABLE SPECIAL HANDRAIL TYPES



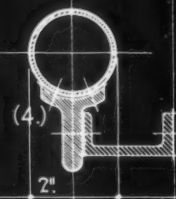
1. Normal rail shape with continuous beaded bar.



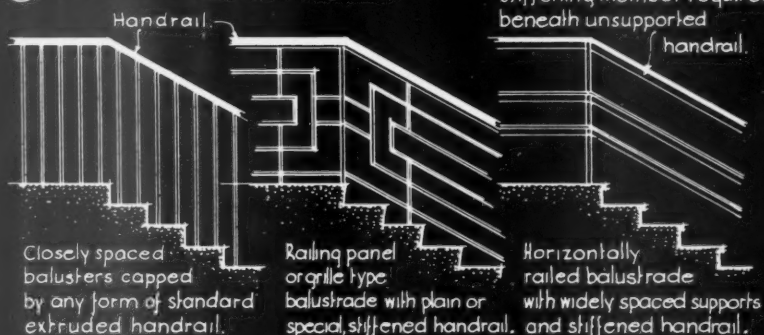
2. Standard round grooved for continuous beaded bar.



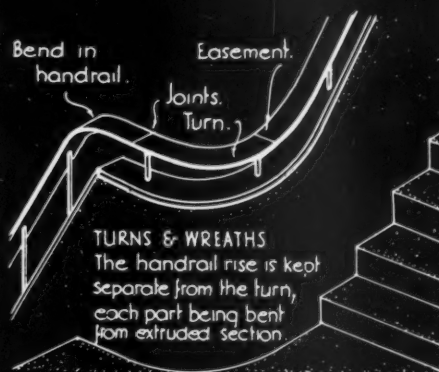
3. & 4. Special & standard hollow shapes in conjunction with continuous base members.



## (B) TYPES OF BALUSTRADES:



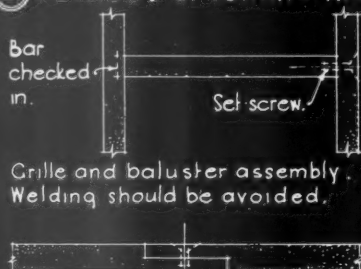
Stiffening member required beneath unsupported handrail.



TURNS &amp; WREATHS

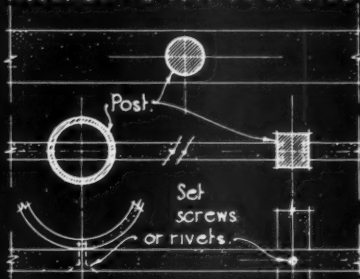
The handrail rise is kept separate from the turn, each part being bent from extruded section.

## (C) METHODS OF JOINING AND ASSEMBLING VARIOUS BALUSTRADE MEMBERS:

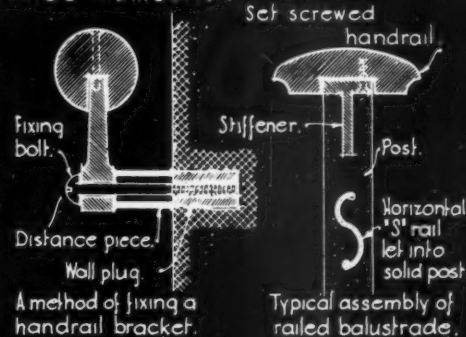


Grille and baluster assembly. Welding should be avoided.

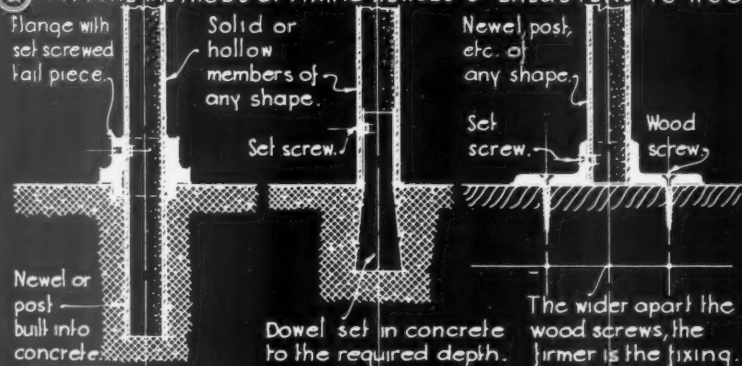
A shiplap & set-screwed joint for long lengths of square or similar section.



Details of various rail, grille & post abutments.



## (D) TYPICAL METHODS OF FIXING NEWELS &amp; BALUSTERS TO WOOD AND CONCRETE:



Information from the Northern Aluminium Company Limited.

INFORMATION SHEET: ALUMINIUM, No 8: HANDRAILS AND RAILINGS.  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WCI. *Des. A. Payne*

THE ARCHITECTS' JOURNAL  
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## INFORMATION SHEET

• 673 •

## ALUMINIUM

**Subject :** Handrails and Balustrades**General :**

This is the eighth of a series of Sheets dealing with the architectural uses of aluminium, and sets out briefly some methods of constructing stair balustrades and internal or external railings of aluminium. The standard and specially built-up extruded sections given are a few only of a great number of shapes suitable for this work which are set out in the Noral Handbook, Section C.

**Handrails :**

Handrails may be formed from plain drawn aluminium tubing or solid round, hexagonal, flat or other standard sections, or from special extruded shapes such as those indicated.

**Handrail Bends :**

Bends and wreathed turns for solid extruded handrails are generally made by casting. They can be made to any shape to match the handrail, but when the casting is intricate, involving use of special alloys, there is sometimes a slight difference in colour between the cast and the extruded work if an anodized finish is used.

Bends for aluminium tube handrails can be made from the extruded tube, wreathed turns must, however, be cast.

To avoid the necessity for these special castings it is frequently possible when using simple flat extruded sections or drawn tube to dispense with the wreathed turn by keeping the ramped or rising portion of the rail separate from the turns as is indicated on this Sheet.

**Span of Handrails :**

The larger diameter tubes and the heavier solid sections are suitable for handrail work without further reinforcement.

The figures given below are the maximum recommended spans between supports for different types of heat-treated alloy section. These figures have been calculated with a safety factor to provide for all reasonable overloads such as are likely to occur (e.g. during furniture removal, etc.) When N.A.2S. (pure aluminium) sections are used the spans must be reduced by about 30 per cent.

TABLE GIVING APPROXIMATE MAXIMUM UNSUPPORTED SPANS FOR STANDARD EXTRUDED HANDRAIL SECTIONS, UNREINFORCED

Shape of Section	Maximum Span in inches							
	Size of Section (diameter or distance across flat in inches)							
	1	1½	2	2½	3	4	5	6
Rounds...	30	43	55	67	80	—	—	—
Squares...	34	50	64	80	93	—	—	—
Hexagons...	30	44	58	70	84	—	—	—
Octagons...	32	46	60	72	86	—	—	—
Wall thickness of tubing in inches								
Tubing ...	0.064	0.080	0.080	0.080	0.080	0.104	0.128	0.128
	15	32	39	46	52	70	92	125
Size of flat bar in inches								
Flat bars used on the flat	2½ x ¾	2½ x 1½	3 x ¾	3 x 1½	3½ x ¾	3½ x 1½	4 x ¾	4 x 1½
	28	31	14.5	29.5	20	—	—	—

The special handrail sections shown on this Sheet have been designed to give lightness of metal combined with considerable depth of section. The maximum spans recommended between supports are given below :—

TABLE GIVING APPROXIMATE MAXIMUM UNSUPPORTED SPANS FOR THE HANDRAILS SHOWN ON THIS SHEET

Type Rail (see diagrams on face of Sheet)	Maximum span in inches
Type (1) ...	104
Type (2) ...	74
Type (3) ...	80
Type (4) ...	98
Type (A) ...	50

Solid round, square, hexagonal and like sections may be used over slightly greater spans than those given for the nearest equivalent diameter tube. All such sections are greatly strengthened if set on an aluminium flat section used

on edge. Where extreme strength is required a steel or wrought iron core can be used.

**Supports for Handrails :**

Balusters or newel posts usually form the supporting members for the handrail. If, however, balusters are spaced far apart, intermediate supports can be provided for the handrail by distance pieces, blocks, spheres or other devices connecting the handrail to the rails or grille work below.

**Special Handrail Designs :**

Handrails of special design can be produced at slight extra cost above that of standard sections.

**Balustrade Rails and Grilles :**

Vertical balusters and horizontal rails forming the infilling below the handrail are not usually subjected to the same severe treatment and heavy loads as the handrail; lighter sections or greater spans may therefore be used for this work.

Horizontal and raking rails between widely spaced balusters are greatly strengthened and stiffened if connected together at intervals with distance pieces or other devices which can be made to form an element in the design.

Exceptionally flat or thin sections are not to be recommended for use in long unstayed lengths even in grille-work, since such sections have considerable strength in the direction of their width but little in the direction of their thickness and are therefore liable to spring.

Consideration should be given in selecting a section for grillework to its rigidity in all directions. Theoretically, tubular, Tee or I sections give the greatest strength and sections which approximate these shapes give great rigidity with economy in metal.

TABLE GIVING APPROXIMATE MAXIMUM UNSUPPORTED SPANS FOR VARIOUS SHAPES AND SIZES OF SECTION WHEN USED FOR GRILLE WORK

Shape of Section	Maximum Span in inches			
	Size of Section (diameter or distance across flat in inches)			
	1	2	3	4
Rounds ...	7	12	20	30
Squares ...	8	15	24	36
Hexagons ...	7	12	22	32
Octagons ...	7	13	23	34
Wall thickness of Tubing in inches				
Tubing ...	0.036	0.036	0.048	0.048
	4	7	15	24
Size of Section in inches				
Flat bars ...	1½ x ½	2 x ½	2½ x ½	3 x ½
	10	8	6	4

**Extruded and Cast Grille Work :**

Grille work may be built up from extruded sections fitted and screwed together, may be cast, or built up from a combination of cast and extruded parts. (For further details of cast and extruded grille work see further Information Sheet of this series.)

**Newel Posts :**

Any shape of aluminium newel post can be extruded or cast and chased. In posts built up in a number of extruded sections, no one section should exceed 8 ins. in diameter. Cast work can be of any size and may be moulded as required.

**Balusters :**

Balusters are cut to length from plain extruded sections, bent as required, or, if specially shaped or decorated, they are cast.

**Contact with other Metals and Materials :**

Aluminium balusters, standards and bases, ends of handrails, newel posts or other work in contact with wet concrete, mortar or other alkaline building materials, require protection with a coat of bituminous paint. Drainage of water from copper, bronze or nickel should not be permitted to reach aluminium work, or galvanic action may take place. In external work, if bases and other supports or fixings are of other metals, they should be painted with bitumen where they are in contact with aluminium.

**Finishes :**

A great variety of finishes are available including matt, sanded or semi-polished, polished and anodized finishes. Anodized finishes form a thin, uniform protective oxide coating which may be dyed practically any colour. Aluminium may be brushed, painted or lacquered, sand-blasted, etched, frosted, etc. No maintenance is required other than periodical cleaning with soap and water.

**Previous Sheets :**

The previous Sheets of this series dealing with the architectural uses of aluminium were Nos. 492, 501, 504, 505, 510, 661 and 669.

**Issued by :****Address :****Telephone :**

The Northern Aluminium Co., Ltd.

Bush House, Aldwych, London, W.C.2

Temple Bar 8844







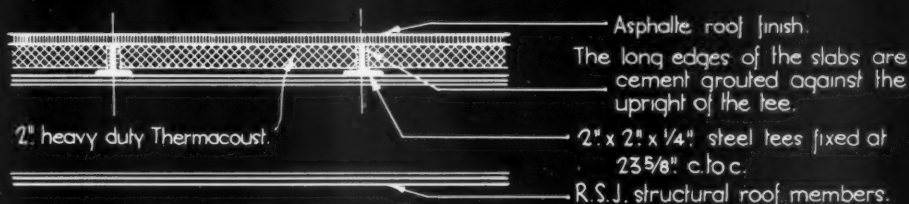
821.

## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## THERMACOUST SLABS USED FOR THE THERMAL INSULATION OF ROOFS:

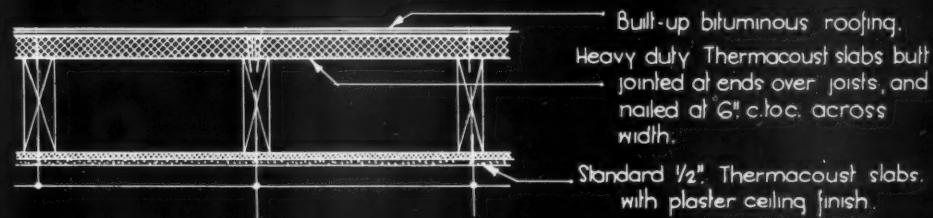
THERMACOUST LAID  
ON A RAFT OF STEEL  
TEES OVER AN OPEN  
STEEL ROOF.

(A)



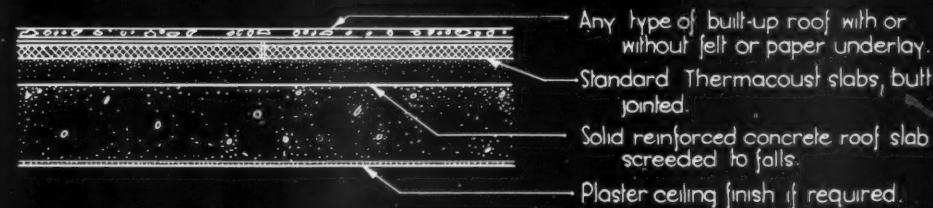
THERMACOUST ON  
WOOD JOISTS WITH  
THERMACOUST SOFFIT.

(B)



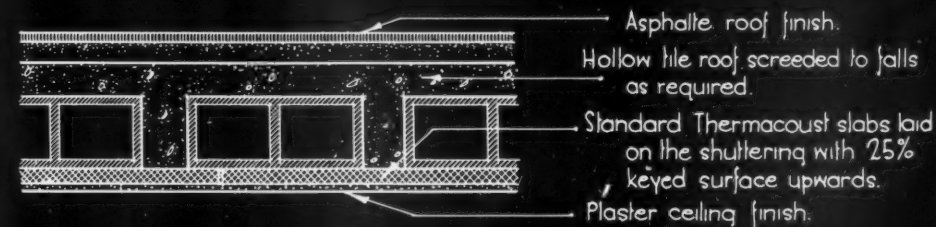
THERMACOUST LOOSE  
BUTT JOINTED ON  
SCREEDED SOLID  
ROOF SLAB.

(C)



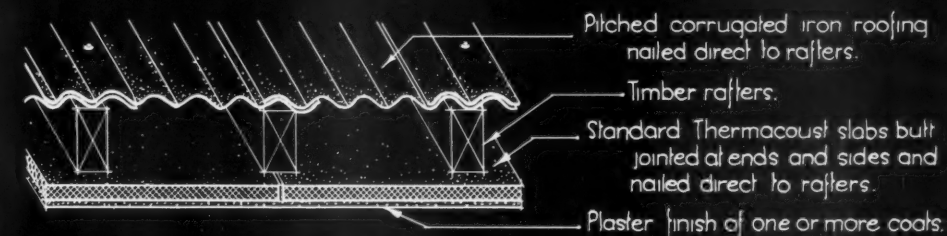
THERMACOUST SLABS  
KEYED TO UNDER  
SIDE OF CONCRETE.

(D)



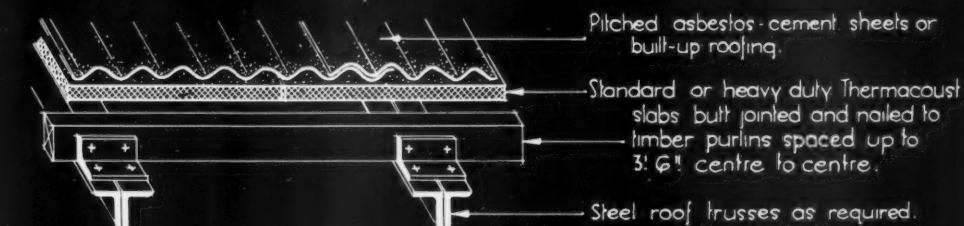
THERMACOUST  
LINING TO SLOPING  
CORRUGATED  
IRON ROOF.

(E)



THERMACOUST  
FIXED TO TIMBER  
PURLINS ON STEEL  
TRUSSED ROOF.

(F)



*Information from Thermacoust Products Limited.*

INFORMATION SHEET: CONSTRUCTIONAL USES OF WOOD WOOL FIBRE BUILDING SLABS. No. 4.  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON, W.C1. *Dec. 1938*

THE ARCHITECTS' JOURNAL  
LIBRARY OF PLANNED INFORMATION

## INFORMATION SHEET

• 674 •

## ROOF INSULATION

**Product :** Thermacoust Wood Wool Fibre  
Building Slabs**General :**

This is the fourth of a series of Sheets showing the constructional uses of Thermacoust building slabs, and illustrates the use of this material to obtain thermal insulation in roofs of various types.

The coefficient of thermal conductivity of the material is 0.58 B.Th.U. per sq. ft. per hour for 1" thickness and 1. deg. F. difference in temperature.

**Material :**

Thermacoust is manufactured from wood wool fibres cemented together under pressure. The inorganic content exceeds 80 per cent. and no magnesite is used. The material has been subjected to tests by the Building Research Station, the National Physical Laboratory, and other authorities, and tests and reports relating to fire resistance, moisture movement, plastering, strength of joints, sound absorption and

resistance, thermal resistance, etc., are open to inspection upon application to the company.

A strong mechanical key is provided for either plaster, asphalt or concrete, and condensation and cracking in the finished plaster work are reduced to a minimum. All thicknesses of slab are readily cut with an ordinary hand-saw. Movement due to variations of humidity is negligible and structural strength is adequate for the purpose recommended.

**Laying :**

It is advisable to use heavy duty Thermacoust on all roofs where traffic is to be expected and the direct support is not continuous. Thermacoust fixed to the soffit of the roof may be of ordinary or heavy duty grade as desired ; but with concrete construction the heavy duty slabs may replace the shuttering. All joints should be tightly butted and, where the slabs are to be plastered, should be scrimmed.

The spacing of intermediate supports may be governed by the results of the tests on 1½" heavy duty slabs, viz. 416 lbs. breaking load at 19" clear span. 2" heavy duty Thermacoust is a little stronger.

Asphalt may be applied direct as also may all types of built-up roofing.

**Plastering :**

The plastering may be carried out in one or more coats. For single-coat work any of the recognized gypsum setting plasters are recommended. For finishes comprising more than one coat, any of the ordinary ceiling and wall mixes may be used. Cement mixes should be avoided on ceilings.

**Sizes, Weights and Prices :**

All standard thicknesses of Thermacoust are used for roof work of this kind. The size of each slab is 7' x 1' 11½", giving a cover of one and a-half sq. yds.

STANDARD SLABS											HEAVY DUTY	
Thickness ... ..	$\frac{1}{2}''$	$\frac{3}{4}''$	1"	$1\frac{1}{2}''$	2"	$2\frac{1}{2}''$	3"	4"	5"	$1\frac{1}{2}''$	2"	
Price per yard (ex Works) ...	1/3	1/6	1/9	2/3	2/9	3/3	3/9	4/7	5/6	2/9	3/3	
Weight per slab in lbs. ...	20	29	33	44	56	68	80	95	110	50	67	
Weight per square yard in lbs.	14	19	22	29	37	45	53	63	75	33	44	
Number of slabs per ton ...	112	79	67	50	40	34	28	24	20	45	34	
Square yards per ton ... ..	168	118	100	75	60	50	42	36	30	68	52	

The cost of carriage is additional, depending on quantity of slabs and travelling distance. Slabs made for acoustical purposes and to special shape are subject to individual quotation.

**Scrim :**

Any of the usual scrim materials may be used to cover the joints, but jute scrim 4" wide is supplied by the company in 100-yd. rolls at 2/6 per roll, sufficient for 50 sq. yds. of Thermacoust.

**Nails :**

Wide-headed galvanized nails must be used ; they may be of any make, or they may be obtained from the company in 14-lb. bags at 6d. per lb.

Nails per pound : 2" nails—90  
(Approx.) 1½" nails—100

**Nails required :**

Joists at 14" C. to C.—23 nails per sq. yd.  
" " 21" C. to C.—17 " " "  
" " 28" C. to C.—14 " " "  
" " 32" C. to C.—10 " " "

**Workmanship :**

Thermacoust slabs do not require especially great care nor specialist workmen for their erection. The

company will, however, undertake to fix or lay Thermacoust work in any part of the country, and estimates will be given for this work on request.

If Thermacoust is being used in an unusual way or for some special form of sound treatment it is usually advisable for the company's specialist staff to undertake the work.

**Design :**

It cannot be too strongly stressed that the fixing arrangements should be designed to suit the purpose of the insulation ; otherwise full value may not be obtained from the material.

**Previous Sheets :**

The first three Sheets of this series are Nos. 658, 662, and 666, dealing, respectively, with partitions, the insulation of wood floors and suspended ceilings.

**Manufacturers :** Thermacoust Products, Ltd.

**Address :** 32 Victoria Street, London, S.W.1

**Telephone :** Abbey 6211



Typical landscape with villages. Note that river, roads and railway run parallel.  
(From "Houses and People of Japan.")

## L I T E R A T U R E

### IN JAPAN

[By BRYAN WESTWOOD]

*Houses and People of Japan.* By Bruno Taut.  
London: John Gifford, Ltd. Price 12s. 6d.

ONE has often heard of the close resemblance of the work of Le Corbusier and other modern architects to that of early Japanese architecture; this book is the result of a careful study of the traditional Japanese house written after living in one for more than a year.

One might have expected the author to have shown that the conditions of which the Japanese house is an expression are fundamentally the same as those which are tending to produce, at least superficially, the same results in Europe. The difference lies in the fact that the Japanese house forms part of a theory of living.

The temperature in the Japanese house is always very much the same as that outside. The warmth from small charcoal braziers is enjoyed by radiation . . . "it is not an increase of air temperature that is essential to comfort, but the radiation of warmth." The Japanese idea is to be as close to nature as possible, and this produces a house which is similar to that evolved in the western hemisphere as a result of the conquest rather than appreciation of nature. The European or American

lives in his house of glass because modern methods of heating and air conditioning have made it possible to maintain comfortable living conditions within.

In more than one place Bruno Taut tells us that the Japanese house is not functional at all, but nevertheless, he occupies a great deal of space describing how its form is the direct result of climate. Extremes of moisture make it necessary to open up the house as much as possible to get rid of the damp, hence the prevalence of sliding shutters and flimsy construction generally. Examples are shown of peasant houses in the Balearics where similar conditions of temperature and sunshine prevail, but without the moisture, and fortress-like structures are the result. Elsewhere there are comparative pictures of Japanese and European farmhouses which show a striking similarity.

However, climate is not the deciding factor. As suggested above, the underlying reason for the exact form of these houses is an outlook on life which is based on an understanding and love of nature having no parallel in western civilization. Superstition also plays a large part, and each aspect of the house has its special significance, and only certain rooms must face each particular direction; the difference of a few degrees may change the owner's luck from best to worst.

Unfortunately, the Japanese appear to be neglecting all the accumulated æsthetic appreciation of "perfect fitness for purpose" in favour of the vilest copying of misunderstood Western ideas. The author gives a vivid and despairing description of the larger cities.

It is a pity that the illustrations do not reach a higher standard, but the book as a whole is a profoundly interesting study of Japanese life, and the architecture which grows out of that life. It makes the reader go over his long accepted beliefs very carefully.

### SHOREDITCH

[By PHILIP H. MASSEY]

*Growing Up in Shoreditch.* By L. P. Scott.  
London: The Shoreditch Housing Association.  
Price 6d. net.

THIS brief survey of the conditions of life of the youth in Shoreditch should serve as a reminder that the housing problems of London, though being tackled with greater energy now than in the past, are still far from solution.

The usual method of a housing survey is to base the conclusions upon details obtained from a sample of houses chosen at random. If the sample is large enough and is really a random one (there are several ways in which bias can be introduced by accident) then the results can be taken as applicable to the whole area.

*Growing Up in Shoreditch* does not follow this method. The primary object





A lakeside shrine. From "Houses and People of Japan," reviewed on the preceding page.

of the survey was to show the conditions under which youth is growing up; it is therefore based upon the conditions of life of a random sample of children only. The children were selected by taking all those who entered six senior schools at a chosen date and those who left the same schools at the end of two successive terms. This method produced two groups aged about 12 and 15½ at the time of the survey. The results are therefore not typical of the conditions of life over the borough as a whole, but are typical of the conditions of life in families with boys and girls of about the ages of those in the sample. The author makes the point that overcrowding is most rife and money most scarce where there are most children, that the standard of housing and the standard of life of the average child are therefore lower than those of the average adult. It should be noted, however, that the results are not strictly applicable to boys and girls as a whole, since children of 12 and 15 will be more likely to have all their brothers and sisters already born and still living with their parents than will a random sample of children of all ages. The average child in the sample lives in a household of as many as six persons.

About 80 per cent. of the households concerned occupy two, three or four rooms. Under the main official overcrowding scale (in which children under 10 years old count as half-persons and children under one year old are ignored) 38 per cent. of the children are living in overcrowded conditions. One household in three has no indoor water supply, three out of four have no indoor lavatory, six out of seven have no proper bath in their homes.

About one-quarter of the 12-year-olds

and one-third of the 15-year-olds had beds to themselves. The report states that:—

"There is an effort made in nearly every family to segregate the sexes among the older children and adults. It is this effort which causes the increase among the seniors in the number sleeping alone in their own room, a state of affairs not nearly as pleasant as it sounds as a great many of them are sleeping in expandable chairs in the kitchen-cum-living room and must therefore be pretty well last to bed and first up."

In addition to the material on home conditions, the survey was concerned with such matters as the health, holidays and recreations of the sample of children covered, and (for the seniors) with their conditions of employment. The proximity of the workplace to the home is obviously a factor of great importance. Most of the children are employed in manufacturing industries established in the neighbourhood and very great hardship would be caused by rehousing at a distance.

## OUTLINE OF ART

[By JOHN STEEGMANN]

*A World History of Art.* By Sheldon Cheney. London. Jonathan Cape. Price 30s.

THERE is no doubt that this encyclopædic production does what it sets out to do, namely, to survey the visual arts of the historic and pre-historic worlds. It ranges from the Dordogne cave-paintings to Kandinsky and Derain. It includes the Orient and Mexico, Persia and India, Greece, Rome and Byzantium, and Western Europe from the Romanesque to our own day.

There are two ways of presenting these outlines of history. The objective, which is designed as a reference-book for the reader who wants facts and dates with labels and brief commentaries; and the subjective, designed for the reader who would like a more "personal" approach but wants it in the person of someone else. This book is of the latter kind and, of that kind, very good.

It is designed primarily for the reader with a little knowledge and no fixed ideas, and for him who is compelled for one reason or another to take his experience of the Arts vicariously. It is not a substitute for the actual looking-at pictures or buildings, and it must be said that few of the many illustrations will tempt the reader into that error.

Mr. Cheney approaches his subject from the modernist standpoint. That is to say that his views on, for example, Chinese painting, Greek sculpture or the negro arts are those of the younger critics of today and emphatically not those of the text-books of yesterday. This is the most valuable quality of his book, even if he does tend to under-rate Velasquez at the expense of the now more fashionable El Greco. It particularly illuminates his chapters on Greek sculpture, which might have been strengthened by reference, at least in the bibliography, to M. Zervos's *Art en Grèce*.

The student of architecture will be less rewarded than the student of painting. Admittedly, the baroque is not to everyone's taste, but it is as important in architecture as Rubens is in painting and must be discussed to the same extent. Yet there is not one mention of Würzburg, and the *Salute* is patronised and dismissed. Tiepolo is described as "empty, stagy and superficial," with no reference to his special functions.

There are appendices containing chronological charts, classifications in epochs, tables of dates, and a bibliography with terse descriptive comments on the works mentioned.

## Leeds in London Architectural Society

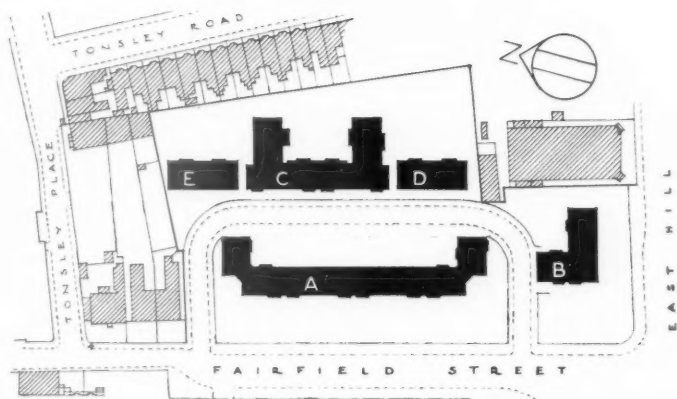
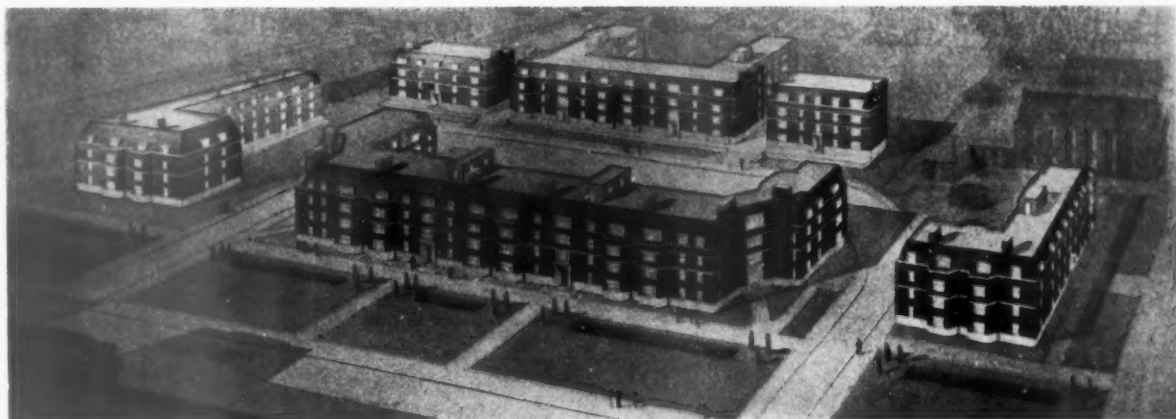
An informal reunion dinner for past students of the Leeds School of Architecture has been arranged to take place on Thursday evening, November 10, 1938, at Ye Olde Cheshire Cheese, Fleet Street, E.C.4, commencing at 7.30 p.m. It is hoped that all who are eligible will endeavour to be present.

The price of tickets is 5s., and these may be obtained on application to Mr. Richard Thompson, Hon. Secretary, L.I.L.A.S., at 8 The Drive, Walthamstow, E.17.

The dinner is to be preceded by a meeting commencing at 6.30 p.m.



## UNDER CONSTRUCTION: FLATS IN WANDSWORTH



*Perspective and site plan of a block of flats now under construction in Fairfield Street, Wandsworth, from the designs of Mr. Basil Hughes (Nicholls and Hughes) in association with Mr. Edward A. Hunt (William and Edward Hunt). The scheme comprises five blocks accommodating 90 flats, arranged on four floors with varying accommodation, i.e. 1, 2 and 3 bedrooms and 1 sitting-room. The floors will be of reinforced concrete and the external walls will be faced with multi-coloured Sussex stocks and stone dressings; the mansard roofs will be covered with hand-made red tiles and asphalt to flat portions.*

## RURAL HOUSING

"Some cottages occupied by agricultural workers are radically unfit, and the only solution is to pull them down and replace them by new houses," writes Mr. John Colville, M.P., Secretary of State for Scotland, in a foreword to a booklet which the Department of Health for Scotland has made available at Post Offices throughout the country. "Other cottages are essentially sound, and can be made excellent dwellings by works of reconstruction or improvement."

The booklet explains the conditions on which financial aid will be given, under the Housing (Agricultural Population) (Scotland) Act, 1938, and the Housing (Rural Workers) (Scotland) Acts, 1926 to 1938, either for building new houses to replace unfit houses or for the repairing of houses occupied by persons of the agricultural population.

Under the Housing (Agricultural Population) (Scotland) Act, 1938, the grants obtainable are:—

For new houses provided by local authorities: The State will make to local authorities a grant of between £10 10s. and £15 a year for each new house for 40 years.

For new houses erected by private enter-

prise: The local authority may grant up to half the cost of the new house subject to a maximum of £160 for a three-apartment house and £200 for a house containing more than three apartments.

The new houses must contain three apartments at least, and a scullery with sink, a fixed bath in a bathroom, and, unless this is not reasonably practicable, a water-closet. The old house must be demolished or closed against human habitation on completion of the new one; but tied houses, bothies, etc., may, with the approval of the local authority, be combined by reconstruction with adjoining houses or premises. The new houses must be maintained fit for habitation for 40 years and must be occupied by a member of the agricultural population.

Higher grants may be given for houses in remote districts where the distance from supplies of labour and material increases building costs.

Under the Housing (Rural Workers) (Scotland) Acts, 1926 to 1938, local authorities may also give grants to private persons to assist in reconstructing or improving houses occupied by agricultural workers or persons of like economic condition. Typical improvements which might be carried out are:—

(1) The installation of scullery, water-

closet, bathroom and other modern conveniences;

(2) The provision of damp-proof courses to remedy dampness;

(3) Enlarging windows, heightening ceilings;

(4) Increase in number or enlargement of rooms.

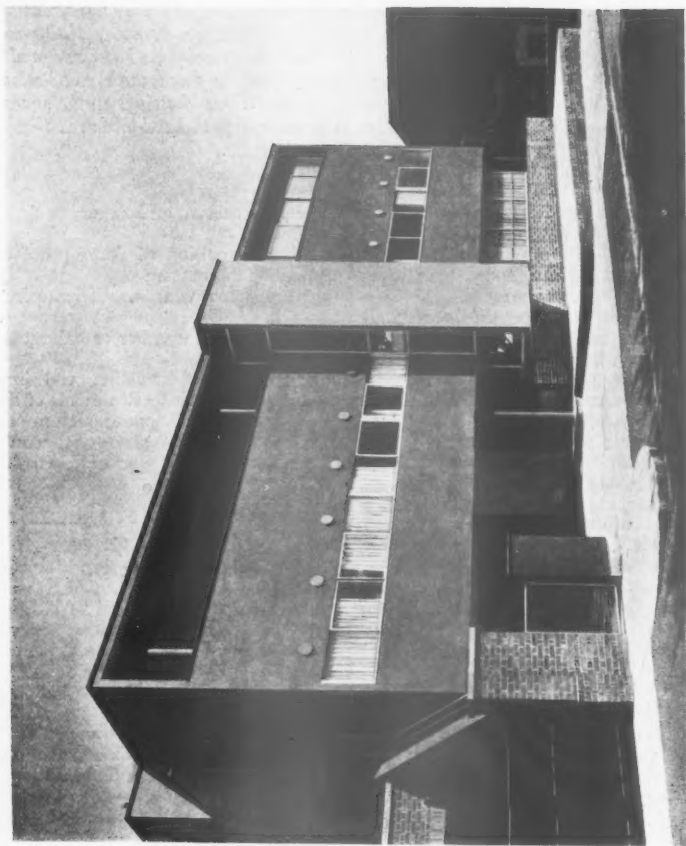
Grants for reconstruction and improvement may amount to two-thirds of the cost of the works subject to a maximum of £100. The actual amount depends on the conditions of the local authority's scheme of assistance.

## New Arts Wing for Queen Mary College

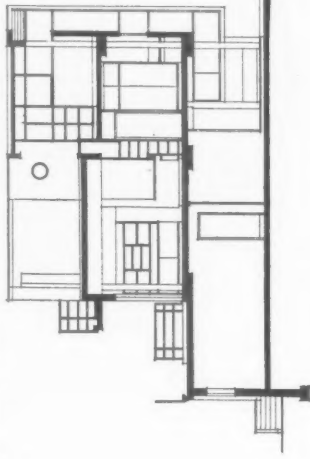
The new arts wing of Queen Mary College (University of London), which was formally opened by the Earl of Athlone on Wednesday, October 12, was designed by Mr. Maurice Webb, F.R.I.B.A., and built and equipped at a cost of £57,000. The new building is part of a £250,000 building and reconstruction scheme.

Queen Mary College occupies the site of the old People's Palace, the original buildings of which were designed by E. R. Robson, F.R.I.B.A., architect to the London School Board, and opened by Queen Victoria in 1887.

## H O U S E I N F R O G N A L , H A M P S T E A D



**PROBLEM AND SITE**—The site is a small one, only .165 acre in extent. It was therefore of great advantage to the owner to make the fullest use of the available ground space, and this controlled to a considerable degree the general form and construction of the house. The ground level runs right in under the house, not only at the front, so that a shelter for cars can be provided without waste of ground space, but also at the back, where a covered terrace, which forms in effect an integral part of the living-room. Similarly, on the roof, the area of the site is used over again in the form of a roof garden. Above, the street front; right, the garden front, looking into the living-room, from the terrace at first-floor level.



the building on account of bad subsoil, made-up ground, etc. Internal walls are of terra cotta blocks, non-structural. Insulation of external walls and of floors is 1-in. cork. External walls are of 4-in. R.C. except certain non-structural walls on ground floor which are of brick. Sound insulation of floor to top floor bedrooms is by means of a hardwood spring floor on isolators. Roofs are asphalted. The external walls are finished a dark brown colour.

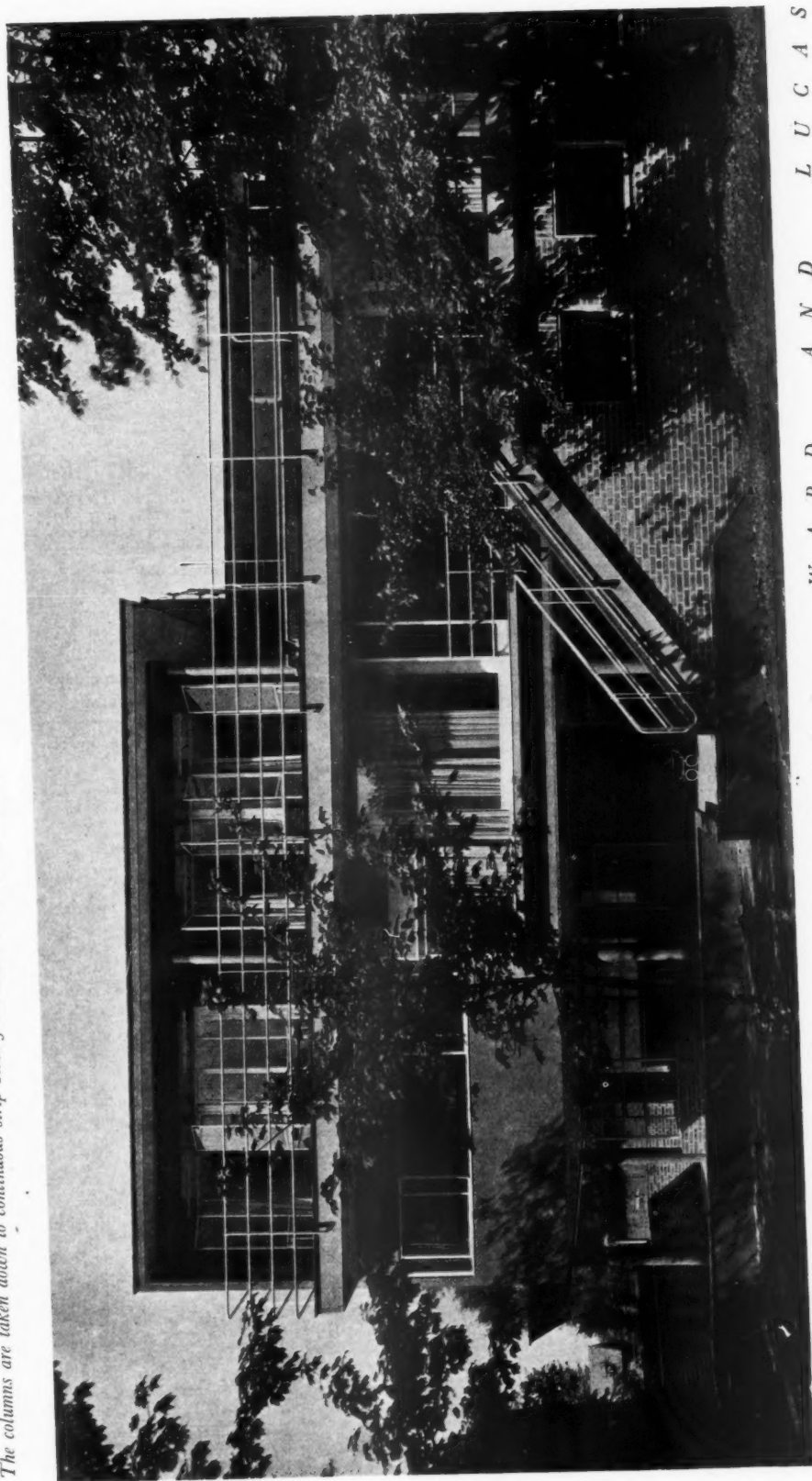
**INTERNAL FINISHES AND EQUIPMENT**—The materials for floors and walls were chosen with particular attention to the question of cleaning. There is no furniture which is not built-in, other than chairs, tables and beds.

**SERVICES**—Heating is by electricity, under thermostatic control; water heating and fires are electric also.

Below, the garden front, showing the external stairway which gives access to the terrace and main living-rooms at first-floor level.

**PLAN**—The rooms face east and west, and there is no outlook to the south. (See floor plans on page 698.) This arrangement was preferred because the owner particularly required the lighting of each room to be from one side only; it was considered that rooms on both sides of the house should obtain sunlight, and that the principal bedrooms and the living-room should have the morning sun; also the most secluded and private outlook possible on a corner site was desirable for the living-room and the principal bedrooms. It has been possible to provide the living-room with a window 45 ft. long and 8 ft. high, half of which slides completely away. Internally, the house is arranged so as to provide distinct separation between the first floor, which forms a complete living unit for the owner and his wife, and the top floor, which contains the children's bedrooms.

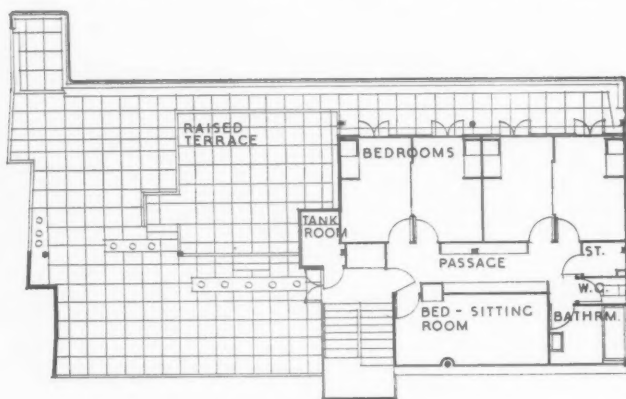
**CONSTRUCTION AND EXTERNAL FINISHES**—Reinforced concrete monolithic structure. Floors are of hollow tile with flat R.C. beams supported on free standing R.C. columns. The columns are taken down to continuous strip R.C. foundations running the length of



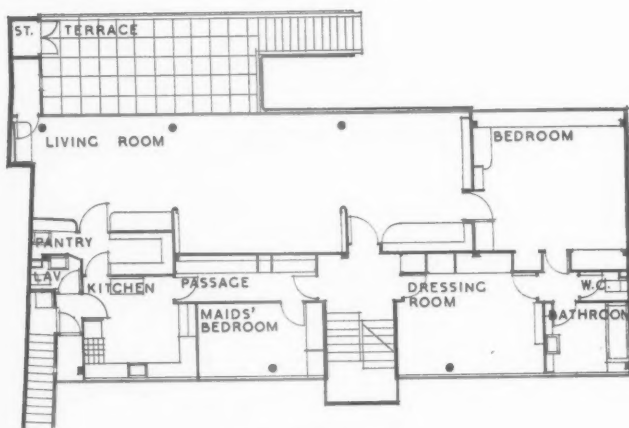
DESIGNED BY CONNELL, WARD AND LUCAS



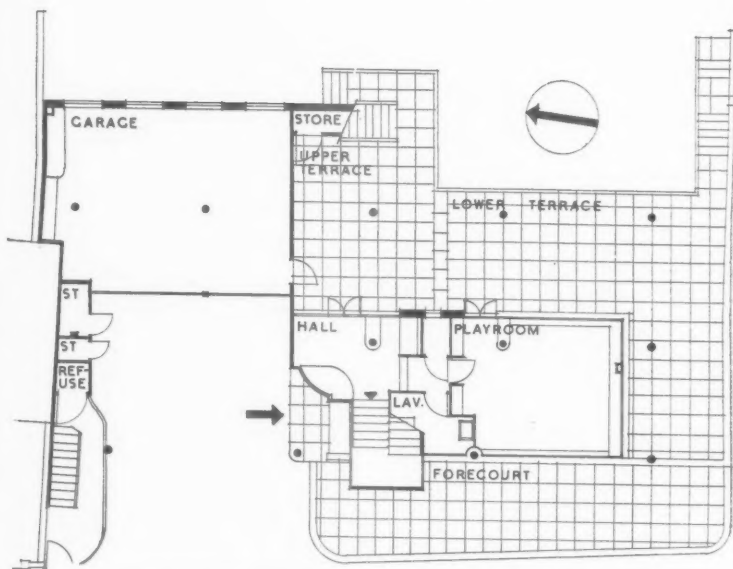
## HOUSE IN FROGNAL, HAMPSTEAD



SECOND FLOOR PLAN



FIRST FLOOR PLAN



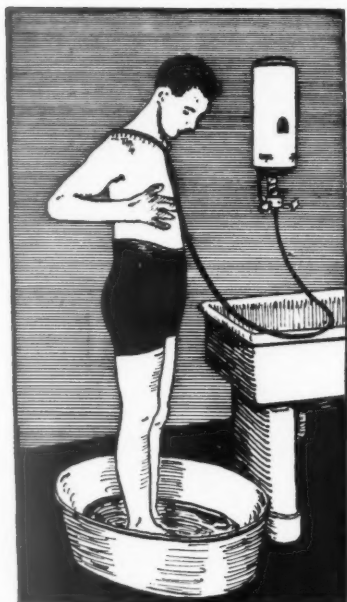
GROUND FLOOR PLAN

Top, the bed-sitting room on the top floor; centre, the living-room; bottom, a corner of the children's playroom on the ground floor.

The general contractors were Y. J. Lovell and Son; for list of sub-contractors see page 702.

BY CONNELL, WARD AND LUCAS





## TRADE NOTES

[By PHILIP SCHOLBERG]

### *Simplified Washing*

IT has been suggested before in these notes that the shower can be a more than adequate substitute for the bath. True, there will always be plenty of people who will insist on the luxury of wallowing in gallons of hot water, but in the small flat there may be quite a considerable saving in space if only a shower is provided, added to which there is also a saving in the amount of hot water used. It is possible to get a reasonable shower with a water consumption of about 1 to 1½ gallons a minute, and remembering that it is only too easy to use 20 gallons or more of hot water for a bath, it can be seen that a shower has to be in use for a long time to reach the same figure. But however much water is saved, it seems unreasonable to go as far as the device shown in the sketch at the head of these notes, which has been evolved for the German worker on low-cost housing schemes. It is in effect a sort of horse collar connected up to the hot water supply, or to one of those small sink heaters, small holes in the pipe allowing water to trickle down over the shoulders and thus wash off the soap. One of the illustrations in the catalogue describing it shows the user standing in a small tub, presumably in the kitchen, but if there is any pressure behind the water supply there is bound to be plenty of mess and splash. Assuming the coal miner's tub and scrubbing brush to be the absolute minimum, this particular device may be looked upon as a slight improvement, but it still seems not good enough. In any household where children have to be washed a proper bath is still probably the best, but if there is to be nothing more than a shower then it should be in a waterproofed compartment with curtains to catch the

splashes. The American method with an ordinary bath and a shower at one end behind a glazed screen or curtains is probably the best, for the shower can then still be used if one is in a hurry, though, of course, the space-saving virtues of the shower are then lost.

### *A New Fixing Device*

Anyone who has ever put up a shelf in the office probably used Rawlplugs to do the job, and it is interesting to see that Rawlplugs have now evolved a new type of screw anchor, a metal flanged plug for



interior and exterior fixing to brick, concrete, stone, cement or marble. It is not intended that this new type shall in any way supersede the more common fibre Rawlplug, but it has been devised to supply

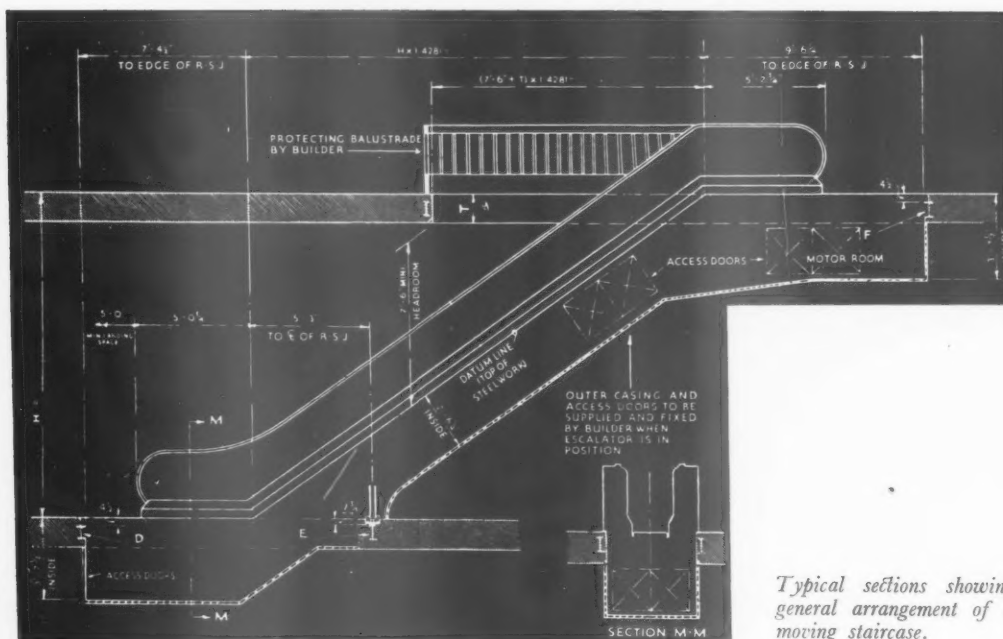
the demand for an anchoring medium made of metal which will resist climatic conditions and overcome prejudices against the use of non-metallic fixings, without at the same time sacrificing the resiliency of the fibre types.

The new plug is made from a specially tough lead alloy, and it has a flanged head so that it can be used in bottomless holes, which are almost inevitable in hollow bricks or partition blocks. A lead plug should always stop short of the bottom of the hole in which it is used, otherwise the lead has no room to flow when the screw is driven. This plug is also slotted longitudinally so that the screw will enter easily and so that the plug can open out and grip the sides of the hole. External ribs are also formed on the plug to prevent it turning while the screw is being driven, and to allow it to expand more easily into the cavities in the hole. Eight different sizes are available from stock.—(The Rawlplug Co., Ltd., Rawlplug House, Cromwell Road, London, S.W.7.)

### *Keep Moving*

That there is something in the old police cry is proved in a few moments if you will take the trouble to look at crowds trying to get into a lift, or at a group of cars getting away from a traffic block. Hence the moving staircase. Regarded purely in terms of vertical movement, the lift is obviously faster, but there is so much delay at each floor while people shuffle in and out and make up their minds whether it's the floor they want or not, that the moving staircase is probably quicker, and certainly less irritating, while it also overcomes the difficulty of crowds waiting for the lift to arrive. The Underground people, for instance, know this perfectly well. I was told a year or two ago, by a moving staircase expert, that lifts are faster. That is to say, you get to the surface sooner, but *only* if you can step straight into the lift and only if it starts as soon as you get into it; the Underground, therefore, prefer to keep people moving and find that the *average* time taken to get to the surface is shorter when the lifts are replaced by moving staircases. In addition to which tempers are much better, because no time seems so long as when you are waiting for something to happen.

If moving staircases score on the deep runs in the Underground it may be safely assumed that they will be even better in the multiple store, where the vertical rises between floors are small and the greater vertical speed of the lift has less time to score. I am not suggesting that lifts are automatically out of date, for the moving staircase is presumably only worth while where the traffic is pretty heavy. But in a large store they seem to offer several advantages, not the least of which is that shoppers are taken to all the intermediate floors on the way to the one they want, and are therefore more likely to remember something they had forgotten if they actually see it than they are when only stimulated by the specifiatory whine of the lift attendant. Ideally, I suppose, all



Typical sections showing general arrangement of a moving staircase.

shoppers should be taken by non-stop lifts straight to the top floor and have to walk down through all departments before they could get out. This has been tried in one or two exhibition pavilions, but the fire brigades (and the shoppers themselves) would hardly stand for it in a large public building.

All of which is the result of a new booklet from J. and E. Hall, who manufacture moving staircases in this country to the designs of the Berlin firm of Carl Flohr, and who put the first shop staircases into Bentalls at Kingston some six years ago. Since then they have done a good many other jobs, both in this country and abroad, and it seems likely that the moving staircase will become popular for handling large crowds; they are already installed, for example, at both Olympia and Earls Court. This booklet consists mainly of illustrations of jobs done, but I notice a refinement in a Coventry store, where a comparatively large (6,000 per hour) staircase has been installed. This is a two-speed light-ray control, which makes the staircase run at half speed until the light ray is interrupted when a passenger steps on to the staircase. The staircase then runs up to full speed for long enough to make certain that the passenger has got off at the top, after which it drops back to half speed again unless the light ray has in the meantime been broken by another passenger getting on at the bottom. Just how much this is likely to save in running expenses it is difficult to tell. Recording instruments on one of the D. H. Evans staircases show that the average power consumption is as low as 2 kilowatts (rather less than 3 horsepower), and the no-load power consumption is about  $\frac{1}{2}$  kw. It will thus be seen that the possible saving to be obtained by slowing the staircase down cannot be very large, though it may be assumed to be worth while, otherwise nobody would have

taken the trouble to arrange it; it would, however, be interesting to see actual figures.

Is there any reason, by the way, why moving staircases should be run so slowly? Some of the newer Underground jobs run at about twice the speed of a few years ago, but even they do not seem to be as fast as they might. One assumes that the elderly are the limiting factor, but perhaps Messrs. Hall could tell us about this as well.—(J. and E. Hall, Ltd., Dartford, Kent.)

#### Lamp Standards

A good many months ago a series of very pleasant steel standards for street lighting was noticed in these columns, and I have now received a booklet illustrating some equally good concrete ones. They are made by Concrete Utilities, and several of the designs show a very real appreciation of how the material should be used. One of the best designs is in use at Bexhill (perhaps the influence of the De La Warr Pavilion), and there are some other good ones in Enfield, while Blackpool, Hackney and Morecambe have some which look to me real horrors. This is, of course, inevitable, for a firm is more or less bound to supply what the customer wants. But it is useful to know that there is in existence a firm which has some good standard designs, and which seems to prefer the simpler types. Street lighting is not often the architect's province, but next time you win a town hall competition there may be a chance of persuading the borough engineer not to ruin the elevations with tortured cast-iron standards.

From the upkeep point of view these standards have the obvious advantage that they do not need painting, and that the production of a special design need not be very expensive.—(Concrete Utilities Ltd., Ware, Hertfordshire.)

#### Manufacturers' Items

*Steel for Air Raid Precautions* is the title of a forty-page illustrated brochure just issued by the British Steelwork Association, of Steel House, Tothill Street, Westminster, S.W.1. The purpose of the publication is to suggest the ways in which a wide range of standardized steel products and special steel constructions can be used for air raid protection. Extracts from the foreword are printed below:—

"The most economic method of construction will generally be found in the adaptation of existing practice to meet the particular requirements using the wide range of available experience in steel construction. The 'elephant' trench shelter of the war, for instance, will recall to mind the ease with which dugouts and other forms of protection are built. Corrugated steel sheets for trench revetments and overhead cover have been used successfully in the past for a variety of military purposes. As standardized products, these are readily available and easily stored for emergency and rapidly erected. Experience in the use of steel mine arches of standardized designs to support the 'roadways' in collieries is applicable to shelter construction in basements, railway embankments, cuttings and the like. The extensive use of steel sheet piling for civil engineering work of all kinds affords practical guidance for its application to underground air raid protection for key-points such as administrative and control centres.

"Similarly, steel doors and door frames and fittings of every kind are easily adapted to the gas and splinter proofing requirements of rooms and chambers.

"In these and many other fields of usage the essential security of the construction lies in the strength of steel combined with its ductility, which enables it to resist successfully abnormal shock and strain in a manner approached by no other material.

"For emergency shelters, first-aid posts and the like, the buildings will require for their speedy completion, constructions which can be quickly put together without the necessity for skilled knowledge. Additional protection can then be given by an earth or concrete fill, or by sandbagging.

"This booklet, therefore, attempts to mobilize the experience in steel construction of all kinds and to indicate the practical applications of a

range of steel products. For special problems in design and construction which require to be adapted to local circumstances or in which special steels are required, the technical services of the industry are available in all parts of the country to local authorities, public utility companies, building and factory owners, and to the general public."

*Concrete House Construction* has been issued by the Cement and Concrete Association, of 52 Grosvenor Gardens, S.W.1.

We have received from Messrs. Geo. Bray & Co., Ltd., of Leeds, a copy of their latest catalogue (No. C31) which illustrates and describes their electric air heaters. Copies are obtainable on application to the firm.

A 90 per cent. increase in baths and an 80 per cent. increase in season-ticket holders would be accounted by most authorities a sufficient justification of their foresight in installing water heating plant in an open-air swimming pool. This concrete example, which comes from Stonehaven, is quoted in an extremely informative booklet just published by the British Commercial Gas Association. *Gas Heating for Swimming Pools, Public Baths and Wash Houses* is the title of the brochure which describes and illustrates the water heating arrangements at a number of municipal and privately-owned swimming pools, both outdoor and covered. Additional information covers Turkish baths, slipper baths and the other departments associated with many public baths. Steam raising and the flood-lighting of out-of-door pools are also dealt with.

Copies of the booklet may be obtained, free of charge, on application to the publishers, Gas Industry House, 1 Grosvenor Place, London, S.W.1, or to any gas undertaking.

The British Thermostat Co., Ltd., have just introduced a new range of strainers and driers known as Model DN. These are of substantially larger capacity than the company's previous S type units and are at the same time lower in price.

Full details of the DN driers and strainers, and of a smaller combined drier and strainer for permanent installation immediately in front of the expansion valve, are given in a new catalogue sheet, No. 347A.

We have also received from The British Thermostat Co., Ltd., a new catalogue sheet, No. 344A, giving full details of their standard 1-in. and 2-in. Model WV pressure-operated water valves.

These units are primarily designed for use in refrigerating plants to regulate the flow of cooling water through the condenser, in relation to the load on the plant. The valve is operated by a flexible metallic bellows connected to the high pressure side of the installation, increase of the condenser pressure with increase of load progressively opening the valve and admitting a greater supply of cooling water.

Copies of both publications are available upon application.

*Cyclone Unit Heaters* is the title of a twenty-eight page illustrated brochure just issued by Messrs. Mathews and Yates, Ltd., of Swinton, Manchester. The advantages of the Cyclone unit heater are described in the brochure as follows:

"The Cyclone suspended unit heater has certain advantages. To give an example, other makes of unit heaters are fitted with the standard form of louvres. The closing of these louvres, to obtain direction, restricts the flow of air in proportion to the angle of closure, therefore greatly reducing the volume of air delivered and the temperature of the room in which they are fixed.



*The new dressing boxes at the West Bromwich Baths, installed by Constructors, Ltd. The scheme was illustrated in our last issue.*

"The Cyclone patent, with the louvres attached to an adjustable cowl (whereby the whole cowl can be moved to any angle best suited to the location)—eliminates restriction in air flow. By this patent cowl, the air can be delivered in full volume without restriction to the desired area, constantly permeating to floor level from a point as high as 35 feet.

"A unit heater usually consists of a combination of four elements:—

- (1) A heating unit,
- (2) A fan,
- (3) A motor to drive fan,
- (4) A housing and container with louvres.

"It is essential that each of the component parts shall be so designed that when working as a complete unit each is at its highest efficiency—the new Cyclone unit heater is so designed.

"Our research engineers have spent a considerable time on experiments and tests to determine the type of heater which would give the maximum B.T.U. output for its size, weight and steam consumption and be free from trouble due to expansion and other causes.

"The fan and motor have been subjected to the same rigorous investigation, and we are therefore able to offer unit heaters in which each of the component parts, heater, fan and motor, fulfils its particular function in the best possible way, resulting in an exceptional combination of strength, lightness and high aerodynamic efficiency. These are now in full production at the Cyclone Works."

The following orders were received by the Helical Bar and Engineering Co., Ltd., during September: Floors, roofs, etc., at 66-67 Newman Street, W. (Waite and Waite, F.R.I.A.); Housing Scheme, Wandsworth (G. L. Elkington, F.R.I.B.A.); Flats, Back Lane, Brentford (L. A. Cooper, L.R.I.B.A.); Flats and Shops, Northampton (Beard, Bennett and Cooper, F.R.I.B.A.); Eastwood Senior School, Southend-on-Sea (F. W. Smith, A.R.I.B.A.); Fracture Clinic, Hull (Gelder and Kitchen, F.R.I.B.A.); Premises, Portwall Lane, Bristol (W. H. Saunders and Son, M.I.S.T.R.U.C.E.), and

floors, etc., Grays Co-operative Society, Gale Street, Barking.

The fourth edition of Messrs. W. T. Henley's Telegraph Works Co., Ltd., Catalogue WB.1, superseding both the third edition of this Catalogue and the first edition of Catalogue WB.6 deals with two-way (straight through), three-way parallel type, three-way right angle type and four-way parallel type underground disconnecting boxes, the parallel type being of the Henley Narrow pattern. In addition, are included details and illustrations of a four-way selective type box fitted with two sets of independent busbars. These provide facilities for isolating or interconnecting the incoming or outgoing cables in a number of different combinations, allowing the greatest possible flexibility. The three-way right angle boxes listed may be provided with links or fuses to permit disconnection on the two-way only, the main cable being connected solid. In the case of the smaller sizes they are arranged so that it is not necessary to cut the main cable. Component parts, spares and accessories also are listed.

Another interesting feature is the Bakelite lifting bars fitted to the fuses to enable them to be inserted and withdrawn by an insulated combined screwdriver and lifting handle, also used for operating the vertical screws of wedge clamping devices.

At the board meeting of Messrs. W. T. Henley's Telegraph Works Co., Ltd., held on October 14, 1938, it was reported that all those members of the company's staff and hourly paid work-people who, during the recent crisis, had been called up for duty in Naval Reserve, Aircraft Defence Units of the Territorial Army, Special Constabulary, the Observer Corps and the Passive Air Defence Service, etc., had returned to the company's service in the positions which had been kept open for them, and that all had received full pay from the company for the period during which they were absent on duty.

A revised and enlarged price list of their products has just been issued by Messrs. Robert Jenkins & Co., Ltd., engineers, boiler makers, etc., of Rotherham.

## THE BUILDINGS ILLUSTRATED

**ARBOUR HOUSE, ARBOUR SQUARE, E.1** (pages 678-679). Architect: Bernard J. Belsher. The general contractors were A. E. Symes, Ltd., and the sub-contractors and suppliers included: McDowall, Stevens & Co., Ltd., Servall combination grates;

Diespeker & Co., Ltd., hollow brick and concrete floors and solid concrete balconies; G. Jennings-Hamer, Ltd., steel casement windows; F. Braby & Co., Ltd., pressed steel internal door frames; Ritz-Plazzo, Ltd., bituminous composition flooring (non-magnesite); Morris-Singer Co., Ltd., enamelled bronze armorial bearings; Nobel Chemical Finishes, Ltd., Petrumite stone paint for concrete balconies and parapets; Ryarsh Brick and Sand Co., Ltd., buff sand lime-facing bricks.

**WARNER THEATRE** (pages 681-684). Architects: E. A. Stone and T. R. Somerford. The general contractors were Griggs and Son, Ltd., and the specialists, sub-contractors and suppliers included: C. H. Bell & Co., Ltd., consulting engineers; A. C. Pool, quantity surveyor; Bainbridge Copnall, N.R.D., sculptured panels to front elevation; Beatrice MacDermott, mural decorations in tea room. Goodman, Price, Ltd., demolitions; Matthew T. Shaw & Co., Ltd., steelwork; Trussed Concrete Steel Co., Ltd., reinforced concrete



work; Attoc Blocks, Ltd., fire-resisting floors, balcony steppings and staircase; Ramsden, Ltd., stonework to the front and internal tiling and terrazzo flooring; Rock Asphalt Co., asphalt; Universal Asbestos Manufacturing Co., Ltd., roofing (asbestos); Allensor, A. E. Lindsey and Son, Ltd., and White Allom, Ltd., joinery; F. Knight & Co., Ltd., ironmongery; Williams and Williams, Ltd., metal windows; British Challenge Glazing Co., lantern lights and queueing canopy; J. Starkie Gardner, Ltd., canopy and vertical sign and poster frames; Knight & Co. (Engineers), Ltd., console lift and drop shutters to projection room; Rambusch Decorating Co., auditorium lighting; Leay Glazing Services, Ltd., glazing; Universal Metal Furring and Lathing Co., metal lathing; D. R. Smart & Co., acoustic linings to auditorium; Newalls Insulation Co., acoustic linings to booth; Matthew Hall & Co., Ltd., plumbing and sewage disposal; H. Pontifex and Sons, sanitary fittings; Carrier Engineering Co., Ltd., heating and ventilating system; Hoffman Sprinkler Co., fire protecting services; J. W. Gray and Son, Ltd., lightning conductors; British Vacuum Cleaning Co., vacuum cleaning; Dunbrik, Ltd., facing bricks; R. Passmore & Co., Ltd., bricks and tunnel cement; London Brick Co., Ltd., bricks (Fletton); Brooks, Ltd., bricks (white glazed); White Allom, Ltd., decorations, fibrous plaster, etc., and special electric light fittings; W. Lusty and Sons, seating; T. F. Firth and Sons, Ltd., carpets; Michael Ross, asbestos fabric; Shutter Contractors, Ltd., roller shutters; Marryat and Scott, lift (service); Garton and Thorne, handrails; Clark, Hunt & Co., Ltd., W.I. barrel handrails and railings; Benham and Sons, Ltd., kitchen equipment; John Compton Organ Co., Ltd., organ; Troughton and Young, Ltd., electricity; National Flooring Co., wood block and composition flooring; Thaddeus Hyatt & Co., pavement lights; Pridays and Snewin, Ltd., teak flooring and stage; C. & T. Painters, Ltd., general decorators; G. R. Speaker & Co., Ltd., partition blocks; J. Frank Brockliss, Ltd., screen and projection room; R. C. A. Photophone, Ltd., main sound system and stage amplification; Strand and Interchangeable Signs, Ltd., outside signs; Strand Electric and Engineering Co., Ltd., stage lighting equipments; Hewitt Electric Co., Ltd., projection room rectifier plant; Chloride Electrical Storage Co., secondary lighting battery; Drake and Gorham, Ltd., main intake switchboard; Robert Green (1911), Ltd., floral decorations; Lund Signs, and Cinema Signs, signs, category boards, etc.

**HOUSE IN FROGNAL, HAMPSTEAD** (pages 696-698). Architects: Connell, Ward and Lucas. The general contractors were Y. J. Lovell and Son, who were also responsible for excavation, etc. The sub-contractors and suppliers included: Brickmakers and Factors, Ltd., bricks; Excelsior Patent Stone Co., artificial stone; Isteg Steel Products, Ltd., structural steel (reinforcement); Rom River Co., Ltd., structural steel; Slate Slab Products, Ltd., slates for cappings; J. H. Sankey and Son, Ltd., partitions; John M. Newton and Sons, Ltd., and James Clark and Son, Ltd., glass; Armstrong Cork Co., Ltd., patent flooring (cork tiling); Horace W. Cullum & Co., patent flooring (soundproof flooring); Ramsdens, vitromac paving in hall and staircase; Cellulin Flooring Co., linoleum; Troughton and Young, Ltd., electric wiring and bells, and electric heating; Oswald Hollmann, electric light fittings; Richard J. Audrey, plumbing; George Jennings (Lambeth), Ltd., sanitary fittings; J. D. Beardmore & Co., Ltd., door furniture; Williams and Williams, casements and window furniture; W. A. Selling, Ltd., plaster; Holland & Hannen and Cubitts, Ltd., joinery; Roberts, Adlard & Co., Ltd., tiling; Chas. Frodsham & Co., Ltd., clocks; Wm. Harland and Son, paints and enamels.

## THE WEEK'S BUILDING NEWS

### LONDON AND DISTRICT

**CHINGFORD.** *School.* Essex Education Committee is to erect a secondary school in Chingford, at a cost of £45,642.

**CROYDON.** *School.* Croydon Education Committee is to enlarge the Oval school at a cost of £3,625.

**CROYDON.** *School.* Croydon Education Committee is to enlarge the Kingsley school at a cost of £2,215.

**CROYDON.** *School.* Croydon Corporation is to enlarge the Lanfranc school at a cost of £2,500.

**CROYDON.** *School.* Croydon Education Committee has approved plans for the erection of a secondary school for boys in Shirley Road, at a cost of £46,650.

**CROYDON.** *Houses, etc.* Plans passed by Croydon Corporation: Two houses, 60-62 Northwood Road, Mr. Mansell; alterations and additions, 28 London Road, Express Dairy Co., Ltd.; alterations and additions, 91 South End. Lipton, Ltd.; classrooms, 2 South Park Hill Road, Mr. G. P. Peachell, "Elmhurst School"; four lock-up shops, Station Road, West Croydon, H. Lottery & Co., Ltd.; two houses, 12 and 14 Harewood Road, Mr. W. A. Rabson; 22 houses, Eversley Way, etc., Bennett, Worskett and Bennett; alterations, Norbury Methodist Church Hall, London Road, Mr. J. Wallace; re-building, 74 High Street, Harold Williams and Partners; house, St. Andrew's House, Russell School, Ballards, W. D. and J. H. Gough, Ltd.; alterations and additions, "Four in Hand" beerhouse, 44-46 Queen's Road, Mann, Crossman and Paulin, Ltd.; alterations, "Blue Anchor" Hotel, South End, Ind Coope and Allsopp, Ltd.; alterations and additions, 69 Church Street, E. Wheatland and Sons, Ltd.; two factory buildings, 22 and 23 Progress Way, Croydon Factory Estate, Ltd.; additions, Addington Golf Club house, Hunt and Steward; extension to factory, Progress Way, Hancock & Co.; extension to factory, Purley Way, Aeronautical and General Instruments, Ltd.

**CROYDON.** *Mental Hospital.* Croydon Corporation has approved a revised scheme of extensions to the mental hospital, at a cost of £209,383.

**LEWISHAM.** *Houses.* Plans passed by the Lewisham B.C.: 60 houses, Woodham Road, Catford, Bates, Ltd.; 10 houses, "The Hall," Hall Drive, Sydenham, Mr. G. T. Harman.

**LEWISHAM.** *Houses.* Plans passed by the Lewisham B.C.: Flats, Bromley Road, Catford, and 60 houses, Woodham Road, Catford, Bates, Ltd.

**WANSTEAD.** *Houses.* Plans passed by the Wanstead Corporation: 24 flats, off Green Walk; 38 houses, Hermitage Walk; 18 houses, Elmcroft Avenue; six houses, Warley Road; 31 houses, Southend Road; 34 flats, Maybank Road; 76 flats and 12 houses, Langbourne Lodge, Whitehall Road; 50 houses, Hanover House, Whitehall Road; 300 houses, Roding Farm Estate.

**WEMBLEY.** *Houses.* Wembley Corporation is to erect 61 houses in Church Lane and Burchem Grove at a cost of £31,729.

**WEMBLEY.** *Reconstruction.* Middlesex Education Committee is to reconstruct the Sudbury School, Wembley, at a cost of £45,393.

### PROVINCES

**ADDINGTON.** *Houses.* First National Housing Trust, Ltd., are to erect a further 516 houses at Addington.

**BEXHILL.** *Houses, etc.* Plans passed by the Bexhill Corporation: Six bungalows, Bidwell Avenue, Mr. W. J. Goodman; six bungalows, Holliers Hill, Kingswood Builders, Ltd.; nine houses, Kingswood Avenue, Mr. Moore.

**BRIDLINGTON.** *Houses.* Bridlington R.D.C. is to erect 104 houses in various parishes, at a cost of £41,165.

**BRIGHTON.** *Houses.* Brighton Corporation is to erect 266 houses on the East Moulsecomb Estate, at a cost of £97,326.

**BRIGHTON.** *Houses.* Brighton Corporation is to erect 157 houses at a cost of £62,811.

**BURTON-ON-TRENT.** *Enlargements.* The trustees of the Burton-on-Trent General Infirmary are to enlarge the premises, at a cost of £20,000.

**CHESTER.** *Houses.* Plans passed by the Chester Corporation: 12 houses, Stocks Avenue, Mr. S. Grimshaw.

**DEVON.** *Police Stations.* Devon C.C. is to erect police stations at Chudleigh and Lynton, at a cost of £11,328.

**ESSEX.** *Senior School.* Essex Education Committee is to erect a senior school at Sible Hedingham at a cost of £33,018.

**ESSEX.** *Police Station, etc.* Essex C.C. is to erect a police station and court-house at Epping at a cost of £16,637.

**EXETER.** *Houses, etc.* Plans passed by the Exeter Corporation: 30 flats, Mount Radford Crescent; 29 houses, Seven Gables Estate; warehouse, offices, etc., Commercial Road; 18 houses, Whipton Lane; rebuilding, Elephant Hotel, North Street.

**GLOUCESTER.** *Technical College.* Gloucester Education Committee is to erect new premises for the technical college at a cost of £87,194.

**GRIMSBY.** *Occupation Centre.* Grimsby Corporation is to erect an occupation centre at Nuns-thorpe at a cost of £2,500.

**HUDDERSFIELD.** *Elementary School.* Huddersfield Education Committee is to erect an elementary school in Grosvenor Road at a cost of £41,026.

**HUISH.** *School.* Somerset Education Committee is to erect a senior school at Huish, at a cost of £38,058.

**KENT.** *Grammar School.* Kent Education Committee is to alter and enlarge the Dartford Grammar School at a cost of £43,562.

**MORLEY.** *Houses and Flats.* Morley Corporation is to erect 60 houses and eight flats on the Wild Lane estate at a cost of £22,900.

**NEATH.** *School.* Glamorganshire Education Committee is to erect an approved school at Neath, at a cost of £10,995.

**NORTHAMPTON.** *Houses.* Northampton Corporation has obtained sanction to borrow £83,463 for the erection of 225 houses on the Spencer and St. David's estates.

**NOTTINGHAM.** *Houses and Flats.* Nottingham Corporation is to erect 366 houses and 60 flats on various council estates at a cost of £175,390.

**PORTSMOUTH.** *Library.* Portsmouth Corporation has approved a scheme for the erection of a new central library in Kingston Road, at a cost of £45,000.

**PORTSMOUTH.** *Houses.* Plans passed by the Portsmouth Corporation: 12 houses, Grove Road, Drayton, Mr. E. E. Wilson.

**SLOUGH.** *School.* Berks Education Committee is to erect new premises for the Slough High School for Girls, at a cost of £39,360.

**SLOUGH.** *Library.* Berks C.C. is to erect a library at Slough, at a cost of £12,000.

**SOLIHULL.** *School.* Warwickshire Education Committee has purchased a site for a senior school at Knowle, Solihull.

**SOUTHAMPTON.** *School.* Southampton Education Committee is to erect a school in Middle Road, at a cost of £34,063.

**SPENBOROUGH.** *Houses.* Spenborough U.D.C. is to erect 86 houses on the Firthcliffe estate at a cost of £28,423.

**STAINES.** *School.* Middlesex Education Committee is to erect a school, on the Laleham House Estate, Staines, at a cost of £72,122.

**SWANSEA.** *Houses.* Plans passed by the Swansea Corporation: Eight houses, Pentregethin Road and Carmarthen Road, Mr. E. E. Edmunds; 28 houses, Grange Road, etc., Picton Developments, Ltd.; 12 houses, Maesygwern Road, Trustees of Wm. Martin Estate; 20 houses, Plasmarl, Mr. J. C. Oliver; six houses, Llangyfelach Road, Clasmount, Mr. Ivor James.



# PRICES

On the following pages appears Prices for Measured Work—Part I, with prices last published on September 29, brought up to date.

## ★ 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.

The complete series of prices consists of four sections, one section being published each week in the following order:—

1. Current Market Prices of Materials, Part I.
2. Current Market Prices of Materials, Part II.
3. Current Prices for Measured Work, Part I.
4. A.—Current Prices for Measured Work, Part II.  
B.—Prices for Approximate Estimates.

● Prices are for work executed complete and are for an average job in the London Area; all prices include for overhead charges and profit for the general contractor.

## PART 3

### CURRENT PRICES FOR MEASURED WORK—I

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

#### PRELIMINARIES

Water for the works .. .. .	1½%
Third party and other insurances to persons and property, employer's liability, unemployment and Public Health insurances, and fire insurances (based on value of contract) ..	2/-
Single scaffolding .. .. . per yard super	2/8
Independent scaffolding .. .. . per yard super	

#### EXCAVATOR

	Ordinary Ground	Clay
Surface digging average 9" deep and wheeling and depositing on spoil heap, not exceeding two runs per yard super	-/9	1/1

#### EXCAVATOR—(continued)

	Ordinary Ground	Clay
Excavating not exceeding 5' 0" deep to form basement and getting out .. .. . per yard cube	1/11	2/10½
Ditto, exceeding 5' 0" deep and not exceeding 10' 0" deep .. .. . per yard cube	2/5	3/6
Excavating not exceeding 5' 0" deep to form surface trenches and getting out .. .. . per yard cube	2/7	3/10
Ditto, exceeding 5' 0" deep and not exceeding 10' 0" deep .. .. . per yard cube	3/7	5/0
Ditto, not exceeding 5' 0" deep to form basement trench excavation commencing 10' 0" deep, and getting out .. .. . per yard cube	3/4½	4/6
Returning, filling in and ramming around foundations .. .. . per yard cube	1/1	1/5

# CURRENT PRICES

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

## EXCAVATOR, CONCRETOR AND BRICKLAYER

### EXCAVATOR—(continued)

	Ordinary Ground	Clay
Filling barrows and wheeling and depositing excavated soil not exceeding two runs per yard cube	1 1	1 5
Spreading and levelling from excavated heaps in layers not exceeding 12" per yard cube	— 9	1 —
Filling into carts or lorries and carting away per yard cube	4 6	4 10
Planking and strutting to sides of basement, excavation, including strutting per foot super	1 —	— 9
Planking and strutting to surface trenches (both sides measured) .. per foot super	— 4½	— 3
Hardcore, broken brick, filled in under floors and well rammed and consolidated per yard cube	6 6	
Hardcore, broken brick, deposited, spread and levelled, and rammed to a true surface 6" thick per yard super	1 4	

### CONCRETOR

#### Foundations and Mass Concrete

Portland cement concrete 1 : 6 with unscreened ballast, in foundations and masses exceeding 12" thick per yard cube	20/6
Ditto, 1 : 3 : 6, with one part of cement and three parts of sand and six parts of clean gravel per yard cube	21/—
Ditto, 1 : 2 : 4 with one part of cement, two parts of sand and four parts of ½" crushed graded shingle per yard cube	25/10
Add if mixed by hand labour .. per yard cube	2/—
Add if in foundations not exceeding 12" thick per yard cube	2/3
Add for mechanical hoisting .. per yard cube	1/6
Add for hand hoisting per 10 feet .. per yard cube	2/3

#### Surface Beds

Portland cement concrete 1 : 6, bed 6" thick, spread and levelled .. per yard super	3/11
Add or deduct for each inch over or under 6" in thickness per yard super	— 5½
Add for surface finished with spade face per yard super	— 3½
Add if laid in two layers with fabric reinforcement (measured separately) .. per yard super	— 3½

#### Upper Floors and Flats

Portland cement concrete 1 : 2 : 4 as before described, 6" thick, packed around fabric reinforcement (measured separately) finished with spade face per yard super	5/3½
Add or deduct for each inch over or under 6" in thickness per yard super	— 7½

#### Casings

Portland cement concrete 1 : 2 : 4 as before, in encasing to steel joists .. per foot cube	1/3
Ditto, packed around rods (measured separately) in lintols, sectional area not exceeding 36 inches per foot cube	1/5½
Ditto, ditto, over 36 inches and not exceeding 72 inches sectional area .. per foot cube	1/4½
Ditto, ditto, over 72 inches and not exceeding 144 inches sectional area .. per foot cube	1/3½
Ditto, ditto, over 144 inches sectional area per foot cube	1/2½

#### Walls in Situ

Portland cement concrete 1 : 6 with unscreened ballast in 9" walls packed around rods (m/s) per yard super	6/7
Ditto, in 12" walls ditto .. per yard super	8/—

#### Reinforcement

* ½" diameter and upwards mild steel rod reinforcement, cut to lengths, including bends and hooked ends and embedding in concrete lintols .. per cwt.	21/6
* Under ½" diameter, ditto .. per cwt.	23/—

#### Formwork

Close boarded formwork to soffits of floors and strutting up .. per yard super	3/9
Vertical formwork to sides of concrete walls, including struts, etc. (both sides measured) per yard super	3/—
Formwork to sides and soffits of concrete lintols and beams per foot super	— 6
Wrot ditto .. per foot super	— 7

### BRICKLAYER

	Flettons £ s. d.	Second Stocks £ s. d.	Blue Staffordshire Wirecuts £ s. d.
Reduced brickwork in lime mortar 1 : 3 with ½" joints .. per rod	23 0	4*31 19 3	
Ditto, ¾" joints .. per rod	22 13	4*30 17 11	
Reduced brickwork in cement mortar 1 : 3 with ½" joints .. per rod	24 15	4*33 13 9	51 15 8
Ditto with ¾" joints .. per rod	24 14	0*32 17 8	50 6 4
Add if lime mortar hand mixed .. per rod	5 8	5 8	
Ditto cement mortar .. per rod	12 9	12 9	9/—
Half brick walls in lime mortar 1 : 3 ½" joints .. per yard super	5/1	*7/—	
Ditto in cement mortar 1 : 3 .. per yard super	5/5½	*7/5	11/3
Labour forming 2" cavity to hollow walls including wall ties, etc. .. per yard super			9d.

	£ s. d.
Add to the price of reduced brickwork for brickwork in underpinning .. per rod	4 0 0
Ditto, for brickwork circular on plan to flat sweep .. per rod	5 0 0
Ditto, ditto, to quick sweep .. per rod	10 0 0

Extra for Internal fairface and flush jointing per yard super 1/1½

Extra for grooved bricks as key for plaster per yard super 3d.

Raking out joints ditto .. per yard super 4½d.

Hacking concrete ditto .. per yard super 6d.

Horizontal double slate damp-proof course 4½" wide bedded in cement mortar .. per foot run 4d.

Ditto exceeding 4½" in width .. per foot super 10d.

Vertical ditto .. per foot super 1/—

" Ledkore " (Grade B) D.P.C. .. per foot super 9d.

Plumbing angles .. per foot run 1d.

Rake out joints and point to lead flashings per foot run 2d.

Ditto stepped .. per foot run 3d.

Bedding door frames .. per foot run 1d.

Ditto and pointing one side .. per foot run 2d.

Ditto and pointing both sides .. per foot run 3d.

Parge and core flues .. each 4/—

Set and flaunch only chimney pots .. each 5/—

Hoisting and fixing metal windows size 3' 6" x 4' including cutting and pinning lugs to brickwork and bedding frames in cement mortar and pointing in mastic on one side .. each 5/—

Ditto, including screwing to wood frame (measured separately) .. each 3/—

Form opening for air brick including slate lintol and render around in cement and sand to 13½" 9" x 3" 9" x 6"

wall and build in Terra Cotta air brick each 2/6 3/3

Galvanized cast iron School Board pattern air bricks and building in .. each 9d. 1/3

Fixing only fireplace simple interior and surround each 27/6

#### Partitions

	2"	2½"	3"	4"
Breeze set in cement mortar per yard super	2/11	3/5	4/1½	5/1½
Clay tile ditto .. per yard super	4/5	4/11	5/8	6/4½
Pumice ditto .. per yard super	4/6	5/2½	6/3	7/2
Plaster ditto .. per yard super	4/—	4/11	6/—	7/2
White glazed both sides best quality bricks, set in cement mortar and pointed in Parian cement per yard super	..	42/5		

#### Facings

Prices are extra over Fletton brickwork and are for raking out joints and pointing with a neat struck weathered ½" joint in cement mortar. For raking joints and pointing in white cement add an extra 11d. per yard super to the following prices.

	Flemish Bond	English Bond	Stretcher Bond
* Stock facings p.c. 93/— per yard super	4/11	5/4	4/1
Rustic Flettons p.c. 70/6 .. per yard super	3/4	3/6	2/11
Blue pressed p.c. 174/— .. per yard super	11/3	12/6	8/10
Sand faced hand made reds p.c. 120/— per yard super	8/—	8/7	6/4
White glazed headers p.c. 470/— and stretchers 480/— .. per yard super	32/—	36/—	24/8
For a variation of 10/— per M. in p.c. of facing bricks size 8½" x 2½" on face with ½" joints add or deduct per yard super	9d.	10d.	6½d.

\* Items marked thus have fallen since September 29.

## CURRENT PRICES

## BRICKLAYER, DRAINLAYER, ASPHALTER AND PAVIOR

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

## BRICKLAYER—(continued)

Facings—(continued)	Rustic		Stock	Sand Faced Hand Made Reds
	Flettons	Facings		
Half brick wall stretcher bond in cement mortar built fair and joints raked out and pointed in cement mortar on one side .. per yard super	8/7½	*9/9½		12/-
Ditto and pointed both sides per yd. super	10/6	*11/8		13/10
One brick wall in cement mortar built fair and joints raked out and pointed in cement mortar on one side .. per yard super	15/5	*17/8½		22/1
Ditto and pointed both sides per yd. super	17/3	*19/6½		23/10
Half brick wall built in best quality white glazed one side bricks, stretcher bond, in cement mortar built fair and pointed in parian cement .. per yard super				31/-
Ditto white glazed both sides and pointed both sides .. per yard super				41/9
Labour and material in hand made sand faced red brick on end window head and pointing to face and 4½" soffite .. per foot run				1/3
Hand made, sand faced brick on edge coping including double course of tile creasing with two cement angle fillets to one brick wall .. per foot run				2/3

## DRAINLAYER

Excavate to form drain trenches for 4" pipes and get out, including planking and strutting, filling in and ramming, and wheeling and spreading surplus.

Prices per 12" average depth per foot run :	Ordinary	Clay
Trenches not exceeding 3' 0" deep ..	-2½	-3
Ditto, exceeding 3' 0" and not exceeding 5' 0" ..	-5½	-7
Ditto, exceeding 5' 0" and not exceeding 10' 0" ..	-8½	-9½
6" thick Portland cement concrete bed 6 : 1, 12" wider than diameter of pipe, and flanchued halfway up sides of pipe .. per foot run	-8½	-10
6" ditto, and completely encasing .. per foot run	1/7	1/11

Agricultural land drain pipes, laid complete with butted joints, exclusive of digging .. per yard run	2"	3"	4"	6"
	-4	-6	-8	1/1

## British Standard Quality Salt Glazed Socketed Stoneware Drainpipes and Fittings

	4" pipes		6" pipes		9" pipes	
	Under 2 tons, 100	Over 2-ton up-lots	Under 2 tons, 100	Over 2-ton up-lots	Under 2 tons, 100	Over 2-ton up-lots
Pipes jointed in 1:1 cement and sand .. per foot run	1/1	1/3	1/7	1/10	2/8½	3/4
Extra for bends .. each	1/4	1/7	2/-	2/4	3/6	4/-
Ditto, single junction each	1/10	2/2	2/-	2/4	3/6	4/-
Trapped yard gulleys with galvanized iron gratings, and setting in concrete and jointing to drain .. each	9/-	11/6	13/-	14/-	19/-	22/-
Ditto, with horizontal back inlet .. each	10/6	13/3	14/6	15/9	20/6	23/9
Ditto, with vertical back inlet .. each	11/3	14/-	15/3	16/9	21/3	24/9
Intercepting trap with Stanford stopper and setting in manhole and making good .. each	20/6	24/-	25/6	29/-	—	—

## Coated Cast Iron Socketed Drain Pipes

	4"		6"		9"	
	per foot run	each	per foot run	each	per foot run	each
Pipes in 9' 0" lengths and laying in trench, including caulked lead joints ..	3/6	1/9	5/3	3/6	9/3	—
Cutting and waste .. each						
Extra for bends, including extra joints and cutting and waste on pipe .. each	10/10		20/9		59/5	
Ditto, junction ditto .. each	17/5		32/6		99/5	
Intercepting trap .. each	49/-		79/4		183/4	

\* Items marked thus have fallen since September 29.

## DRAINLAYER—(continued)

	4"	6"	9"
H.M.O.W. large socket gulley trap with 9" gulley top and heavy grating and one back inlet ..	45/5	79/6	—
H.M.O.W. gulley trap with 9" inlet with high invert outlet for use with raising pieces ..	33/5	48/-	—
4" inspection chamber with one 4" branch .. each			66/-
4" ditto with two 4" branches one side .. each			99/-
6" ditto with one 4" branch .. each			95/3
6" ditto with two 6" branches one side .. each			140/-
9" ditto with one 9" branch .. each			212/6
9" ditto with two 9" branches one side .. each			326/-
4" half-round straight main channel 24" long .. each	5/10		2/1
Ditto, channel bends (ordinary) .. each	8/6		3/-
4" Three-quarter round branch bends (short) .. each	8/6		6/9
Fixing only, manhole covers and frames, including bedding in grease and setting in cement mortar .. each		4/-	

## ASPHALTER

Various qualities of asphalt are marketed by different firms. The term "Best" is intended to imply the best quality produced by a single representative firm, and not necessarily the best or most expensive asphalt obtainable.

	Natural Rock	Asphalte
	Best Quality	Second Quality
Basement (Tanking).		
1½" horizontal d.p.c. in three layers on concrete .. per yard super	8/5	6/10
¾" vertical ditto in three coats on brickwork or concrete .. per yard super	11/6½	10/-
Double angle fillet .. per foot run	-6½	-5½
Hard Graded Paving.		
1" thick .. per yard super	7/4	6/3½
¾" thick .. per yard super	6/3½	5/3½
½" dampcourse finish, with smooth surface to receive lino or other floor covering ..	5/3	4/8½
Roofing (Flat).		
¾" thick in 2 layers .. per yard super	6/3½	5/3
1" ditto .. per yard super	7/4	6/3½
Extras.		
Felt supplied and fixed .. per yard super	-6½	—
Expanded metal reinforcement ditto .. per yard super	1/0½	—
6" skirting and fillet on brickwork .. per foot run	1/0½	-11½
6" ditto on wood (reinforced) .. per foot run	1/2½	1/1½
Nosing at eaves on lead apron (measured separately) .. per foot run	-3½	-3½
Parapet outlets .. each	4/2½	3/8

## PAVIOR

	1"	1½"	2"
Granolithic paving .. per yard super	2/7½	3/6	4/7
Add for dusting with carborundum powder .. per yard super			-9
Cement and sand paving (1 : 3) .. per yard super	1/10	2/4½	—
½" Jointless flooring, red, buff or brown, finished to a smooth trowelled surface, on concrete sub floors .. per yard super			5/3
¾" Ditto, in two coats on spade faced concrete or wood sub floors ..			6/7
½" thick ditto, reinforced with laths and galvanised wire netting .. per yard super			6/0½
Add for polishing .. per yard super			-6½
Terrazzo paving, white chips set in white cement, panelled into squares with 1½" x ½" deep ebonite strips, on and including cement and sand screed. Total thickness 1½" .. per yard super			10/5
Ditto, but white chips set in grey Portland cement .. per yard super			17/4
Terrazzo tiles, white chips set in white cement :—			
Size 9" x 9" x ½" .. per yard super	20/6		
Size 12" x 12" x 1" .. per yard super	18/8		
Ditto, but white chips set in grey Portland cement :—			
Size 9" x 9" x ½" .. per yard super	18/11		
Size 12" x 12" x 1" .. per yard super	17/1		
Sheet rubber .. per yard super	11/7	14/8	17/10
Rubber tiles .. per yard super	13/8	16/10	19/11
Cork tiles, polished .. per yard super	12/10½	11/-	10/-



# CURRENT PRICES

## MASON, SLATER, TILER AND ROOFER, AND CARPENTER

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

### PAVIOR—(continued)

Hard red paving bricks laid flat (9" × 4½" × 2½")	per yard super	9/-
Ditto, laid on edge	per yard super	11/9
	thick	thick
6" × 6" best quality red quarry tiles	per yard super	10/-
6" × 6" best quality buff quarry tiles	per yard super	10/6
2" Yorkshire stone paving, square joints and bedding	per yard super	22/-
2" Finished path of coarse gravel finished with good binding	per yard super	1/7½
3½" Path of clean hard clinker and 1½" gravel finished to slight camber	per yard super	2/3
7½" Carriage drive of 3" clinker, 3" coarse gravel and 1½" binding gravel finished to slight camber	per yard super	3/9
2½" Tar paving in two layers finished with Derbyshire spar	per yard super	4/9

### MASON

	Bath	Portland
Stone and all labours of usual character, covering 7" on bed, roughly squared at back, fixed and cleaned down complete	11/9	17/-

#### Yorkstone

	3"	4"	6"
Templates tooled on exposed faces, sawn beds and joints, and set in cement mortar:—			
Size 9" × 9"	1/8	2/3	3/4½
" 14" × 9"	2/7½	3/6	5/3
" 18" × 14"	5/3	7/-	10/6
" 22½" × 14"	6/6	8/8	13/-
" 27" × 14"	7/10½	10/6	15/9

#### Artificial Stone

In steps, copings, band courses, etc., per foot cube, from	9/-
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#### Reconstructed Stone

In steps, dressings, band courses, etc., per foot cube	12/6
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#### Slate

	1"	1½"	1½"
Slate slabs, sawn to size, not exceeding 10 ft. sup. and planed, with rubbed face and fixing as shelving, etc.	4/6	5/-	6/-
Ditto, not exceeding 20 ft. sup. per foot super	5/4	5/10	7/-
Rubbed edges	-4½	-4½	-4½

### SLATER, TILER AND ROOFER

#### Bangor and Portmadoc Slates

	20" × 10"	16" × 8"	24" × 12"
Slates laid to a 3" lap and fixed with zinc nails	79/-	77/-	80/-

#### Old Delabole Slates

	20" × 12"	16" × 10"
Grey medium gradings	86/-	84/6
Unselected greens (V.M.S.) (weathering greens and grey greens mixed)	96/6	94/6
No. 1 Gradings	12"/10"	
Ordinary grey greens	91/3	
Weathering grey greens (V.M.S.)	101/9	
No. 2 Gradings	24"/22" to 12"/10"	
Weathering greens (V.M.S.)	107/-	

#### Randoms

	12"/10"	12"/10"
Ordinary grey greens	91/3	
Weathering grey greens (V.M.S.)	101/9	
No. 2 Gradings	24"/22" to 12"/10"	
Weathering greens (V.M.S.)	107/-	

#### Westmorland Green Slates

	Bests 24" to 12" long proportionate widths
No. 1 Buttermere, fine light green	122/9
No. 2 Buttermere, light green (coarse grained)	120/9
No. 5 Buttermere, olive green (coarse grained)	117/6

### SLATER, TILER AND ROOFER—(continued)

#### Tiles

Hand made sand faced 10½" × 6½" laid to 4" gauge, fourth course nailed with galvanized nails	per square	65/-
Machine made ditto	per square	56/7

#### Pantiles

Berkshire hand made surface red laid dry	per square	65/-
Bridgewater hand made red laid dry	per square	65/-
Bridgewater double Roman laid dry	per square	48/3

#### Sundries

Stripping, slating down to and including, 18" × 9"	per square	4/6
Ditto smaller sizes	per square	6/-
Add for carrying down and stacking	per square	1/8
Ditto stripping battens down to and including 18" × 9"	per square	1/4½
Ditto, ditto, smaller sizes	per square	2/3

#### Cedarwood Tiles

Canadian Cedarwood shingles laid to 5" gauge	per square	47/4
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#### Asbestos

Russet brown asbestos cement roofing tiles 15½" × 15½" laid diagonally with 2½" lap	per square	38/-
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### CARPENTER

#### Centering

Turning piece to flat soffits 4½" wide	per foot run	-4
(For Formwork see "Concrete.")		

#### Fir Sawn and Fixed

Plates, dragon ties, sleeper joists and lintols, ground floor (4" × 2" and 4" × 3")	per foot cube	3/7
Floor joists (7" × 2")	per foot cube	4/1
Partitions (stud) (4" × 2" and 4" × 3")	per foot cube	4/10
Rafters and ceiling joists (4" × 2" and 4" × 3")	per foot cube	4/7
Purlins (6" × 4")	per foot cube	5/3
Hand labour wrot face	per foot super	-2
Machine ditto	per foot super	-1
Rebates, grooves, beads, chamfers and splays, per foot run		-1
1½" × 9" ridge	per foot run	-6½
1½" × 11" hips or valleys, including cutting ends of rafters against same	per foot run	-8½
Extra labour trimming 6" × 2" floor joists around fireplace, including notching ends of joists at 14" centres to trimmer joist 7' 0" long and two tusk tenons	per doz.	6/-
Boring small hole per inch of depth	per doz.	-6
Ditto large	per doz.	1/-

#### Deal Battening for Slates and Tiles

2" × 1" spaced for Countess (20" × 10") slates to 3" lap	per square	10/8
2" × 1" ditto for Ladies (16" × 8")	per square	14/1
2" × 1" ditto for Duchess (24" × 12") ditto	per square	8/9
2" × 1" ditto for randoms 24"/22" to 12"/10"	per square	11/10
1½" × ¾" ditto for plain tiles (10½" × 6½") to a 4" gauge	per square	13/7
1½" × 1" ditto for pantiles to approximately 11½" gauge	per square	6/7

#### Roof Boarding

	¾"	1"
Deal roof boarding in batten widths close jointed	per square	27/8
Ditto, prepared for patent flat roofing and including firrings to falls	per square	38/1
Small tilting fillet	per foot run	-2
Large ditto	per foot run	-4

#### Felt

Sarking or slaters felt, fixed with 2" side laps and 6" end laps	per yard super	-10½
Roofing felt ditto	per yard super	1/1
Bituminous hair felt ditto	per yard super	2/-

#### Weather Boarding

Rough deal feather edge boarding in batten widths ½" average with 1½" laps	per square	29/9
Western Red Cedar ditto	per square	32/10

#### Fascia and Soffite Boards

1" × 6" deal splayed fascia fixed to rafter feet per foot run		-4½
1" × 9" deal soffit tongued both edges, including grooves	per foot run	-7½

(To be continued in next Issue)