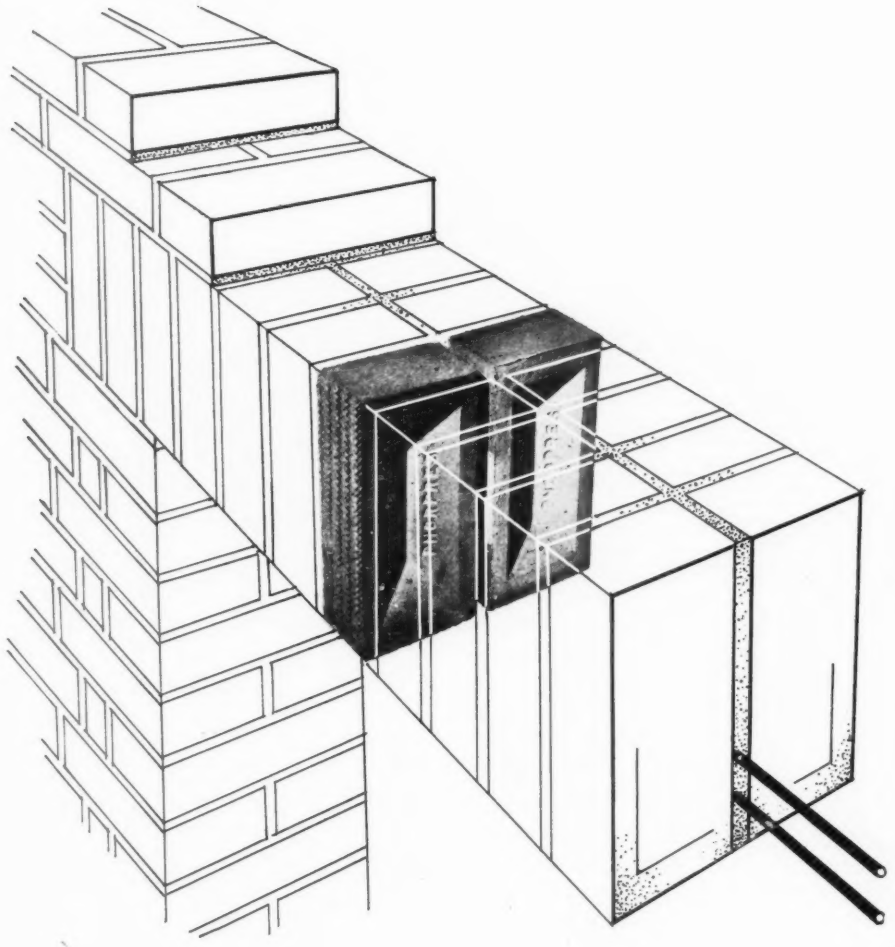


MODERN MATERIALS & MODERN TECHNIQUE

Improved manufacturing technique produced the modern Brick — a high performance product at less cost. Modern building method takes the improved material and develops a new technique in building.

Reinforced brickwork has great possibilities. In this example it is used to solve that most common but difficult problem — the door and window lintel.

PHORPRES
(four times pressed)

LONDON BRICK COMPANY LIMITED

HEAD OFFICE: AFRICA HOUSE, KINGSWAY, W.C.2. TELEPHONE: HOLBORN 8282
BIRMINGHAM DISTRICT OFFICE: PRUDENTIAL BLDGS., ST. PHILIP'S PLACE, BIRMINGHAM, 3. TEL.: COLMORE 4142

C

THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER, IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 9 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1

*

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :
BY POST IN THE UNITED KINGDOM £1 3 10
BY POST TO CANADA £1 3 10
BY POST ELSEWHERE ABROAD £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL : INLAND £2 6s. ; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

*

SINGLE COPIES, SIXPENCE ; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION ; SINGLE COPIES, ONE SHILLING ; POST FREE, 1s. 3d. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE.

*

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 10S. EACH. CARRIAGE 1S. EXTRA

*

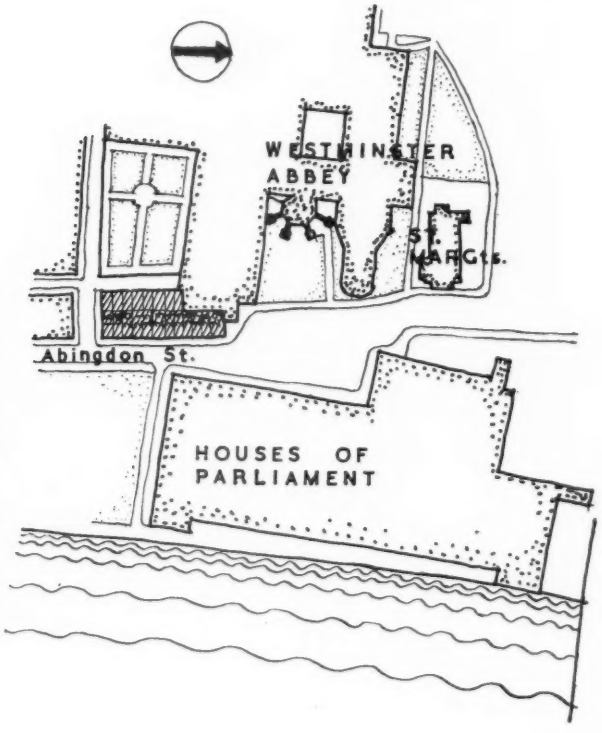
9 *Queen Anne's Gate, Westminster, London, S.W.1*
TELEPHONE : WHITEHALL 9212-7 (OWN EXCHANGE)
TELEGRAPHIC ADDRESS : BUILDABLE, PARL., LONDON

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, APRIL 7, 1938. NUMBER 2255 : VOLUME 87

PRINCIPAL CONTENTS

RECONSTRUCTION OF ABINGDON STREET



IT is announced that a block of offices is to be built on the site of Nos. 18 to 27 Abingdon Street.

These are ten of the twelve houses in the block immediately opposite the Houses of Parliament whose demolition has been discussed in connection with the King George Memorial.

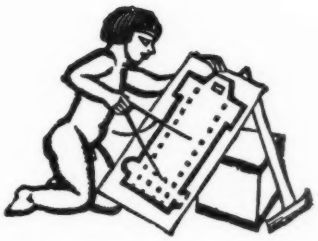
The Ecclesiastical Commissioners, who own six of the houses, and the Association of Local Government Officers, who own two and have decided to buy the other two, are reported to be co-operating over the redevelopment of the site. No information appears yet available as to the names of the architects or whether the new block will be for the use of the owners or a commercial proposition.

A photograph of Nos. 18 to 29 is reproduced above; the houses are shown hatched in the plan.

D

FOUNTAIN AT LUCERNE

Fountain and pedestal in the garden of the Rococo Church of the Jesuits at Lucerne.



3. THE PROFESSION'S MISSING LEG

THIS is the third article upon one subject: the architectural profession's lack of proper equipment for practice as it inevitably will be in ten years.

In the JOURNAL's opinion, future architectural practice will consist of two distinct parts. The first—the design of individual buildings on individual plots; the second—co-operation with other people in using land in much larger units, and after fuller consideration than hitherto. This second part may be called territorial planning.

The tendencies remarked on in the former articles show that the average man has got to the point of pressing for abuses to be remedied which can only be remedied by positive—not preservative—territorial planning. Architects have so far showed little or no collective interest in the national problems which touch on larger professional matters than single buildings or small groups of buildings.

The article published last week ended with a question. It was this: Supposing architects agree with the policy of the comprehensive planning of land in large units, have they a collective or central organization capable of dealing with the problems that will arise directly that policy is put into operation?

The JOURNAL believes it is obvious that architects have no such organization and that, lacking it, they may see territorial planning put into operation without anyone realizing that it is fundamentally an *architectural* policy and that territorial planning is *the* architectural problem of an industrial civilization. If there is a danger of this happening it seems appalling that architects should be unprepared. Why are they unprepared? This is important enough to be answered in detail.

Thirty years ago architects, individualists all, were loosely grouped in, or outside, nearly as many societies as exist now. Scholars, technicians and a few town planners of individual eminence there were; collectively architects were equally disinterested in either aspect of architectural practice.

Then the profession realized that it was becoming handicapped by its easy-going attitude towards education and its lack of central organization and regulation. From then on the campaign of consolidation was begun which will only end in two years' time—if it ends then—with an obligatory minimum qualification for each person who wants to practise architecture.

This consolidation had reference wholly to the architect as designer of individual buildings on individual plots. It was vitally necessary. But it had the effect of first making internal professional consolidation the main plank of collective policy and then, by degrees, the only plank. The societies, even the principal society, had limited resources and only a few officials to ensure continuity of effort. Professional consolidation was more than big enough to absorb all the energy that was not needed for purely routine functions, and the profession's influence in problems of national interest suffered.

The chief example of narrowed influence was town planning. Town planning is essentially enlarged architecture, and up to the time statutory town planning became imminent, and therefore more complex, it was in the hands of men who, trained as architects, had slowly enlarged their outlook until it had the breadth necessary for the greater problem. Then the calamity occurred. The profession collectively did not enlarge its outlook and its organization to take in the town planners. It failed to say: "Here is a bigger thing—perhaps not absolutely bigger, but infinitely bigger in its effect on the lives of ordinary men and women. Let us encourage it at all costs."

The immediate consequences were that the architects interested in town planning formed with others (few others then) a society specially devoted to town planning. Architecture in the large became separated from architecture in the small, and as the first legislative approaches to effective town planning began to be made—optional, preservative and ineffectual though they may have been—more personnel were needed in town planning administration. They were forthcoming, but they were not architects. Today hundreds of men are controlling large-scale planning without any training in small-scale planning.

The main body of the profession continued to concentrate on its single policy of consolidation. It has been successful. On May 13 it is probable that professional consolidation and regulation will be made virtually complete—at a cost.

The cost has been the almost complete neglect by the profession of all the national questions in which planning in its widest sense plays a great part. There is no collective organization for studying these problems and preparing a professional policy concerning them. In consequence it simply never occurs to the public that architects have any connection with housing, transport and the location of industry. The JOURNAL intends to try to explain the damage such an attitude is doing and will do to all architects.

The Architects' Journal
Westminster, S.W.1
Telephones: Whitehall
9212-7
Telegrams
Buildable
Parl
London

NOTES & TOPICS

NATIONAL THEATRE

THE Executive Committee of the National Theatre has announced that the architects of the Theatre will be Sir Edwin Lutyens, R.A., in collaboration with Mr. Cecil Masey as technical consultant.

*

Until the last moment I am told the Committee favoured Messrs. Val Myer and Watson Hart while Messrs. Wimperis, Simpson had been asked to prepare a sketch scheme at an earlier stage.

*

I still feel that a competition was the only decent thing. Failing that, however, the job is in the best hands. Although Sir Edwin has never yet built a theatre, there could be no better subject for his inventive, high-spirited genius.

*

In a press interview the architects answered questions about the theatre. It will be of "medium" capacity, holding not more than a thousand persons. The latest methods of stage technique will be incorporated, and acoustics are being closely studied. The design will be simple "and modern in the English tradition." Sir Edwin hopes to use Portland Stone for the exterior. An interesting point is that boxes will be provided. In recent theatres these have often been omitted, and actors have complained of a feeling of "bleakness."

*

It was during this conference that Sir Edwin made the first joke of the inevitable series to which we look forward, when he said that the safety curtain might be of glass, in which the audience could admire itself and "husbands would be able to look at the curtain and see their wives sitting with other men."

*

The drawings will take about a year to prepare, and in any case the building will not start until the whole of the £100,000 needed has been subscribed.

ACHIEVEMENT AT LEEDS

The completion of the first block of the Quarry Hill flats seems to be a suitable opportunity for a tribute to the Leeds Housing Committee and Mr. Livett. Not often does an architect get a 26-acre site for rehousing, still less does he get a committee prepared to try out a new form of construction. True, the Mopin system is not so outrageous as all that, for there is a certain old-fashioned logic in using the skin of a building to make it do some structural work, thereby reducing the weight of the steel frame.

*

But, Housing Committees being timorous folk, it's not too easy to lead them on to accept the other developments of the Mopin system, the vibrated wall panels, the fact that the external wall finish isn't like anything they've seen before. Had you been Mr. Livett, which would have appalled you more—the prospect of dimensioning *everything* down to the last pipe run or of putting it across your committee? Mr. Livett has managed both, and has also put in about the only really sensible method of refuse disposal available for flats of this size. This system (which, in a few words, means that *all* refuse goes down the sink), with its central destructor plant and the whole of the laundry heated from it, has worked out at only £20 a flat.

*

The Mopin system has necessarily been modified a good deal to suit English conditions, but for large open sites it may well be the most important housing development made since the war.

I AM LEAVING YOU NOW

As a provincial architect I want to know what is said and done. In this interest I suffer now and again, for a spell, from the JOURNAL.

However, page 524, current, is too ill-informed and vulgar even for me. Good bye.

Sincerely yours

*

Page 524 was this page last week. I have lost readers before. The agonizing thing about this letter is that my perceptions must be becoming blunted; for on that particular page nothing seems very vulgar and ill-informed.

*

I have asked for details. Here I only tell my ex-reader that his phrase "even for me" manifestly does him the greatest injustice.

THE GOOD THAT COMPETITIONS DO

The entertainments business in Bexhill must be on the upgrade, for the Town Council are already considering an extension to the De la Warr Pavilion, to include a conference hall and a separate ballroom.

*

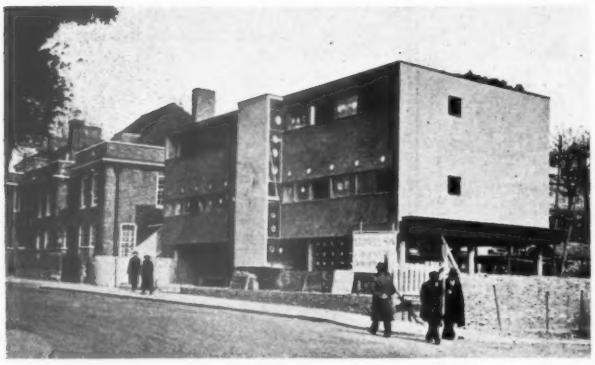
Before making its decision the council has called a meeting to hear the views of the different organizations in the town as to the style of architecture and the type of architect required.

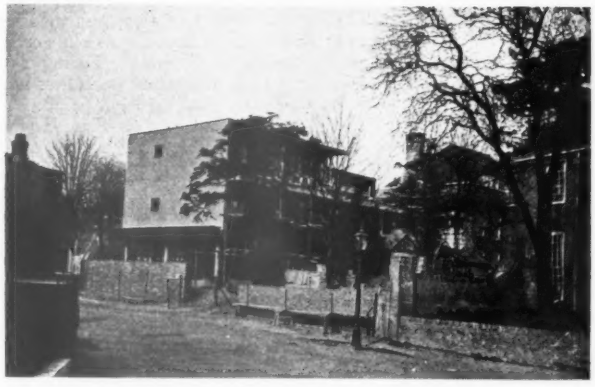
*

I have been unable to confirm a report which I have received from a nameless but high authority, that the plans have been prepared by the Borough Engineer. My own view is that there ought to be another competition, or failing that, the job ought to go to Sir Edwin Lutyens.

DESIGN AND THE ENGINEERS

I expect you have noticed that the Registration Bill





Two views of the house in Frognal Way, Hampstead, now nearing completion, from the designs of Messrs. Connell, Ward and Lucas.

has caused the "Engineers *v.* Architects" argument to pop up again.

*

Last November the new President of the Institution of Structural Engineers—Professor Husband—delivered an inaugural address in which he explained quite clearly that the structural engineer ought to be the architect of today, and that he certainly was the architect of the future. The titular "architect" was (or ought to be) an inferior sort of person who might possibly be employed—as a subordinate—by the structural engineer if he wanted to add a little icing to his wedding-cake.

*

At the Annual Dinner of the Institution of Civil Engineers some days ago, two official speeches were made, one by their President and the other by Professor Inglis of Cambridge, which rather pointedly dealt with the subject. Even the most intelligent engineers never seem to have the foggiest idea of what an architect is (or at least aims to be). They always think of architecture simply as decoration (I suppose they look up Fergusson's definition of architecture and accept it as a final judgment)—that which is applied to a building after the engineer and the building contractor have done their stuff.

*

"Design" simply has no meaning for them; they often use it indiscriminately for "construction." Above all, they are entirely ignorant of *planning*. They talk of it sometimes, but never give the impression that they have an idea of its difficulty and importance. With their ideas—or their absence of ideas—it becomes easy to see how they go wrong in this discussion.

*

Beneath it all, of course, the engineer has the deep-seated self-satisfaction of the ordinary scientist, which contrasts with the uneasy humility of the architect who is invariably a martyr to his Art. It's about time someone really took the engineers in hand. The general public is a great deal too respectful to them.

BEVERLEY NICHOLS SPEAKS OUT

Robert Byron, the *Architectural Review* and the Georgian Group have been recently active in defence of English architectural possessions. Their voices, however, though they have their influence in high places, cannot reach what the booksellers call the "mass of the reading public." But if there is a writer in England whose word this mass will listen to it is Beverley Nichols.

*

So the chapter in Mr. Nichols's latest book, *News of England*, in which the same story is told of senseless destruction, even more senseless building and the pathetic multiplicity of well-meaning but ineffective preservation societies, is a welcome new attack on public opinion.

*

"Regent Street," Mr. Nichols only too truly says, "is only an example, in miniature, of a process which has transformed London, in the past ten years, into the ugliest capital in the world." Though his architectural criticism is not always as straight-forward as this; and sometimes his terminology is a little less conventional:—

"Consider Italy. The Architecture of the Fascist regime is tense as the muscles of a fighter's army. . . . I came into a modern square. Mussolini Square, I suppose it was called. The architecture was electric with energy. Stark columns thrust themselves up with a power that can only be called phallic. Flights of steps were so designed that they seemed to impel the pedestrian to run up them—walking would have been incongruous. Two towers swept skywards with the gesture of clenched fists."

(Not clenched fists, surely, Mr. Nichols, in Mussolini Square?)

*

However, his analysis of the ineffectiveness of English architectural preservation is less emotional and thereby more convincing, as well as being very funny.

*

But those who look to Beverley Nichols for a lead will ask themselves after reading his pointed criticism, what is his remedy. Here I cannot do better than quote from later chapters of the book:—

"If you had sat with me, in that little room, with the light slowly fading over the grey roofs outside, you would have realized that you were in the presence of a figure of tremendous *importance*. . . . One of the reasons for Mosley's importance is that he has had the courage to admit that there are occasions when a man should follow his instinct in preference to his intellect. . . . He pointed to the map of England which lay behind him. It was beflagged from Newcastle to Penzance. Each flag represented an organization of British Fascists—perhaps not large, certainly not rich, but welded by a religious faith. To that fact I can testify."

*

"For he (Sir Oswald Mosley) is the only man I know who has in him the qualities of that hero for whom this country has waited so long, and waited in vain."

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

SAVED FROM DEMOLITION

Royal Crescent, Ramsgate, has been saved from destruction. There are twenty houses in the crescent and all but one belonged to the late Mr. J. T. Hedley, a Ramsgate antiquarian and, since he would not allow them to be cut up, the whole terrace remains untouched. The crescent was due for auction on Thursday last, and a strong appeal was made by the Georgian Group to save it from demolition. The Group's efforts have proved successful; we understand that Mrs. H. Harrison, a Ramsgate caterer, has purchased 19 of the houses and is determined not to disturb their architectural features.

NATIONAL THEATRE: ARCHITECTS APPOINTED

Sir Edwin Lutyens, R.A., and Mr. Cecil Masey, F.R.I.B.A., have been appointed architects for the National Theatre, which is to be built on the island site adjoining South Kensington Station. The appointment was made known at a meeting held at the Theatre Committee's offices in Pall Mall, S.W., last Thursday, when representatives of the architectural press met the architects in order to discuss the scheme. Sir Edwin explained that he had as yet made no plans or designs that could be discussed. It all depended on how much money the Committee found it was able to spend. Asked what material he proposed to use, he said that he would prefer Portland stone, and that it would be a modern building in the English tradition. It was intended that the Theatre should contain from 1,000 to 1,200 seats.

A member of the Committee stated that £75,000 had already been paid for the site, and it had about the same amount in hand. Another £100,000 was required to complete and endow the theatre. Portraits of the architects and a view of the site are reproduced on page 570.

EMPIRE EXHIBITION

Arrangements are now almost complete for the Royal opening of the Empire Exhibition on May 3. The King will perform the opening ceremony from a specially erected dais in Ibrox Stadium where there is accommodation for close on 100,000 people.

THE ARCHITECTS' DIARY

Thursday, April 7

IDEAL HOME EXHIBITION. *At Olympia. Until April 20. 10 a.m. to 10 p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, Piccadilly, W.1. "A Summary of Recent Discoveries in London." By F. Cottrill. 8.30 p.m.*

Friday, April 8

INSTITUTION OF STRUCTURAL ENGINEERS. *Annual Dinner. At the Dorchester Hotel, W.1. 7.30 p.m.*

INSTITUTION OF SANITARY ENGINEERS. *At Caxton Hall, Caxton Street, S.W.1. "Small Sewage Disposal Works." By F. C. Temple. 6.30 p.m.*

ROYAL SANITARY INSTITUTE. *Conference at the Municipal Offices, Yeovil. Discussion on "The Administration and Management of Housing Estates." To be opened by Ivor F. Shellardt. 5 p.m.*

Saturday, April 9

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. *Visit to All Saints' Parish Church; Lamb's Cottage; and Salisbury House, Edmonton. 2.30 p.m.*

Tuesday, April 12

ILLUMINATING ENGINEERING SOCIETY. *At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. "Luminescent Materials and their Application to Light Sources." By J. W. Ryde. 7 p.m.*

Wednesday, April 13

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. *At 6 Queen Square, W.C.1. "Kentish Gravestones." By Edward W. Filkins. 8 p.m.*

ARCHITECTS APPOINTED FOR WOMEN'S FAIR

Messrs. Olympia (Exhibitions), Ltd., have appointed Messrs. C. Beresford Marshall and Partners to act as architects for the Women's Fair and Exhibition to be held at Olympia in November.

VISIT OF ARCHITECTURAL STUDENTS TO ROME

On Sunday, March 27, a party of twelve students left London for a four weeks' visit to Rome. The party included students from twelve schools of architecture.

While in Rome the students will work under the director of the British School at Rome, who has prepared a comprehensive programme for them. A visit to Pompeii and Naples will be included. The scheme was started in 1937 by Mr. Percy Thomas, who was then president of the R.I.B.A. He invited the presidents of the Allied Societies to collaborate in sending each year a party of selected architectural students to Rome.

TWO BILLS RECEIVE THE ROYAL ASSENT

Two Bills introduced by Sir Kingsley Wood, the Minister of Health, received the Royal Assent last week. They are the Housing (Financial Provisions) Bill and the Population (Statistics) Bill.

The Housing (Financial Provisions) Act makes provision for further State assistance for slum clearance and the elimination of overcrowding. It lays down the rates of subsidy which will be possible for houses for these purposes completed after January 1, 1939. The new subsidy will for the first time be uniform both for slum clearance and for overcrowding. It will take the form of annual payments payable for forty years in respect of each new dwelling. New and substantial subsidies are provided to meet the needs of the agricultural population.

The Population (Statistics) Act is a measure designed to make possible the collection by local registrars of fresh information bearing on the population problem. This information, which will be additional to that already given at the registration of a birth or death, will be received in the strictest confidence and utilized by the Registrar-General's staff at Somerset House for statistical purposes only. It will not be accessible to the public. The Act will come into operation at the beginning of July.

CENTRAL ELECTRICITY BOARD

The annual report of the Central Electricity Board shows that the revenue credit balance arising from trading during 1937 was £2,014,508. This sum compares with £1,686,944 for 1936 (namely, £1,689,487. less £2,543 for Redemption Fund Investment interest) and, the Board states, reflects satisfactory progress.

A.A. RECEPTION

The annual reception of the Architectural Association is to be held at 36 Bedford Square, W.C.1, on Wednesday, April 27, at 8.30 p.m.

EXHIBITION AT CHARING CROSS STATION

An exhibition of photographs showing the progress being made at the Team Valley Trading Estate was opened at Charing Cross Underground Station on April 5 by Mr. Ernest Brown, Minister of Labour.

CIVIC CENTRE, POTTERS BAR

Messrs. Marshall and Tweedy have been appointed by the Potters Bar (Middlesex) Urban District Council to design the new civic centre. The Council has decided to proceed with the erection of municipal offices, fire station, ambulance station and mortuary.

The architects have also been selected by the Hospital Committee to design the new cottage hospital.

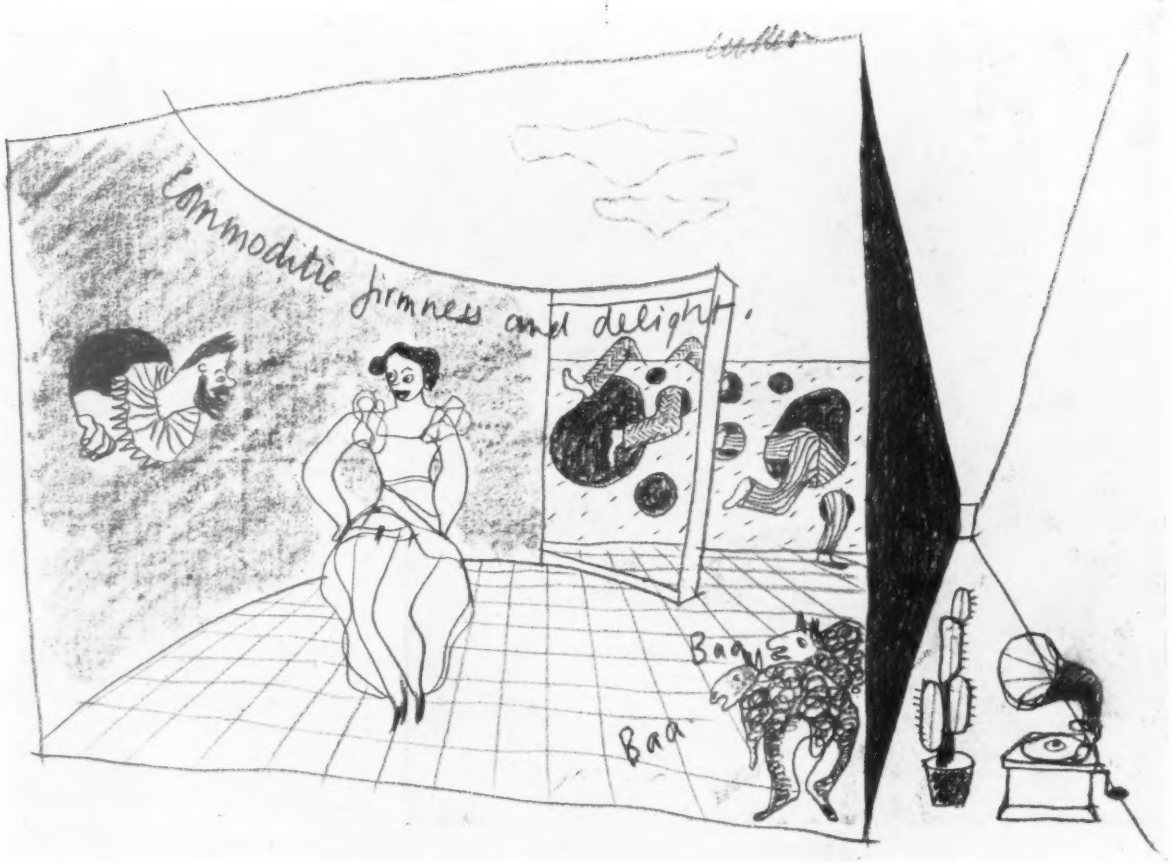
I.A.A.S. RIFLE CLUB

The I.A.A.S. Rifle Club is now affiliated to the London and Middlesex Rifle Association and the National Rifle Association, at the Bisley Ranges, Brookwood, Surrey. All members of the I.A.A.S. are eligible to become members at a membership fee of five shillings per annum. Applications for membership should be addressed to Mr. H. R. Beesley, F.I.A.S., Hon. Secretary, the I.A.A.S. Rifle Club, 43 Grosvenor Place, Westminster, S.W.1.

LIBRARY BUILDINGS

Should buildings for the public, such as libraries, be "lowest common denominator buildings," or should they be something better? This question was asked by Mr. Edward Carter in a lecture to the South Wales Institute of Architects (Central Branch) and the Institute of Builders. On the one hand, he said, library buildings might be of a popular form which uncultured people would think attractive, and which cultured persons would consider abominable; on the other hand, they might run the risk of frightening off the public by buildings which were highbrow,

SPIRIT OF MODERNITY: "HOW'M I DOING?"
SIR HENRY WOTTON: "HEY, NONNY NONNY"



Pressed to explain further a drawing apparently richly symbolic, the artist said the gramophone represented the voice of MARS, the cactus its insistent repetitions, and the figures at the back some architects over-entangled with display. The sheep may be taken to be either a bored and indifferent public opinion or the rest of the architectural profession. Sir Henry Wotton's famous tag it will be remembered was the nucleus round which the Exhibition was formed.

snobbish or arty. He suggested that what usually happened was not so lively as either of these alternatives.

ROYAL SOCIETY OF BRITISH SCULPTORS

At the annual general meeting of the Royal Society of British Sculptors, Mr. Gilbert Bayes was elected president, Mr. Charles Wheeler, A.R.A., F.R.B.S., vice-president, and Mr. T. Mewburn Crook, F.R.B.S., was re-elected hon. treasurer.

APPOINTMENT

Mr. W. A. S. Cormack has been appointed head of the Department of Building at the South-West Essex Technical College now being erected at Walthamstow.

Mr. Cormack studied at Glasgow University and Robert Gordon's College, Aberdeen, and was elected an Associate of the Institution of Naval Architects in 1923. He is an Associate of the R.I.B.A. and of the Royal Incorporation of Architects in Scotland.

Mr. Cormack qualified for the Byrne (£50) scholarship for architecture in 1925, was awarded the Scottish Board of Education Travelling Scholarship (£120) for architecture in 1928, the Neale Bursary of the R.I.B.A. in 1930, and the Portland House Scholarship (£150) and gold medal of the Institution of Structural Engineers in 1933.

For the past six years Mr. Cormack has been a member of the full-time lecturing staff in the Faculty of Technology, Manchester University, and in the College of Technology, Manchester.

CONCRETE TUBE TUNNELS

After exhaustive tests, the L.P.T.B. has decided to use reinforced concrete in the construction of two and a-half miles of running tunnel in north-east London, where the Central Tube is being extended to Epping, Ongar and Hainault.

Cast iron, in the form of segments, which are placed in position and bolted together by hand, has been used to line tube tunnels for some forty years. Ever since the war London Transport's consulting engineers have had in mind the possibility of employing reinforced concrete, and advances in concrete technique have been watched closely. About six months ago, when serious difficulty was experienced in obtaining supplies of cast iron for new works, the consulting engineers submitted to the Board a concrete segment of a type as strong and as easily handled as a metal segment.

Many interesting experiments were made. Of the chief pressures that have to be resisted by the lining of a tunnel, one is that exerted upon it in a horizontal direction by the hydraulic rams employed to push forward shields used to bore a tunnel. These rams may exert a pressure of as much as 560 tons. To ensure that the reinforced concrete would withstand this heavy pressure, complete rings were erected in one of the new tunnels under construction, with successful results.

The other great pressure on a tunnel lining comes from the weight of the earth above it. To ascertain whether the concrete lining was as strong as cast iron, an experimental tunnel, 8 ft. 6 ins. in diameter, was driven at Wood Lane, half of it formed of cast-iron rings and half of concrete rings. The top of the tunnel was only 2 ft. 6 ins. below the surface of the ground, so, to represent a greater depth, a stack of iron weighing 175 tons was built up immediately over the tunnel. Under this burden the concrete proved to be just as capable of carrying weight as the cast iron. The same result followed when 228 tons of iron were piled on top of a tunnel 12 ft. in diameter.

These tests satisfied the engineers that concrete would make as good a lining as iron, but several problems of details had

Left, Sir Edwin Lutyens, R.A., who will collaborate with Mr. Cecil Masey (above) in the design of the National Theatre, which is to be built on the site of the building—now demolished—shown in the photograph. The site, adjoining South Kensington Station, occupies an area of 16,500 sq. ft. The garden in front will remain.

still to be solved. Concrete segments had never been bolted together in this way before. A way had to be found of making the holes for the bolts so that the concrete would not crumble. This was done by lining the holes with steel ferrules, and the concrete itself was strengthened by special local steel reinforcement.

The concrete used in making the segments is reinforced with steel rods, on the same principle as the large number of reinforced concrete structures of all kinds now so common. But double the customary proportion of steel reinforcement has been used to make the segments specially strong.

WELDING OF STEEL STRUCTURES

The Department of Scientific and Industrial Research issued, on Monday last, its report on the welding of steel structures. (H.M. Stationery Office. Price 6s.) The report embodies the results and conclusions of a panel of the Steel Structures Research Committee, which has been working for eight years upon the subject. Accounts of the investigations have appeared in the reports of the Steel Structures Research Committee, but the most important part of the work has been carried out in the last four years and has not been previously published. The main object before the panel has been to obtain reliable information which may be used as a basis for the design and construction of welded steel frameworks of multi-storey buildings. It is believed, however, that investigations will be found useful in other applications of electric welding to structural steelwork.

The general conclusion reached by the panel is stated as follows :—

We consider that electric arc (metal arc) welding is sufficiently reliable and trustworthy for general use in the fabrication of joints in steel-framed and other buildings, and recommend it for that purpose provided suitable precautions are observed concerning (*a*) quality of electrodes, (*b*) standards of workmanship, (*c*) methods of design and (*d*) working stresses. This recommendation applies only to welding in which the parent metal is structural steel conforming to British Standard Specification No. 15, 1936 (Structural Steel for Bridges, etc., and General Building Construction).

The panel also believes that its investigations have produced much new information which should be useful as a basis of a code of practice for the use of electric welding in building construction and has given some consideration to the preparation of a suitable code. Recently, however, this task has been handed over to a technical committee of the Institute of Welding which has undertaken the preparation of draft building bye-laws and a code of practice for welding. In placing the results of its investigations at the disposal of the Institute of Welding the committee offers many suggestions which may be of assistance in the preparation of the code. These are detailed in the report.

R.I.B.A.

NEWS BULLETIN

The 1939 Conference.—The centenary celebrations of the Royal Institute of the Architects of Ireland will be held next June, and the Council of the R.I.B.A. has accepted the invitation of the R.I.A.I. to hold the British Architects' Conference there at the same time. This will be the first " repeat " visit in the series of Conferences, that of 1931 having been held in Dublin.

Distinguished Visitor.—Visitors during the past week have included Monsieur Gabriel Guvrekian, Hon. Corresponding Member, whose work in Iran as a garden designer is well known.

R.I.B.A. Dance.—The Dance Club's last dance of the session will be held on Friday, April 22, at 9 p.m. Tickets, 6s. each, to be obtained from Mr. R. H. H. Robertson, Clerk to the Dance Club at the R.I.B.A.

Prizes and Studentships.—The R.I.B.A. Prizes and Studentships Pamphlet for 1938-39 has now been published, price 1s. This gives full information and programmes.

Exhibitions.—Civic Centres at Brighton until May 8 at the Public Art Galleries, Church Street.

Airports and Airways at the Museum and Art Gallery, Derby, until April 24.

Modern Schools closes Public Library Museum and Art Gallery, Hereford, April 11th—re-opens Leicester College of Arts and Crafts, under the auspices of the Leicester Education Committee, on April 22nd.

INTERMEDIATE EXAMINATION

The following are the dates on which the forthcoming R.I.B.A. Intermediate Examination will be held : May 20, 21, 23,

24 and 26, 1938. (Last day for applications : April 20, 1938.)

EXHIBITIONS

[*By D. COSENS*]

VARDA'S panels at the Storran Gallery with their ingenuity in the use of materials and their remarkable colour sense are far more than decoration, but they fill one with regret that he is not given the freedom of large wall spaces and, in conjunction with an architect, commissioned to design some part of a building—say the foyer of a theatre or a cocktail bar, or any place where decoration forms part of the general scheme. But no, our restaurants, theatres and such places where decoration is permitted to flourish are left to the whimsies of the school of admirers of the Zinkeison sisters and of etched glass, and no one has yet, even as an exhibition piece, proved what architects, painters, sculptors and lighting experts might do if only they got together. The idea may not sound profitable enough to appeal to the promoters of such things (though are they always right in gauging public taste?), but just as an experiment in some improbably ideal exhibition it would be inspiring to see a series of rooms in which painters, sculptors and architects of contemporary outlook had collaborated from the start. And that comes back to Varda, for it is here that his strange and lovely talent could be used as it deserves. His exhibition should not be missed.

•

Elwin Hawthorne was one of the original members of the East London Group. His quiet, pleasant, rather architectural painting has steadily developed in style and he is skilful in stating the character of a particular district or a building very simply in relation to its surroundings. His two paintings of Blackheath (1 and 10) are particularly successful examples of his straightforward and unaffected observation, and his careful use of colour. He never relies on incident to help him out, and his pictures gain in character by their discipline.

•

In complete contrast is the exuberant painting of Carel Weight. In the foreword to his catalogue he says: "An artist should be free to use every means in his power to say what he wants to as clearly and completely as possible. No avenue of thought or experiment with his medium should be closed to him," which is exactly as it should be, but he does not say quite all of that in paint. Very few can. Paint and the excitement of putting it on seems, in most of his work, rather more important than whatever it is that he wants to say, but the result is very lively and competent and uninhibited.

•

Somewhere between a serious portrait and a photograph, both æsthetically and financially, come the lightning quick sketches of Ivan Opffer with their instantaneous grasp of essentials. At the Wertheim Gallery, under the title of " Men of Moment," he gives his impressions of 66 well-known people. The likenesses are good, and the quick presentation more successful than that of the average portrait.

•

New Works by Varda. Storran Gallery, 5 Albany Court Yard, Piccadilly. Until April 23.

Elwin Hawthorne. Lefevre Galleries, 1a King Street, St. James's. Until April 23.

Carel Weight. Picture Hire, 56 Brook Street. Until April 23.

" Men of Moment," by Ivan Opffer. Wertheim Gallery, 8 Burlington Gardens. Until April 14.

Photograph taken at the annual dinner of the South Wales Institute of Architects. Left to right—seated : Mrs. O. S. Portsmouth, the Lord Mayor of Cardiff (Alderman O. C. Purnell), Mr. O. S. Portsmouth, A.R.I.B.A. (President of the Institute), Mr. H. S. Goodhart-Rendel, F.R.I.B.A., and Lady MacAlister. Standing : Mr. T. H. B. Scott, F.R.I.B.A., Mr. A. L. Roberts, F.R.I.B.A., Mrs. Percy Thomas, Sir Ian MacAlister, Mr. H. Teather, F.R.I.B.A., Mr. R. Hopkin Morris (Welsh Regional Director, B.B.C.), the Mayor of Merthyr (Councillor J. Davies), Mr. Ivor Jones, A.R.I.B.A. (Secretary), and Mr. Percy Thomas, PP.R.I.B.A.

Malcolm MacTaggart

an architect keenly conscious of the problems confronting architectural practice and architectural assistants today, feels that no basis for their permanent solution will be found while a greater universal problem remains unconsidered. He therefore has contributed this week a story of constructive thoughtfulness called

SEX IN ARCHITECTURAL PRACTICE

THE other day I had a visitor. The Rev. Ernest Greenborn was ushered in. He is new to our parish. " I am come to see you," he said, " because you are an architect." " What more fitting," I responded, " than that professional goodness should call upon professional beauty ! Be seated, my good Sir. Pray, be seated."

Greenborn lowered himself to a chair, and resumed his explanation. " I am come," he said, " about my daughter, Mabel. Mabel wishes to embrace the calling of architecture." I nodded sympathetically. " There are worse things," I said. " Journalism is worse, so is selling matches. May I ask, do you intend to buy her a practice ? I'd sell you mine, I should like to retire."

Greenborn ran a finger round the inside of his collar. " Alas, no," he said, " that is not possible. I am blessed with a large family. No, I am come to solicit the privilege of your opinion on Mabel's chances of happiness —without a practice of her own. You see, I am given to understand you are the originator of the theory of sex in architectural practice."

I bowed. " It had to be so," I explained. " I was accused of having no constructive proposal to put forward. It was not enough that I rebuked the architectural profession for its lack of democratic spirit, and hinted that it might make for a healthier and happier state of affairs if its members were to try behaving with a little more intellectual fair-mindedness and common decency among themselves. It was thrown back at me that a constructive policy cannot be framed in such terms."

Greenborn sighed assent. " How true that is," he said. " I meet with the same difficulty in my own calling. So much *might* be done if only we had a wiser and more mannerly leadership."

He waited, and I went on, " Denying, therefore, the appeal to fair mindedness and common decency, what was left? Far flung political and economic abstractions? I chose instead to look at the ground immediately under my nose. What did I find ? The family ! Man

and woman united to produce the smallest possible and thus implicitly the most fundamental unit of our society.

"I was not to be misled by the startling nature of my discovery. Sex is fundamentally a psychological and not a physiological distinction. The sexes are not utterly different. Man is partly woman, woman partly man. What did it all portend? What else than that in every conceivable experiment of social structure there will be those who correspond implicitly to the activity of the male, and those who correspond implicitly to the passivity of the female!"

Greenborn sighed assent. "How true that is," he said. "Man and woman created He them."

He waited, and I went on, "What more obvious, than that in the organization—the family circle—of architecture, there should be those who approximate to the male and those who approximate to the female rôle. What more obvious, than that the part of the principal is male and the part of the assistant, female. Viewed merely as an analogy, the case shows itself to be astonishingly perfect. The male does the hunting—called, variously, personality, dining out, making connections, and the like. The female sits at home—called, variously, being willing, being punctual, being quite happy or words to that effect. The male sows the seeds of inspiration, which is called designing or claiming the authorship, and the female minds the baby, which is called drawing out, sorting out, dealing with, and so on. The male is gay and adventurous; the female is staid and conservative. And, not infrequently, we find the institution of the harem in its counterpart of the large office. The wealthy man has taken unto himself a number of wives! There you have it in a nutshell. All our trouble today is because architectural assistants are drawn from the male and not the female population. Male by nature, they sense a wrongness — a frustration — in the feminine sphere they are called upon to occupy. Many are already growing beards. But it won't be any good. Beards are the last things they should want. The only truly *constructive* device—the only lasting remedy—is that architectural assistants should wear skirts instead of trousers."

My visitor rose to take his leave. "I shall let Mabel go in for architecture," he said.

LETTERS FROM READERS

WALDO MAITLAND

E. H. B. BOULTON (Technical Director, Timber Development Association)

Lighting

SIR,—I read with great interest the correspondence in connection with school lighting, and there is no doubt that there still exists some diversity of opinion on this extremely important subject.

Education today imposes upon the pupil visual tasks which are critical and prolonged. Good lighting is therefore necessary if the sight is to be preserved during this formative period. In the case of pupils with defective sight, special consideration should be given after the pupil has consulted a reliable oculist.

The opinions expressed were no doubt for classrooms accommodating pupils with normal vision. There does not seem to be at the present time any definite agreement upon this question, even amongst experts, but the tendency shows that increased illumination is desirable.

As a matter of interest, the Board of Education in 1931 suggested that 6 ft. candles should be minimum at desk level in classrooms, while in 1937 10 ft. candles were suggested. It would be interesting to know what tests were made to establish these figures.

In my view, it is essential to consider artificial lighting in conjunction with daylight, so that a balance of illumination is obtained. If one considers that, during an average dull day, the desks near the window may be receiving a considerably higher proportion of daylight than those farthest from the window, probably a variation of 30–1, an intensity that will provide a reasonably even illumination is desirable if the suggested diversity factor of 1.5 to 1 is to be maintained. It does not seem that the 10 ft. candles suggested by the Board of Education would be sufficient to maintain this, which would call for between 20 and 30ft. candles. Naturally, intensities of this magnitude, if they are to satisfy the fundamental conditions of good lighting, would be planned in such a way that at least 95 per cent. of the light is directed to the ceiling. It is probable that 30 may be the limit if ceiling brightness is to be maintained within desirable limits. Colour and finish of walls, ceilings and furniture should receive careful consideration. There is no doubt that intensities beyond this figure would require a system of lighting combining direct and indirect.

It seems to me therefore that 15 ft. to 20 ft. candles, as suggested by the authors of "Plan Units (Classrooms)," is not unreasonable with the possibility of even increasing this figure. The suggestion made by Mr. Downer that this intensity is injurious to the eyes is quite unfounded. A system free from glare and a brightness contrast within reasonable limits, together with diffusion and soft shadows, is considered by experts the most desirable condition for good classroom lighting.

To utilise effectively and economically the lighting system providing a constant minimum illumination with daylight, automatic control by means of a photo-electric cell operating each of the rows individually can be used. By this means reasonable uniformity of illumination can be assured. This method of control has been adopted with some success in America.

It may be of interest to readers to know that in the State of Ohio, U.S.A., the Department of Education now requires all State schools to conform to the recently adopted recommendations for the lighting of classrooms. The established recommendations concern the classrooms for pupils with defective eyesight. In the many recommendations made, it stipulates a minimum of 30 ft. candles at desk level, and suggests that even higher values may be desirable.

It seems desirable that artificial lighting and daylight should be correlated if ideal conditions are to be established. No doubt the various committees who have this problem in hand are dealing with it in this manner.

Mr. Downer's suggested 4 to 5 ft. would not fulfil the requirements for classroom lighting. I agree that moderation in illumination is desirable, but the degree of moderation is a question which should be carefully studied by a committee of Education Authorities, lighting experts and the eye specialists.

WALDO MAITLAND

Rural Cottage Competitions

SIR,—Following the Minister of Health's announcement of his intention to ask Parliament for assistance from the Exchequer towards providing cottages for agricultural workers at low rentals, two competitions have been announced for suitable designs for such cottages. One is arranged by the Department of Health for Scotland and is open to persons engaged in architecture in Scotland, and the other, organized by the Timber Development Association, is unrestricted territorially.

Timber houses, because of their speed of erection and low cost, have an important contribution to make to the solution of the rural housing problem, and in case any competitors are in doubt about the choice of woods or any detail of modern timber design and construction, I write to say that the technical information which we have here (47 King William Street, E.C.4) is at their disposal.

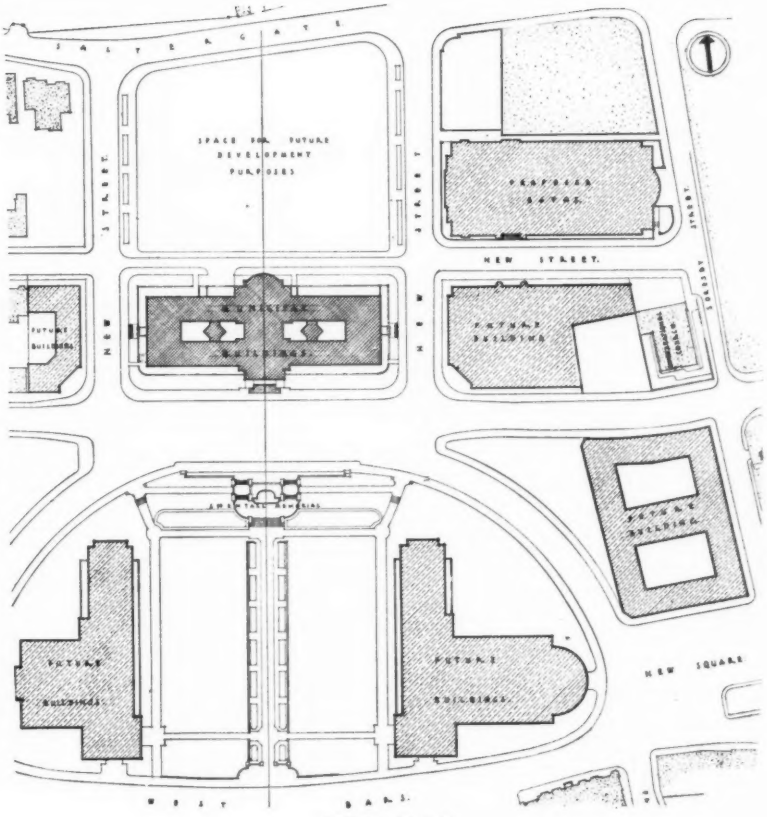
E. H. B. BOULTON,
Technical Director, Timber Development Association.

MUNICIPAL BUILDINGS, CHESTERFIELD

DESIGNED BY BRADSHAW GASS AND HOPE

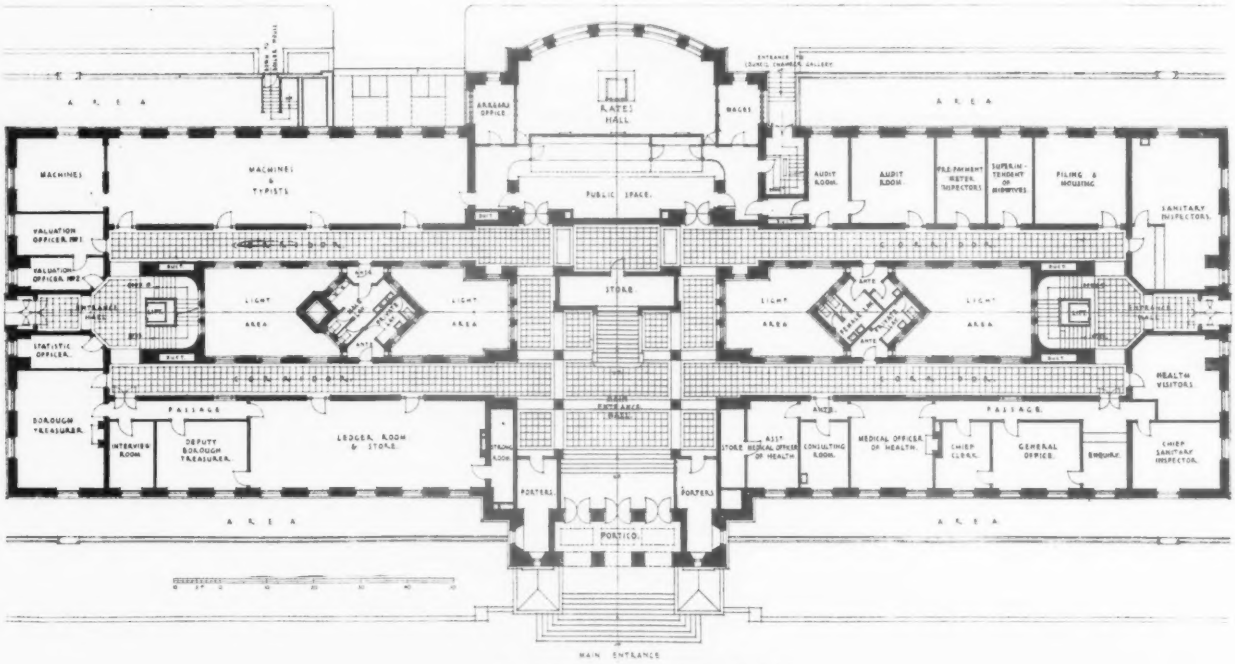
GENERAL—*In 1930 the Chesterfield Corporation purchased the estate of Rose Hill, an area of nine acres near the centre of the town. In 1932 the Corporation appointed Mr. A. J. Hope, of Messrs. Bradshaw Gass and Hope, to prepare a scheme for the layout of the estate; and in 1933 a layout scheme was approved, providing for a Civic Centre, with a road system giving convenient connection with all parts of the town. This road system, with the exception of the two crescent roadways and the pedestrian way from West Bars which culminates in a staircase approach to the central place, has since been executed by the Borough Engineer. The crescent roadways may not be formed for some time, but towards the end of last year the Corporation decided to proceed with the pedestrian way and staircase approach under the supervision of the architects. The municipal buildings were submitted for tender in 1935 and were officially opened by the Duchess of Devonshire, yesterday, April 6.*

The photograph is of the south front.

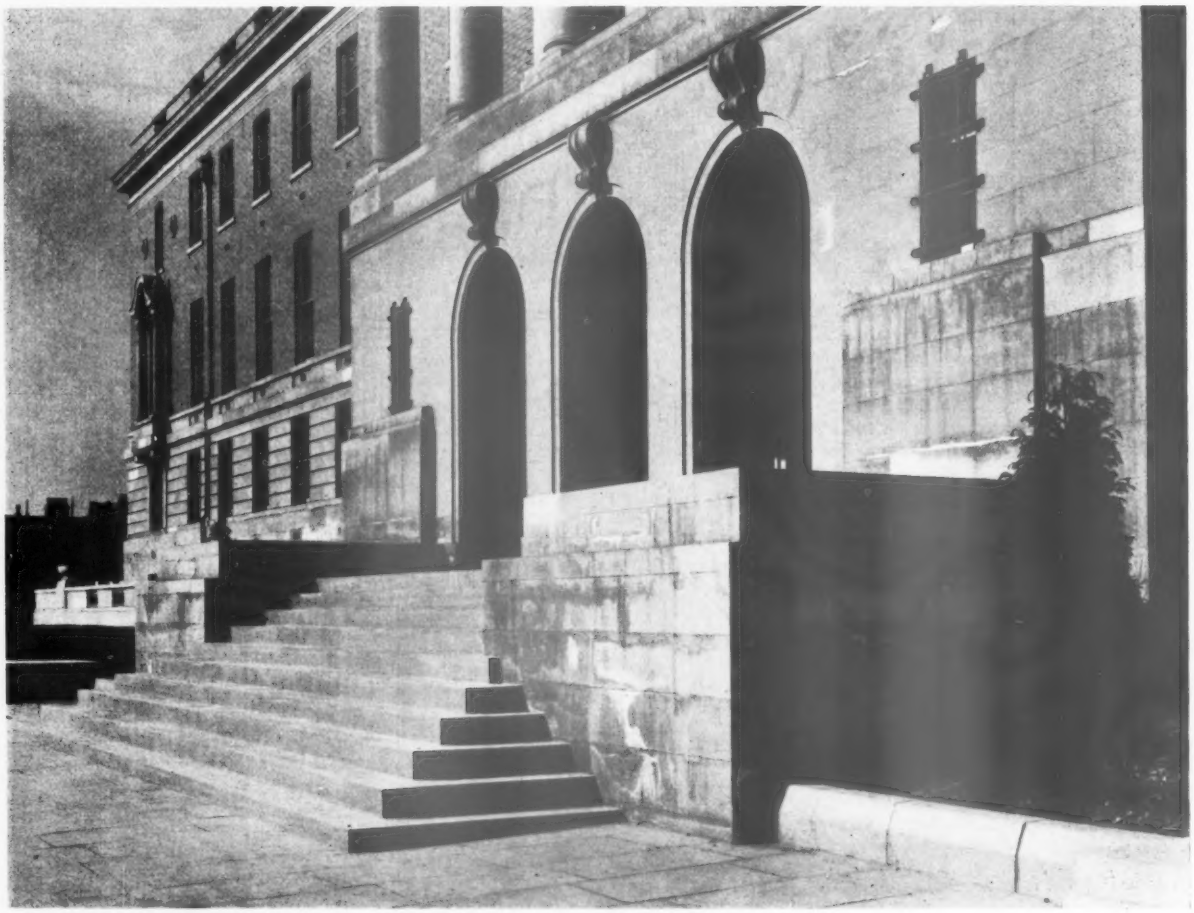


SITE PLAN

MUNICIPAL BUILDINGS, CHESTERFIELD: DESIGNED



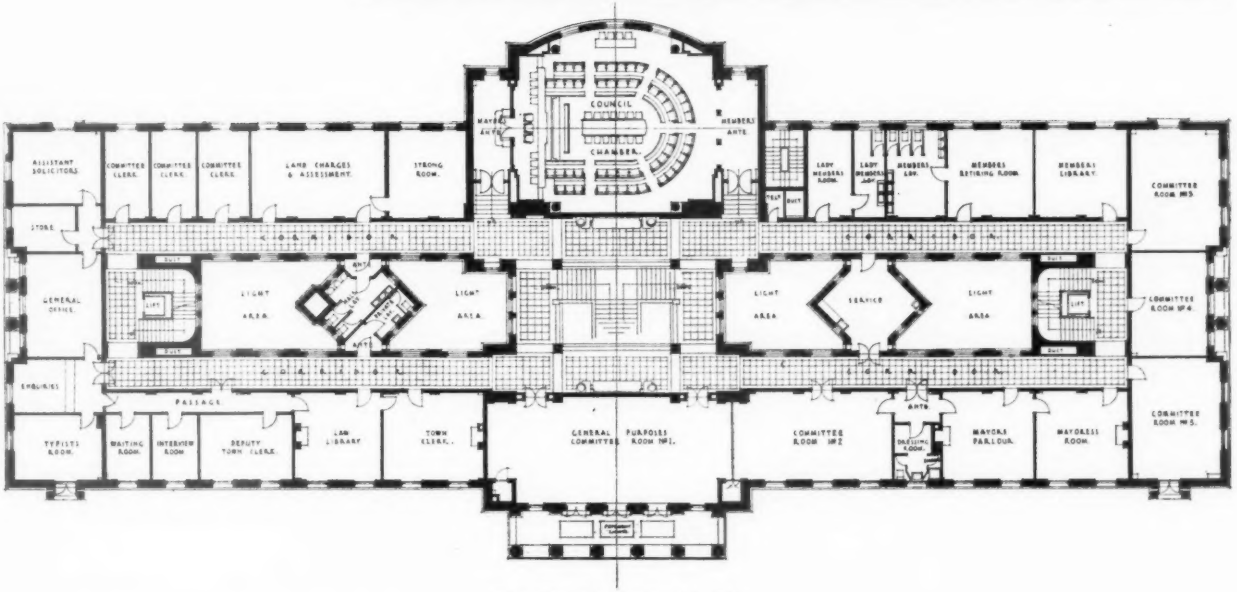
GROUND FLOOR PLAN



BY BRADSHAW GASS AND HOPE

CONSTRUCTION—*The building is steel framed with hollow block floors. The plinth and dressings are in Portland stone, the upper storey in warm tone brick.*

On the right is a detail of the portico leading to the principal entrance hall; on the facing page is a detail photograph of the portico.



FIRST FLOOR PLAN

MUNICIPAL BUILDINGS, CHESTERFIELD:

DESIGNED BY BRADSHAW GASS AND HOPE

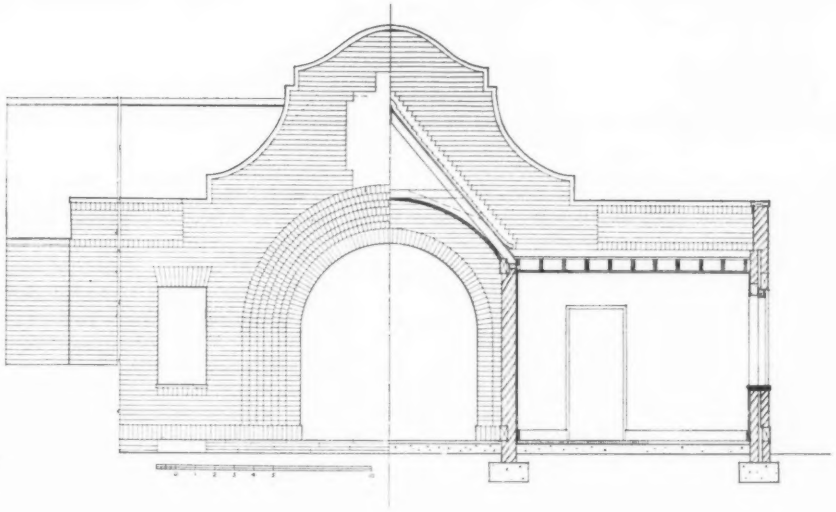
INTERNAL FINISHES — *The council chamber is treated in warm grey tones, with a dado of figured walnut. The seating for the members is also in walnut, upholstered in leather of a brownish grey with narrow piping lines of red; the carpets and curtains are grey-green. There are five committee rooms on the first floor. Two of them in the centre of the building, can be thrown into one room for receptions. These two rooms are panelled in quartered walnut relieved by ebony lines, the long windows on the front being echoed on the opposite wall by panels of peach tinted mirror. The folding screen, dividing the rooms, is panelled in a similar manner to the walls. The central staircase is lined with reconstructed marble. The whole of the furnishings throughout the building were designed by the architects, who were also responsible for the layout of the heating, ventilating, electrical and other services.*

The photographs show: Left, top, the main entrance hall; above, the general purpose room; left and below, the Council Chamber.

For list of general and sub-contractors, see page 560.

ST. FELIX SCHOOL CLOISTERS, SOUTHWOLD

DESIGNED BY MITCHELL AND BRIDGWATER

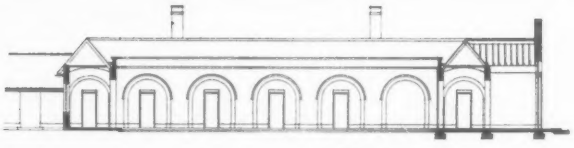


DETAIL OF THE MAIN ENTRANCE

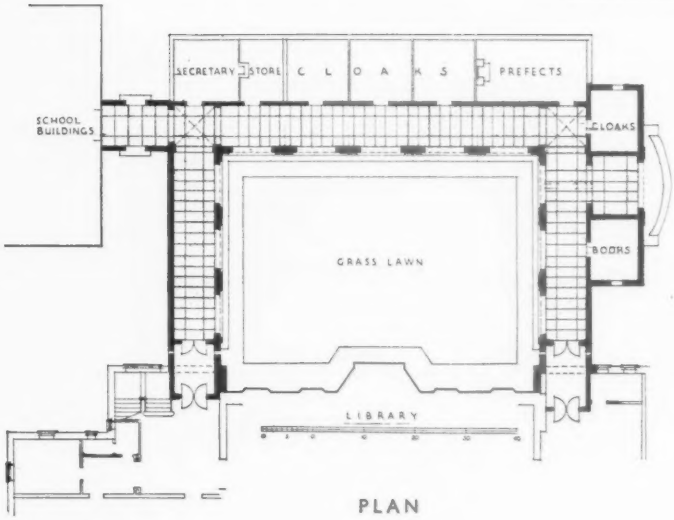
GENERAL PROBLEM—*The three-sided cloister was built to form a new main entrance to the school and connects up the School House, the new wing containing head mistresses' study, etc., and specialist buildings. Grouped round the cloisters are new cloakrooms, a prefects' room, head mistress's secretary, etc.*

CONSTRUCTION AND FINISHES—*The cloisters are of brick, the roof of timber laid with hand-made, sand-faced tiles. The sash windows are of wood and the floor of the cloisters of blue and brown York stone arranged in rectangular pattern. In the cloisters facing brick is employed inside and out. The rooms round the cloisters are plastered and the floors are of oak block. Trough lighting is employed in the cloisters. The arms of the school over the entrance were designed by Windsor Herald in consultation with the architects. The crest, a Gryphon, is the family crest of the first Head Mistress, Miss Gardiner. It carries in its beak a torch of learning. At the bottom of the shield, which has a chevron, is a mitre for St. Felix, first Bishop of East Anglia, after whom the school is named. Above is a view of the main entrance.*

ST. FELIX SCHOOL CLOISTERS, SOUTHWOLD



SECTION



PLAN

DESIGNED BY MITCHELL AND BRIDGWATER

Above is a view in the internal courtyard.

The Architects' Journal Library of Planned Information

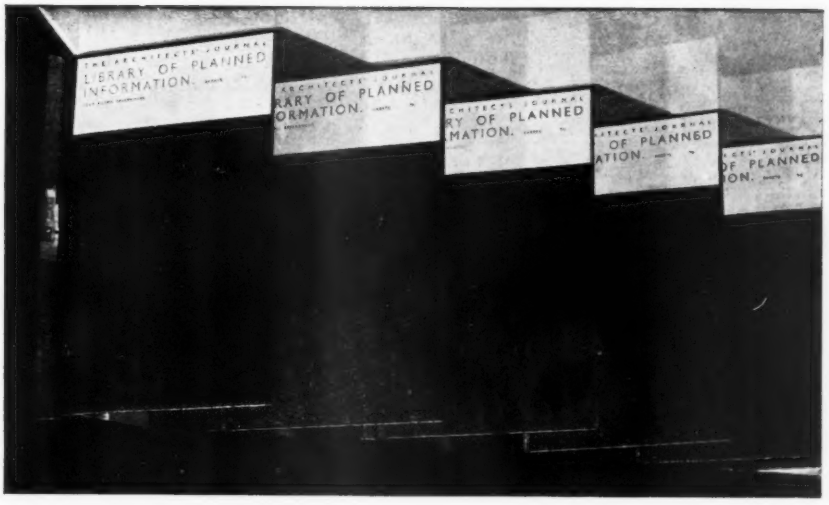
INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

615 Heating: Open Fires

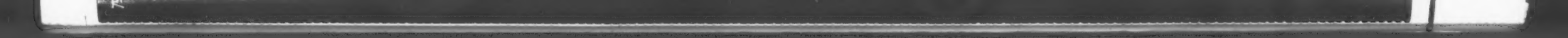
616 External Renderings



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

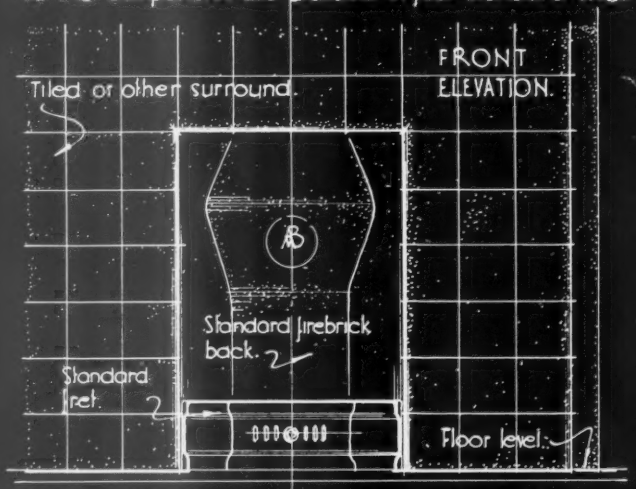


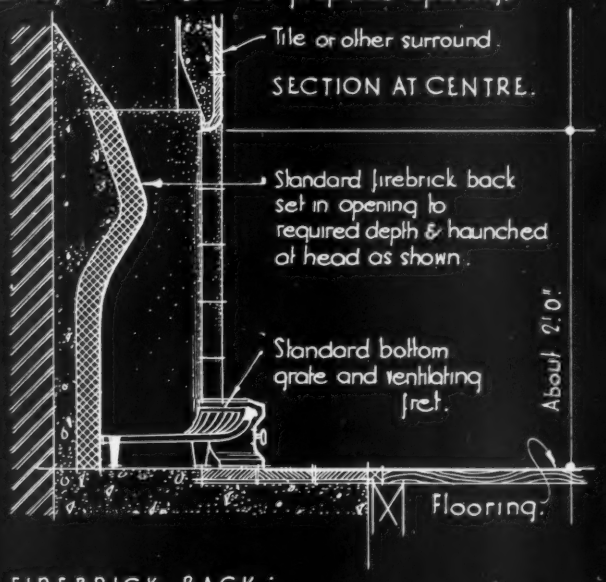
737

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

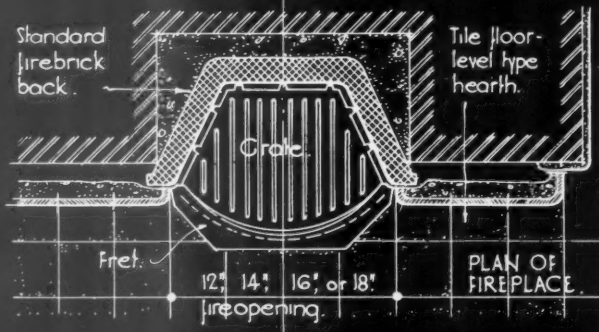
PLAN, ELEVATION & SECTION SHOWING TYPICAL ASSEMBLY OF FIREBRICK, GRATE & FRET:

All the components are available in four standard sizes for 12", 14", 16" and 18" fireplace openings.





Scale of drawings: 1 inch equals 1 foot.



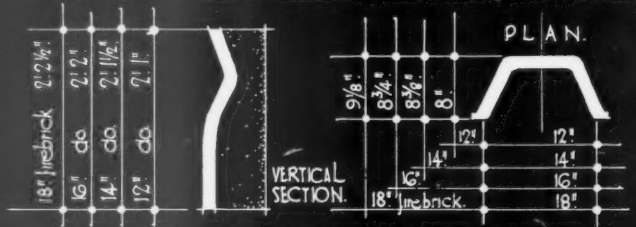
FIREBRICK BACK: The clear internal face width is 1" less than the surround opening, in order that coals should not come directly into contact with tiling, etc.

FRONT FRET: The fret is self-centring on the corners of the bricks, thus avoiding the risk of damage to the edge of the tile surround.

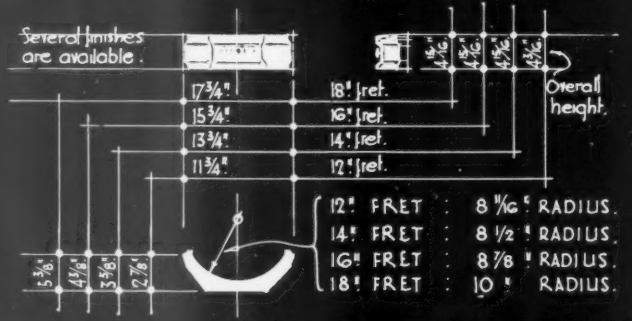
The flat top is suitable for use as a kettle rest, while the hit and miss ventilator is provided with a chromium plated brass knob.

PRINCIPAL DIMENSIONS OF THE STANDARD SIZES OF FIREPARTS:

The firebrick back, bottom grate and front fret of any one size of the fireparts are interchangeable.



WEIGHT OF FIREBRICKS: 12", 56 lbs. 14", 70 lbs. 16", 83 lbs. 18", 97 lbs.



STANDARD SIZES OF C.I. GRATES. 1" = 1'.0"

12" grate 9¼" r.
14" grate 9¼" r.
16" grate 10" r.
18" grate 11" r.

PLAN OF GRATE.

18" grate.	12¼".
16" grate.	10⅞".
14" grate.	10⅛".
12" grate.	8 13/16".

SECTION AT CENTRE.

Information from the Associated Builders' Merchants Ltd.

INFORMATION SHEET: STANDARD ASSEMBLY OF FIREBRICK BACKS, BOTTOM GRATES & FRETS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Oscar de Bruyne.

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 615 •

HEATING : OPEN FIRES

Products : Firebacks, grates and frets for barless slow combustion fires

General :
This Sheet illustrates the standard and interchangeable A.B.M. firebrick backs, bottom grates and frets. The three units are designed for a close-nesting fire assembly, and the fireparts for any particular size of firebrick are made to fit each other and the brick exactly. Since all parts are standardized, replacements may be readily obtained at any time.

Firebricks :
These are available in four sizes to exact standard dimensions, for fire openings of 12 ins., 14 ins., 16 ins. or 18 ins. wide. The brick is solid and is made to a stringent specification as regards composition, temperature and period of firing.

Bottom grates :
The bottom gratings are of cast iron, in four standard nominal sizes of 12 ins., 14 ins., 16 ins. and 18 ins. for exact fitting within the fireback. The firebars are rectangular in section and bevelled toward the bottom, and can be easily replaced when renewals are required. Each size of grate is provided with tapering front and back legs, and positioning lugs at the back and sides.

Frets :
The front frets are also available in the four nominal sizes given above, and each size is self-centring on the corners of the corresponding brick. The hit and miss ventilator is provided with a chromium-plated brass knob. The flat lip covering the front bar of the grate is suitable for a kettle rest if required. Standard finishes are : Fine cast and blacked, ground and Berlin blacked, black vitreous enamelled and chromium plated.

Previous Sheets :
Sheets already published dealing with A.B.M. products are Nos. 540, 555, 558, 562, 566, 570, 574, 579, 591, 597, 601 and 609.

Standardised design :
The Associated Builders' Merchants is a non-trading organization devoted to the standardisation of the design of building materials and equipment.

Materials and equipment made by a number of manufacturers are stamped with the following symbol 

indicating that they conform to the standard of design and quality laid down.

Issued by : The Associated Builders' Merchants, Ltd.

Address : Peters Hill, Upper Thames Street, London, E.C.4

783.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

ESSENTIAL REQUIREMENTS OF EXTERNAL RENDERINGS FOR DAMP-PROOF CONSTRUCTION.

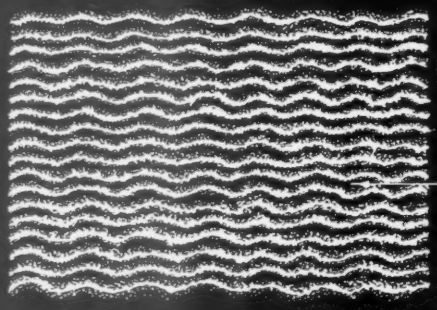
GENERAL DESIGN:

It is necessary to make adequate provision against water seeping behind the rendering. Particular attention should be paid to copings, cills, frames etc. Details for correct design are given in Information Sheet No. 437.

BACKING COAT:

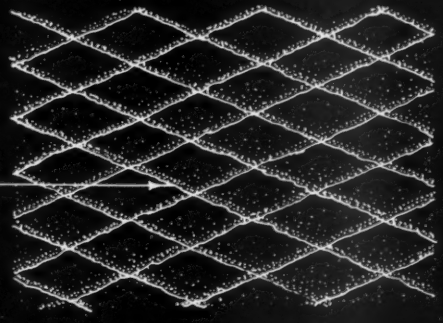
For the backing coat Aquacrete· water-repellent cement should be used. The combing to produce a mechanical key may be altered to suit weather conditions, as illustrated below.

TYPE OF KEY USED IN WARM WEATHER.



Horizontal wavy lines 3/4" apart & 1/8" deep.

TYPE OF KEY USED IN COLD, WET, WEATHER.



Diagonal lines, both directions 1/8" deep & 2" apart.

The mix consists of 1 part ·Aquacrete· to 3 parts clean gritty sand graded 1/8" down.

An interval of at least 48 hours should elapse before the set coat is applied.

SUITABLE SET COATS: Smooth textures should be avoided as they permit rain to run down in sheets or films immediately on the surface, thus facilitating its penetration through any fine hair cracks which are liable to occur if the rendering is over-trowelled. With rough textures this direct contact over the whole of the area is avoided, since a series of drip points are formed.

Great density is not desirable in the set coat. Movement in materials of which the wall is built, as well as of the rendering coats themselves, are liable to cause cracks. More open textures will expand and contract without cracking, and, at the same time, allow the facing to breathe, which is a most valuable characteristic in preventing the penetration and accumulation of damp.

RECOMMENDED TEXTURES FOR EXTERNAL COLOURED CEMENT RENDERINGS:

1. SCRAPED TEXTURE IN ·CULLAMIX· OR ·SNOWCRETE· MIXTURE:
   (a.) graded 1/16" down for fine scrape.
   (b.) graded 1/8" down for medium scrape.
   (c.) graded 1/4" down for coarse scrape.

2. ROUGHCAST IN ·CULLAMIX· OR ·SNOWCRETE· MIXTURE: Supplied suitably proportioned in different mixes, graded 3/8" down, 1/4" down and 3/16" down, for direct application to hardened render coat, or for application to plastic skimming coat.

3. ENGLISH COTTAGE TEXTURE IN ·CULLAMIX·: Graded 1/16" down.

4. PEBBLE-DASH ON PLASTIC SKIMMING COAT OF ·CULLAMIX· OR ·COLORCRETE· & LOCAL SAND: Float with a rough coat of ·Cullamix· or ·Snowcrete· mixture graded for smooth finishes, or alternatively, a mix of one part ·Colorcrete· to two parts suitable sand, which is to be dashed immediately with a well wetted pea gravel, Long Rake Spar, or other suitable material, until the whole area is covered.

Detailed Specifications for producing the above setting coats are available from the Cement Marketing Co. Ltd. Reproductions of these textures are shown on the Supplement to this Information Sheet.

Information from The Cement Marketing Company Ltd.

INFORMATION SHEET: COLOURED CEMENT RENDERINGS: No. 2

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

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 616 •

EXTERNAL RENDERINGS

Subject : The Essential Requirements of External Renderings for Damp-proof Construction.

Design :

It is essential in rendered work to ensure that water is prevented from entering the wall at the back of the rendering.

Particular attention therefore must be paid to flashings and damp-proof courses. A continuous flashing should be carried across all walls below the coping, and this flashing (or D.P.C.) should project beyond the face of the rendering to form an inconspicuous lip.

Flashings should be provided over all door and window openings, and frames, whether wood or metal, should be set in mastic wherever they adjoin rendered work.

Parapet walls should never be used without a coping, and all copings should be designed with adequate overhang and drips.

Preparation of Surfaces to take Cement Rendering :

Brickwork—dense.—All joints should be raked out to a depth of half an inch over the area to be rendered, and the surface should be brushed free of all loose material and soaked with water.

Brickwork and slabs having heavy suction.—Brickwork should be soaked with water and a $\frac{1}{16}$ in. thick coat of cement slurry, composed of 2 parts of Aquacrete cement to $1\frac{1}{2}$ parts of sand, suitably graded from $\frac{1}{16}$ in. down, should be brushed on and allowed to harden for 24 hours before the application of the render coat.

Concrete.—All mould oil should be cleaned off and all loose material brushed off. The concrete should be soaked with water, and as soon as all free moisture has left the surface the first coat should be stippled on with a brush, or dashed on. The first coat should be composed of 1 part Blue Circle cement, 1 part clean sand, suitably graded from $\frac{1}{16}$ in. down, to 1 part clean crushed gravel, graded $\frac{3}{16}$ in. *clean.* After 48 hours the render coat should be applied.

Metal Laths or Meshwork.—The first coat should be applied to a thickness of $\frac{3}{4}$ in. and be composed of 3 parts clean sand, suitably graded from $\frac{1}{16}$ in. down, to 1 part of Aquacrete cement. Hydralime should be added in the proportion of $\frac{1}{10}$ the volume of cement, and hair should be added in the proportion of one pound of hair to every three cubic feet of mortar. The surface should be combed while still plastic with horizontal wavy lines $\frac{1}{8}$ in. deep and $\frac{3}{4}$ in. apart.

Materials for Render Coat :

The sand for the render coat must be clean, sharp and suitably graded from $\frac{1}{8}$ in. down and free from all impurities and deleterious matter.

It should be thoroughly mixed in the proportion of 3 parts to 1 part Aquacrete, water-repellent Portland cement.

In addition to ensuring even suction between the render coat and the white or coloured setting coat, the use of Aquacrete breaks down capillarity in the render coat by lining the pores with a water-repellent film.

Set Coat :

The function of the set coat is to provide a decorative finish. Its texture should be of such a nature that it sheds water, and it should be sufficiently open in structure to enable any moisture which may be drawn within its thickness ($\frac{3}{16}$ in. to $\frac{1}{4}$ in.) to be readily dried out.

Materials for Set Coat :

Snowcrete Mixture and Cullamix are so graded and proportioned that a wide range of suitable textures may be produced. The plasterer is relieved of all responsibility in selecting his materials. All that is necessary is to ensure that the appropriate grading is specified for the particular finish required.

Correct gradings for the textures recommended are given on the front of this Sheet.

Illustrations of these textures are reproduced on the accompanying photographic supplement.

Issued by : The Cement Marketing Co. Ltd.

Address : Portland House, Tothill Street, S.W.1

Telephone : Whitehall 2323

EXTERNAL RENDERINGS

SCRAPED FINISH IN "SNOWCRETE" MIXTURE OR "CULLAMIX"

The mixture should be trowelled on to a thickness of $\frac{1}{4}$ in. and finished off only very roughly with a wood float without any attempt at leaving a finished surface.

With regard to the time which should elapse between placing the finishing coat and scraping the surface, the following are the approximate periods for different weather conditions when "Aquacrete" cement is used in the backing :—

	HOT		WARM		FAIR		COOL		COLD	
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
Hours	6	5	7	6	12	12	17	18	21	24

VERY COLD AND FROSTY—Work should be postponed.

These times will have to be adjusted if a drying wind is prevailing since the scraping will have to be carried out considerably earlier.

When ordinary cement is used for the backing, it may be necessary to scrape within a few hours, according to weather conditions.

For scraping large areas, a good tool to employ is a wood float, the face of which is covered with a strip of $\frac{1}{4}$ in. mesh expanded metal fixed to the sides. This should be drawn across the facing with sufficient force to remove the entire top surface to a depth of about $\frac{1}{16}$ in.

For small areas and for faces near arrises, the scraping should be carried out by holding a metal straight edge or the edge of a trowel at right angles to the rendering, and scraping the surface in short quick strokes.

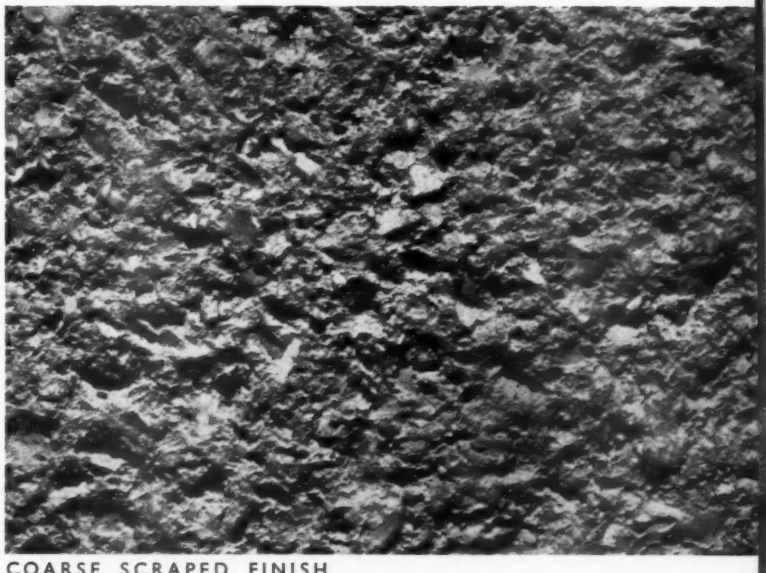
The scraping should be done at different angles in order that marks are disguised. Scraping should be done away from an arris, and not towards it.

Where a large surface has to be treated it should, wherever possible, be divided into panels or bays and the placing and scraping of the complete bay should be carried out.

Any holes which may be formed through scraping too deeply should be filled with the waste mixture and tapped in with a wood float. This should be scraped carefully about two hours later to produce the same texture.

FINE SCRAPED FINISH

MEDIUM SCRAPED FINISH



COARSE SCRAPED FINISH

EXTERNAL RENDERINGS

ROUGHCAST

ROUGHCAST IN "CULLAMIX" OR "SNOWCRETE" MIXTURE

(a) *On hard backing (two coat work).*

The Roughcast Mixture consisting of "Snowcrete" Mixture or "Cullamix" of approved colour graded $\frac{1}{4}$ in., $\frac{3}{8}$ in., or $\frac{3}{16}$ in. down should be dashed on.

(b) *On plastic backing (three coat work).*

The setting coat consisting of one part of "Snowcrete" or "Colorcrete" to three parts of clean sand suitably graded from $\frac{1}{16}$ in. down, should be applied to a thickness of $\frac{1}{4}$ in. and while still plastic, "Snowcrete" Mixture or "Cullamix" Roughcast Mixture graded $\frac{3}{8}$ in., $\frac{1}{4}$ in., or $\frac{3}{16}$ in. down, should be dashed on.

ENGLISH COTTAGE TEXTURE

ENGLISH COTTAGE TEXTURE

A preliminary set coat of "Cullamix" should first be applied to a thickness of about $\frac{1}{8}$ in. While this is still soft, further small quantities of the mixture should be applied from the underside of the float or trowel, which should be gently dragged upwards and held at an angle to the wall. The strokes should be made in one direction—e.g., 45° from the vertical.

Variations of this texture can be produced by varying the amount of mortar on the trowel, the length of the strokes, and the pressure applied.

PEBBLE-DASH

PEBBLE-DASH

(a) *Using "Cullamix."*

"Cullamix" graded for smooth finishes, should be trowelled on to a thickness of $\frac{3}{8}$ in. and dashed whilst plastic with pea gravel, long rake spar, broken glass or other suitable material, until the whole area is covered.

(b) *Using "Snowcrete" or "Colorcrete."*

As above, substituting for "Cullamix" one part of "Snowcrete," White Portland Cement, or "Colorcrete" of approved shade, with three parts of suitably graded sand.

(If an ideal sand is not available, lime putty may be added to the setting coat in an amount not exceeding one-eighth of the quantity of cement, or the proportion of cement may be increased up to a maximum of one part of cement to two parts of sand in order to obtain the necessary workability.)

The Architects' Journal Library of Planning

SCHOOLS

Conclusion

DESIGN • CONSTRUCTION • COST

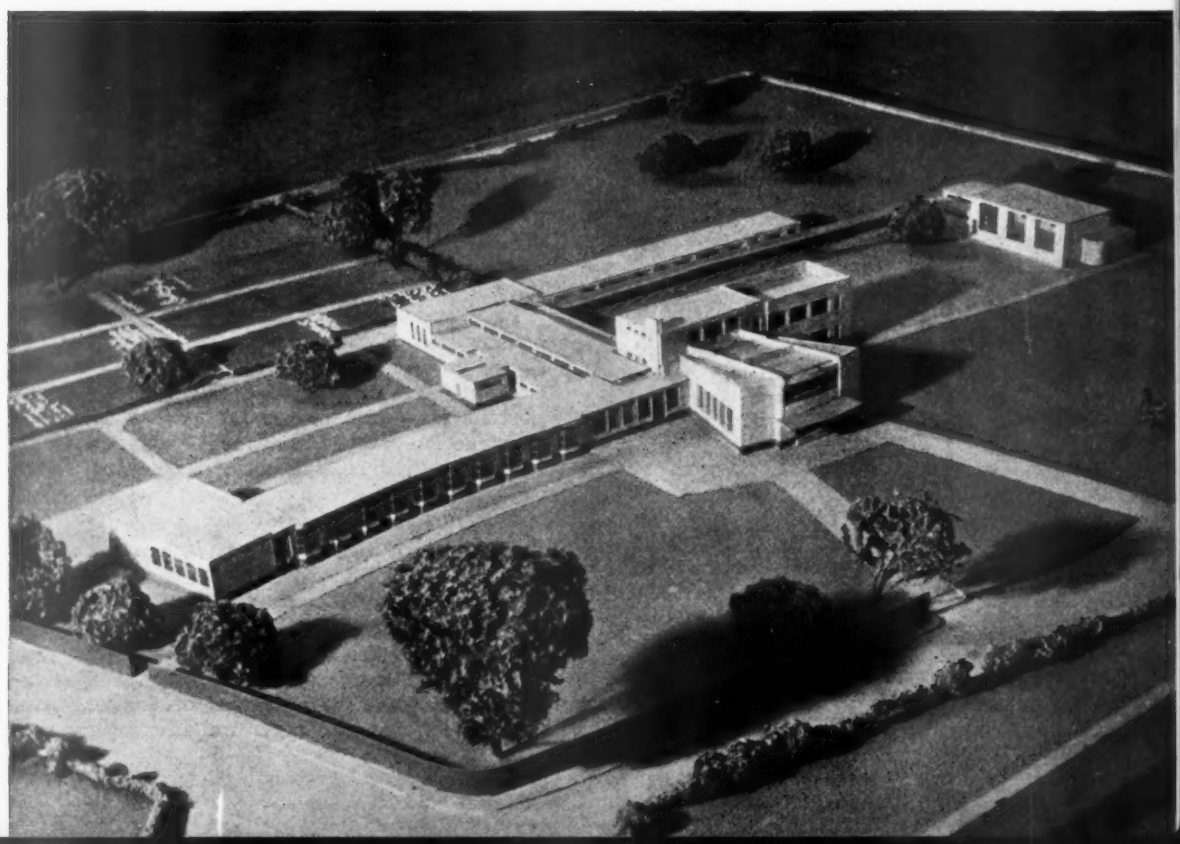
A DESIGN for a successful school must depend first on full understanding of the requirements which these articles have tried to summarize, but finally it must depend on competent integration of those requirements. That is the architect's special job: not merely to juggle with plan units until somehow they fit together, but to turn them into an efficient whole. Ability in all forms of planning plus sympathy with the new schools problem are his necessary qualifications.

The immediate demand for large numbers of spaciously planned but cheap schools calls for a *rationale* of design based on up-to-date industrial technique. The need for lightness and flexibility in construction, particularly in the case of Nursery Schools, has been emphasized by the Board of Education:

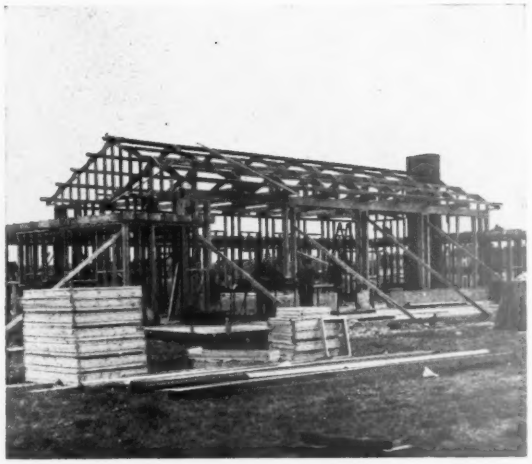
> "... the character of the new building should be such as to permit of easy adaptation and enlargement should it be required. It seems quite clear that the solid stereotyped buildings of fifty years ago are entirely out of place in this connection. The demand is for light buildings, with little of the classroom about them, arranged with a view to freedom and variety of use, to possible enlargement and even replacement in the not too far future."

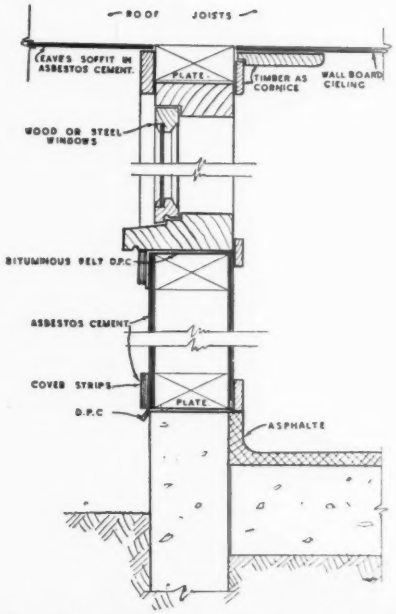
This advice might well apply to all types of elementary schools, more especially to those built on open sites and not more than two storeys high. The lesson of the all too solid schools of the last century should teach us that it is unreasonable to expect a school building to serve an effective, useful life of more than forty years at the very most. In this space of time we must anticipate important changes, some of them beyond prophecy, in social conditions, educational theory, teaching equipment. We must not load the next generation with schools which, when they become obsolete—as they surely will, far sooner than we like to think—are found to be virtually unalterable and immovable.

Some excellent pioneer work has been done by many local education authorities, and the schools of Cambridgeshire, inspired by Mr. Henry Morris, Director of Education, are specially noteworthy. Yet there are still a large number of less inspired authorities who continue to pile up schools of heavy masonry and mass concrete, calculated, apparently, to outlive their usefulness by more like four hundred years than forty. There is one going up in one of the southern counties now, with continuous foundation walls 2 ft. thick and piers between classroom windows 3 ft. wide—3 ft. 9 ins. if you count the heavy wood frames of *sash* windows. Apparent reason: correct Georgian façade required. Unwieldy, archaic, absurdly extravagant, such schools



Model of Impington Village College, Cambridgeshire, now going up. Details and plan are shown on pages 98-99. Architects, Walter Gropius and E. Maxwell Fry.





The Lâche Nursery School, Chester, in course of erection. The simple wood framework, with its system of double studding between windows, was designed to suit the standard asbestos-cement wall panels. The drawing shows the effective simplicity of the detailing. Plan and interior view were shown on page 21. Architects: Gibson and Lemmon.

Table showing comparative thermal resistance of various types of wall. High resistance considerably reduces heating costs and helps to maintain even temperatures.

Construction or material	Thickness in inches	Thermal Resistance. No. of hours for transmission of 1 B.Th.U. per sq. ft. per degree F. difference in surface temperatures
Stock Brick (Dry) ..	4½	0·75
,, ,, ,, ..	9	1·50
,, ,, ,, ..	11 (2-in. cavity)	1·90
,, ,, ,, ..	13½	2·25
,, ,, ,, ..	18	3·0
Stock Brick (Wet) ..	4½	0·4
,, ,, ,, ..	9	0·75
,, ,, ,, ..	11 (2-in. cavity)	1·45
,, ,, ,, ..	13½	0·9
,, ,, ,, ..	18	1·2
Air cavity with metal ties	2	0·4
,, ,, with no ties ..	2	0·8
Cork slab	1	3·3
Wallboard	½	1·25
Cement rendering ..	1	0·3
Plaster	½	0·15
4-in. reinforced concrete ..	4	0·63
4-in. concrete + 1-in. cork + ½-in. plaster	5½	4·1
4 in. by 2 in. studs + aluminium foil, asbestos cement outside, wallboard inside	5	4·7

will be cursed by the next generation as the grim Gothic ones of the nineteenth century are cursed by ours.

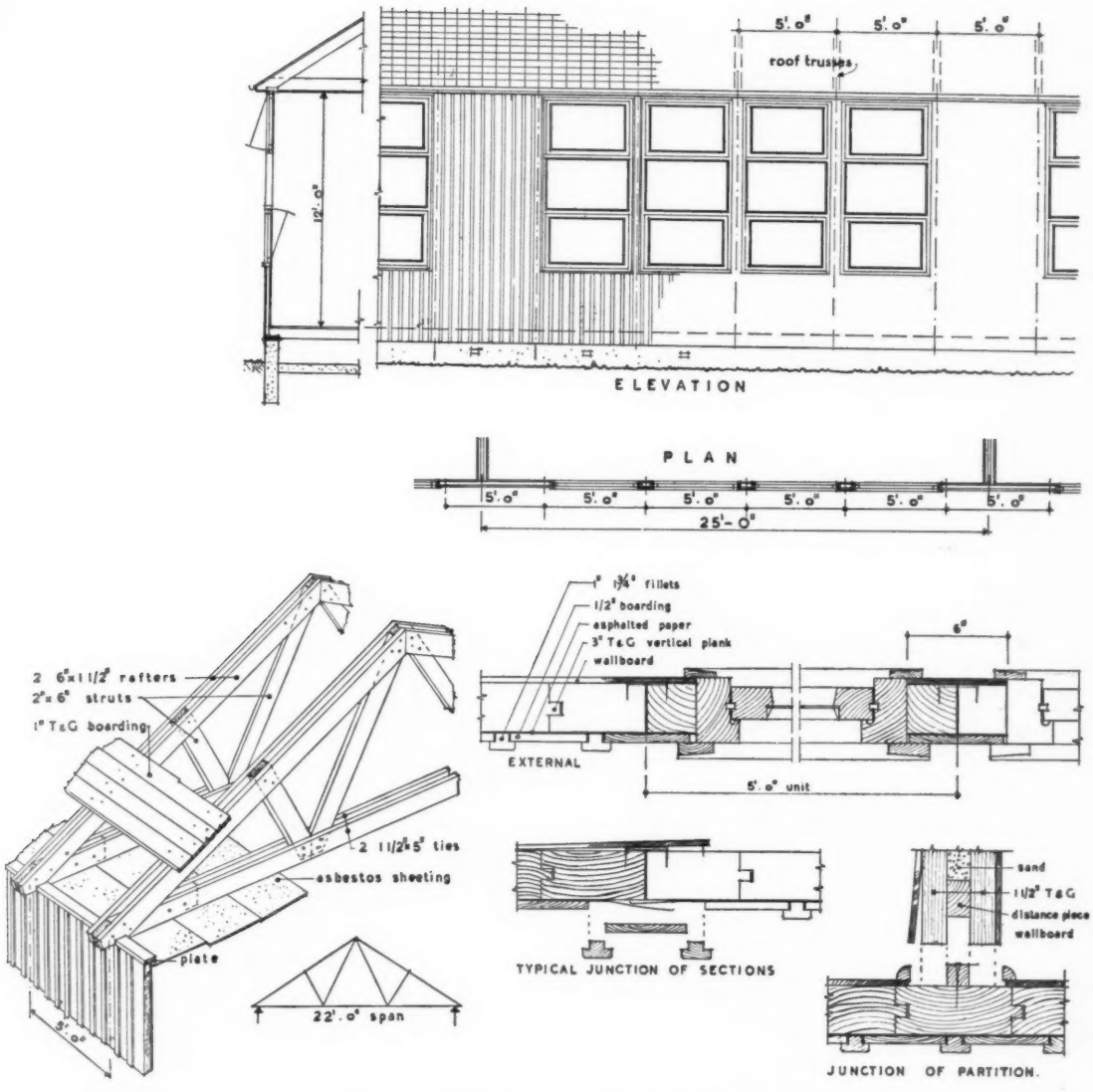
Considering the fact is definitely established that a 4-in. wall—using wood studs, aluminium foil insulation, wood, asbestos-cement or fibre board coverings—has one and a-half times the thermal resistance of even an 18-in. solid brick wall, it seems difficult to understand why primitive and costly methods are still preferred. The idea that temporary or semi-permanent structures are necessarily ugly should have been dispelled by now. In the hands of a good designer they can be made considerably *more* attractive for children than buildings of the solid type.

Elimination of deep foundations is one of the economic advantages of light frame construction. Loads can be carried at isolated points or distributed on a reinforced floor slab. Important attributes to be aimed at in light construction are elimination of footings, high thermal resistance, low maintenance costs.

Brick

The use of brick, though it may soon be superseded by a more rationalized machine technique, can still be applied economically and effectively today, particularly in combination with steel for the bridging of large spans. An example of "semi-light" construction is illustrated on page 98. Here brick has been intelligently used to form weight-carrying and

SCHOOLS



Details of a system of all-timber prefabrication specially designed for schools to be erected by the Glasgow Corporation. The system is of Swedish origin and similar to that already used for municipal houses outside Glasgow. The solid frameless wall, only 3½ ins. thick, has been found highly efficient and has a higher thermal resistance than an 18 in. solid brick wall. Roof trusses are of light prefabricated members bolted together. Though placed at 5 ft. centres, elimination of purlins and rafters results in considerable saving of timber and unnecessary dead load. An adaptation of the same system has been worked out for two-storey schools. Architect : Cyril Sjöström.

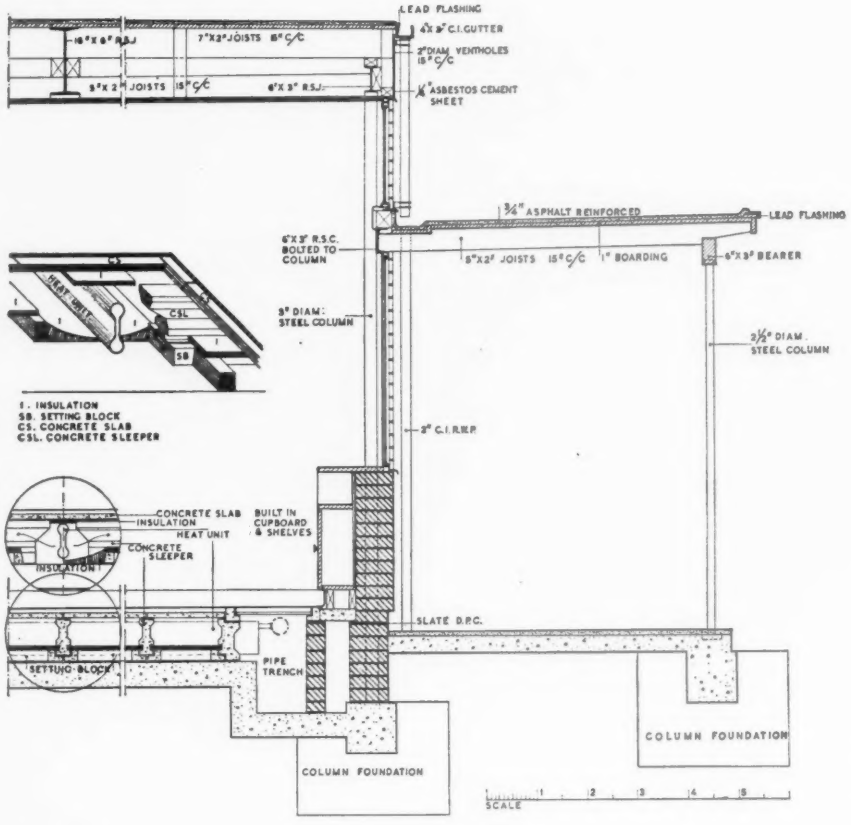
soundproof party walls. It must be remembered that brick, though poor for thermal insulation (*see* table) is most effective for absorption of sound. When used in a not too solid way, brick has also the advantage that it is fairly easy, compared with reinforced concrete, to remove and adjust, and when used sensibly for outer covering the cost of maintenance is negligible.

Timber

For the immediate future, particularly for nursery schools and other schools built one storey high on spacious sites, investigation of a more advanced technique in timber construction would be well worth while.

The wider use of timber has been boosted in this country during the last three years, but the more advanced methods of cutting, processing and jointing have been very little exploited so far, except in the manufacture of furniture, doors and decorative veneers. In the Scandinavian countries, where timber is used enormously, great advances have been made in structural design. Here in England, traditional methods in use before the machine-shop came into being are still in use today. Often this results in unnecessarily heavy timbers, unnecessarily elaborate jointing. An example of an economical roof truss, built up of light members bolted together, is illustrated.

Combinations of wood and steel plates and extensions of the principle of lamination make it possible to bridge large spans without the use of heavy timbers. In Sweden a laminated



Typical classroom details of Impington Village College, illustrated on the opposite page. The floor heating detail is particularly interesting.

I-beam built up of multiple layers of wood and formaldehyde resin, is frequently used in a slightly curved form for spans of 30 to 50 ft. The result is remarkably light and interesting in effect, and no painting or upkeep is necessary. It would be admirable for assembly hall roofs.

Wood adapts itself well to prefabrication. Two examples of its use for standard sections are illustrated. Available for exterior standard sections in the near future will be "super" plywood panels, consisting of alternate layers of paper-thin plywood and formaldehyde resin. These have already been successfully tested in the United States, but at present their production is expensive.

Asbestos-cement is a practical and economical outer covering which can be used appropriately with wood construction. Reinforced panels can now be obtained. It is often assumed to be inevitably disagreeable in appearance, but if asbestos-cement fillets are used instead of the popular stained wood ones, and if bright colours are used for painted windows, a thoroughly satisfactory effect is possible. Asbestos-cement buildings are usually designed ignorantly, but a sense of proportion and colour can do wonders.

Common objections to wood construction are: temporary character, fire risks, cost of upkeep. To these objections architects anxious to convert unbelieving authorities can reply:—

(1) Schools should in any case be temporary in the sense of being easily removable, but sound wood construction is, in fact, anything but temporary in the sense of standing up to hard wear; witness the new-looking houses of the Pilgrim Fathers still inhabited on the coast of Massachusetts.

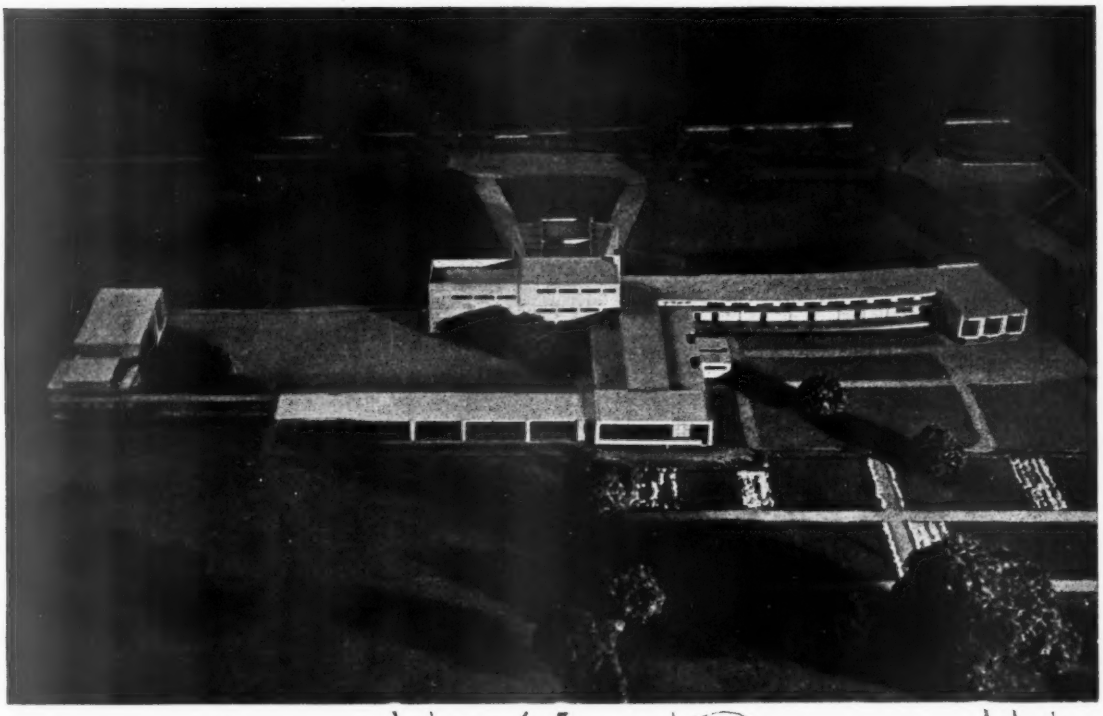
(2) There is little risk of fire in a school where coal fires or exposed heating elements are not employed, and means of escape, particularly in an open ground floor plan, is simple and immediate. Insurance premiums are no more, and a fire-wrecked "solid" building is in any case a greater liability.

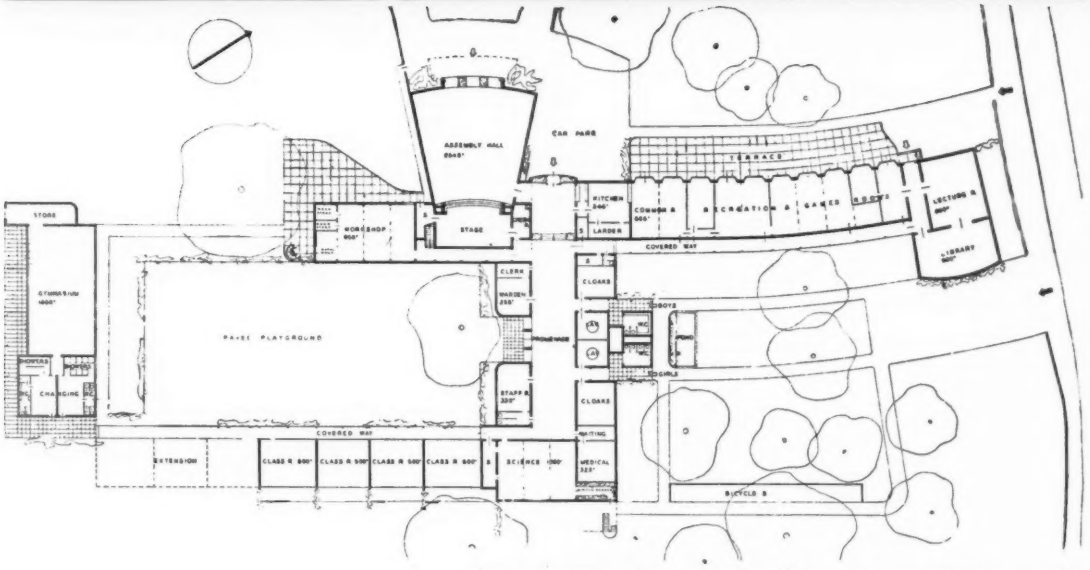
(3) Cedar, which weathers an attractive silver grey, needs no attention whatsoever, and if painted deal boards are used, the cost of painting the small amount of non-window surface is not high.

Steel and Reinforced Concrete

Steel is not available for intensive economic use at present, but under less peculiar social conditions its extreme lightness and adaptability have the greatest potentialities. A light frame technique, used in conjunction with wall sheathing of pressed metal of synthetic and fibrous materials, can be fabricated with precision and assembled rapidly. Large spans can be easily bridged, window divisions reduced to minimum thicknesses. In other countries, notably America, lattice girders and stanchions have produced low-cost structures of great lightness and rigidity. In England the less adaptable R.S.J. methods are too universally used.

Reinforced concrete technique, though cheap when unrestricted by obsolete bye-laws and carried out on a large scale, cannot be considered the most suitable structural system for schools. The "flexibility" claimed for concrete





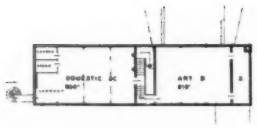
Impington Village College, serving Histon and seven of the surrounding Cambridgeshire villages : designed to provide for the cultural and social life of the senior children and adults of the community. The school will serve 240 boys and girls who formerly received very limited education in small all-age parochial schools.

The wing on the right of the assembly hall is largely for evening adult education, which will include University extension courses in the arts and sciences, handicrafts, agriculture and physical training.

The " promenade " provides a nucleus and will be an attractive feature in the intervals of concerts and plays.

Attached to the building will be community playing-fields and a demonstration centre for agricultural and horticultural education.

Architects : Walter Gropius and Maxwell Fry.



PLAN OVER STAGE

is confined to the drawing-board stage. When once erected it is notoriously inflexible. It is one of the most expensive types of structure to move and alter, and elaborate precautions are necessary to overcome sound conduction. However, a 4-in. reinforced concrete wall with a 1-in. cork lining is more efficient in thermal insulation than a brick wall four times as thick (*see* table on page 96), and with thin walls and large spans an admirable effect of lightness is possible. But the disadvantages must be carefully weighed against the wholesale enthusiasm for highly competent, exquisitely designed schools in reinforced concrete to be seen on the Continent—particularly in France, Switzerland, and Scandinavia.

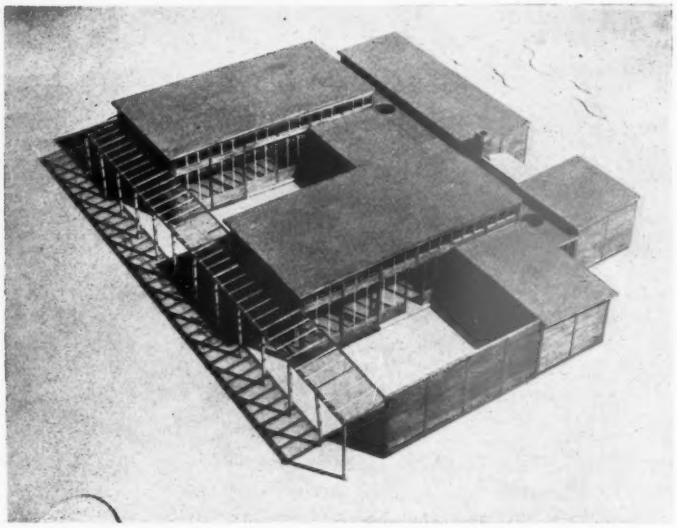
Prefabrication

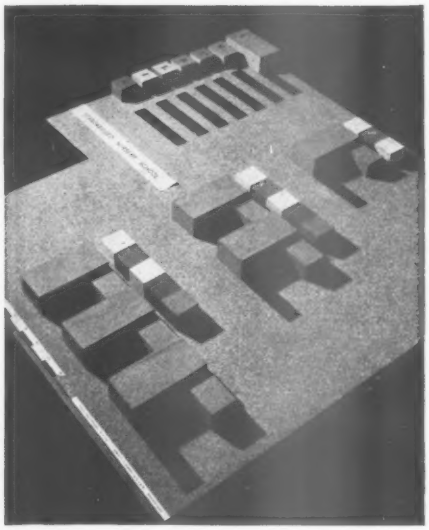
An efficiently worked out system of prefabrication based on standardized units would be applicable to all two-floor schools. It would be perfectly practicable under present conditions

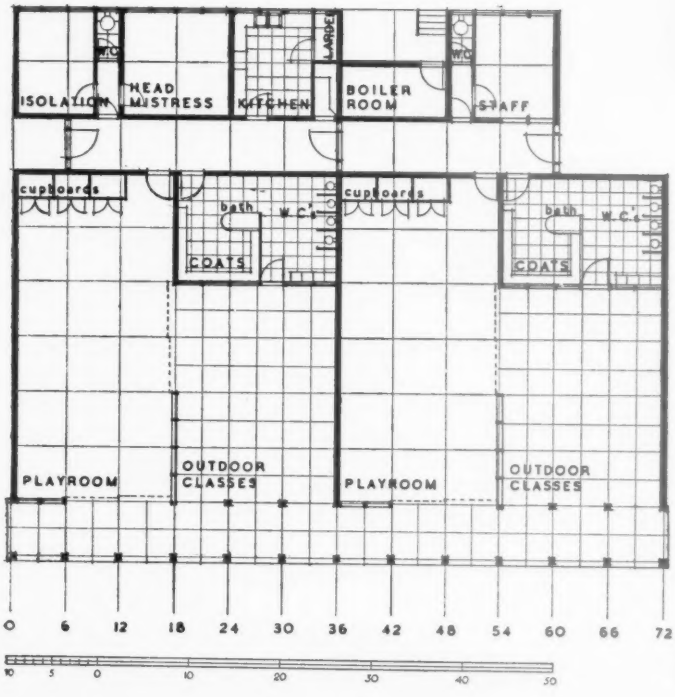
and it could materially reduce costs. Prefabrication already exists in the manufacture of a number of building elements, such as windows, doors, radiators, fibre-board panels, sanitary fittings; but these elements cover only a small proportion of a complete building, and there is practically no correlation between them. In building today confusion and waste are caused by mixing ancient and modern techniques—some fantastically primitive and wasteful, others highly scientific and precise.

A comprehensive prefabrication system for schools, based on wall, floor and roof units of suitable and variable sizes, should have these twelve attributes :—

1. Speedy assembly.
2. Strength with lightness : units easily handled by two or three men.
3. Virtually dry construction.
4. Units sufficiently small and rigid for long-distance delivery.
5. Effective heat insulation.
6. Effective sound insulation (particularly in partition walls).





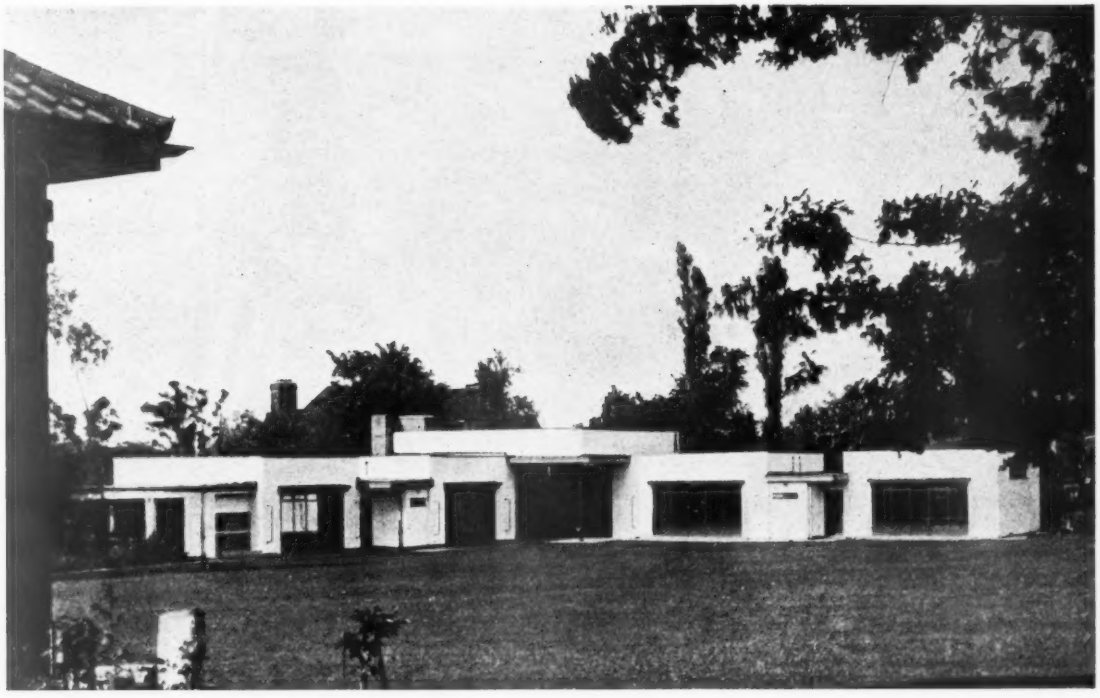


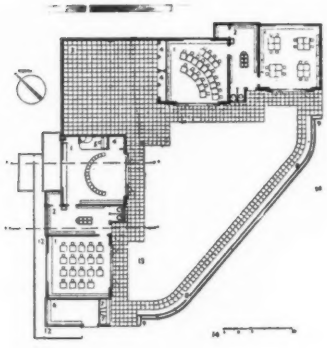
Expanding Nursery School designed on the unit system. Plan and photograph of model show the school in the intermediate stage : two playroom units intended for up to 40 children (more than the recommended number) in each. The demonstration block-diagram shows the three possible stages : for 40, 80, 120 children. Corresponding coat-room, lavatory and staff units can be added with each playroom.

Each unit is built up of 6 ft. wide wood-framed wall sections, bolted together. Outer cover is in flat-faced weather boarding with wood battens at joints, inner cover in various fibre-board finishes. Insulation is by aluminium foil stretched between uprights. The glass-roofed verandah is an additional feature which most nursery school teachers would prefer to do without.

Architects : Ernö Goldfinger and Mary Crowley. The units are marketed by Boulton and Paul.

SCHOOLS





48

Single storey Junior School attached to the old King Alfred School, Hampstead. Classroom arrangement is attractively informal, with down-to-ground folding windows giving access to a lawn and covered play space between the two groups.
Architect : E. C. Kaufmann.

KEY : 1, Classroom. 2, Cloakroom. 3, Open covered playhall. 4, Cupboard. 5, Classroom stage. 6, Workshop. 7, Rabbit hutches. 8, Flower box with concrete table. 9, Bird bath. 12, Access ramp. 13, Grass-covered forecourt. 14, Playing field.

7. Damp-proof.
8. Rot-proof.
9. Hygienic.
10. Economical in first cost and upkeep.
11. Easily adjustable or removable.
12. Units well related in design.

The actual materials used are not important, provided they have these attributes. One of the advantages of prefabrication on a large scale is that use of high-grade materials does not noticeably increase cost; the saving of labour by efficiently organized assembly is in proportion much greater than the saving in quality of materials when these are mass-produced.

Notable examples of schools designed on a scientifically applied system of prefabrication are Richard Neutra's California schools (illustrated on page 43). They have a framework of light lattice steel, corrugated aluminium outer sheathing, partitions and inner sheathing of gypsum compound and fibre board. Rejected at first as crudely revolutionary (America is even more conservative architecturally than England) after a three years' trial they have proved to fulfil both educational and economic requirements to a remarkable degree.

In England, apart from the promising preliminary canters illustrated in this section, there have been no serious attempts at prefabrication for schools. An American system, based on interlocking pressed steel plates with a highly resistant vitreous enamel finish, is shortly to be marketed in this country. Though at present designed for houses, it seems reasonable to expect that a similar system could be worked out for schools.

Usual objections to prefabrication are that it limits planning possibilities and produces a monotonous effect. But it must be remembered that units, particularly interior units, are usually made in two or three sizes designed for maximum adaptability, and that standardized units

certainly do not imply standardized plan forms. In fact, standard wall sections, if well designed, provide a "module" which, while allowing ample variety of designs, at the same time ensures admirable consistency in character and proportion. Prefabricated buildings can adapt themselves to site and circumstance as easily as brick-on-brick buildings, and surface finishes are certainly not limited. Prefabrication does *not*, as some people think, eliminate the architect, for obviously problems of planning and composition remain the same.

Cost

Any comparative computation of costs for different types of construction would be impracticable, as so many special factors, such as size, nature of site, and locality have to be taken into account. It is important that materials should be chosen not for their intrinsic value but for their efficiency and low maintenance costs. The saving effected by high thermal insulation has already been emphasized.

Provision of first-rate equipment in sanitation, heating and lighting is far more important than the provision of extra accommodation or expensive finishes. It is second in importance only to adequate and well-disposed space in classrooms. P.C. sums for general services should be one of the last items to be cut.

Character

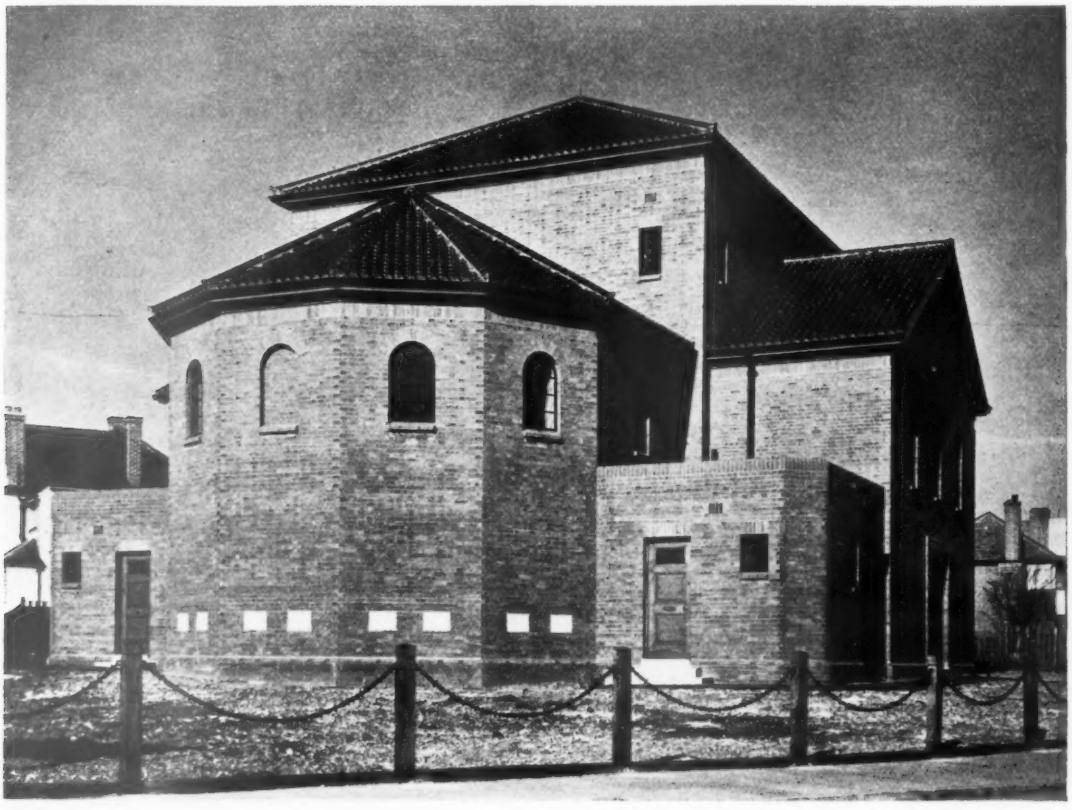
The most important consideration in judging the final appearance of a school should surely be its impression on the children. Any suggestion of pretentiousness or exaggerated scale should be avoided, and there is a good case for bringing the scale down below that of an ordinary building for adults. At any rate, an "imposing city edifice" is the last thing the children want. Monumentality should have disappeared long ago from all everyday buildings, and, above all, it should have no place in the school today, where education, its monumental E struck down by child psychology, is no longer stern but smiling.

The school today must be welcoming, a place of light and colour. In its design the characteristic twentieth-century attribute of strength-with lightness seems most apt.

THE END

Detail of the Jules-Ferry School, Paris, a plan of which was illustrated on page 35. Architects : Dubreuil and Hummel.

METHODIST CHURCH, FRIERN BARNET

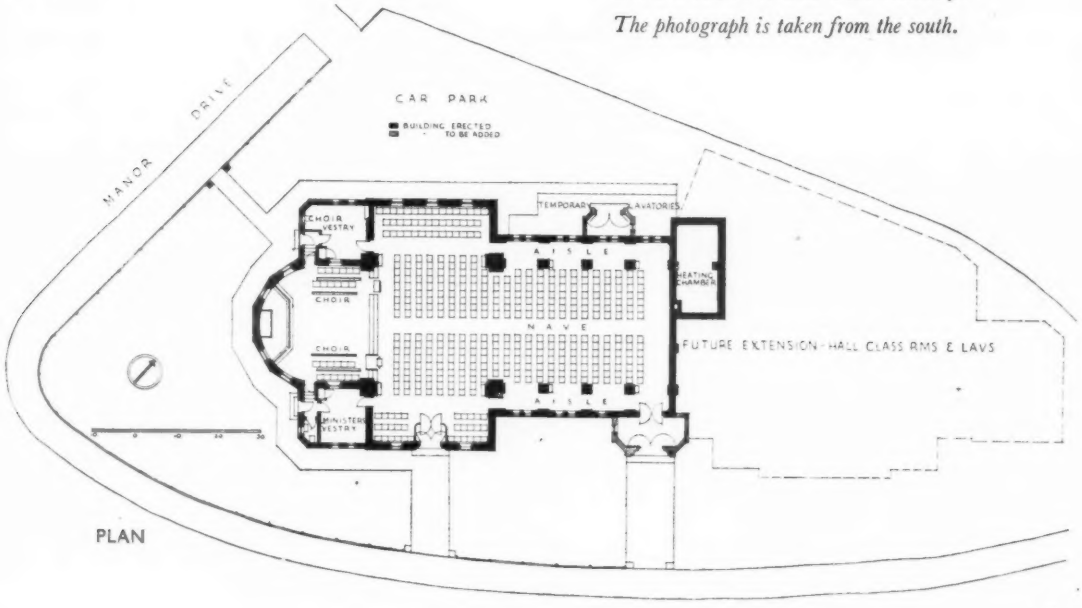


DESIGNED BY R. C. WHITE-COOPER AND SYDNEY R. TURNER

GENERAL PROBLEM—*The first section of a scheme which, when completed, will consist of a church seating 450 persons; a hall seating 250, fitted for lectures and cinema; classrooms; church room; service and cloakrooms. There is a car park for 20 cars.*

PLAN—*The pulpit, lectern and choir rails are removable and can be cleared when necessary.*

The photograph is taken from the south.



PLAN

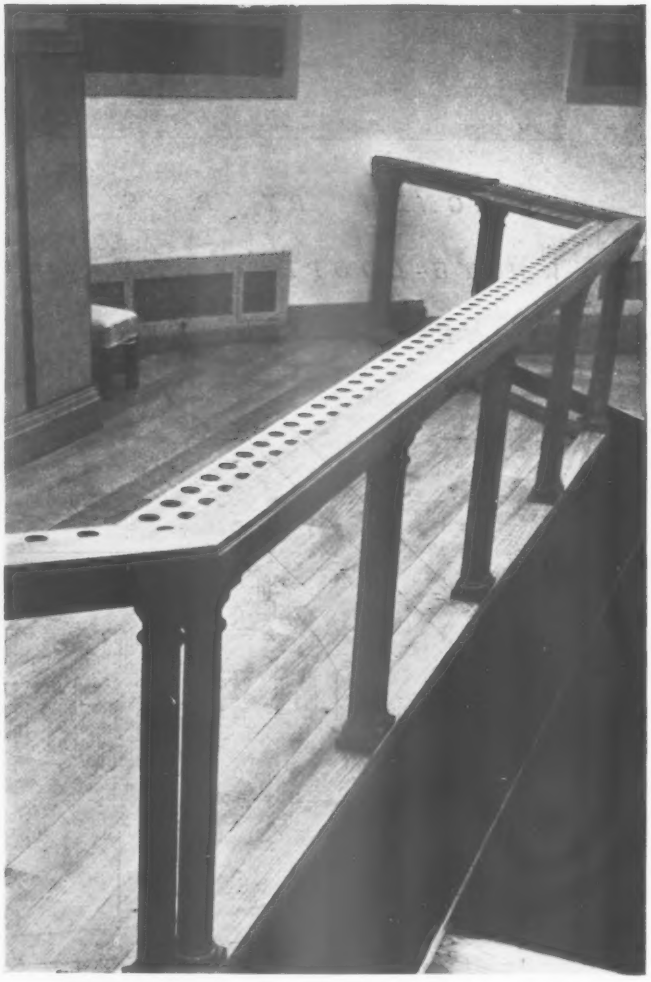
G

METHODIST CHURCH, FRIERN BARNET: BY R. C.

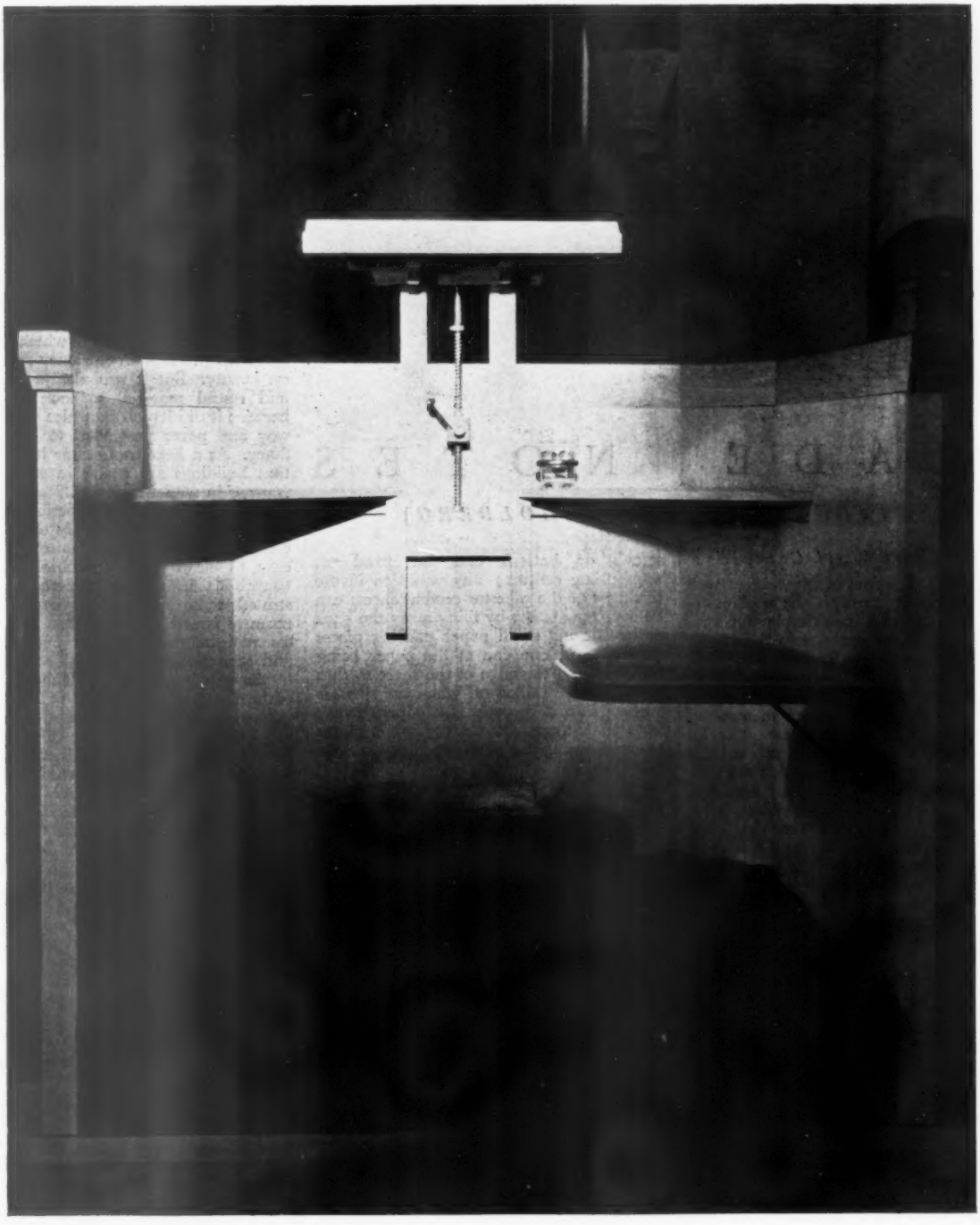
CONSTRUCTION—*Walls are brick; roofs, black glazed tiles. The vaulting of the apse and dome and the ceilings of the nave and transepts are of plaster on expanded metal hung from R.S.J.'s; the west wall being of acoustic, and other surfaces of ordinary, plaster.*

INTERNAL FINISH—*Walls and ceilings are distempered ivory tint; window glass is amber colour; joinery, oak and Columbian pine, stained. Floors are: apse, oak strip board; church and vestries, oak blocks on concrete.*

The photographs show: above, the apse and the lectern; right, the communion rails; below, the nave.



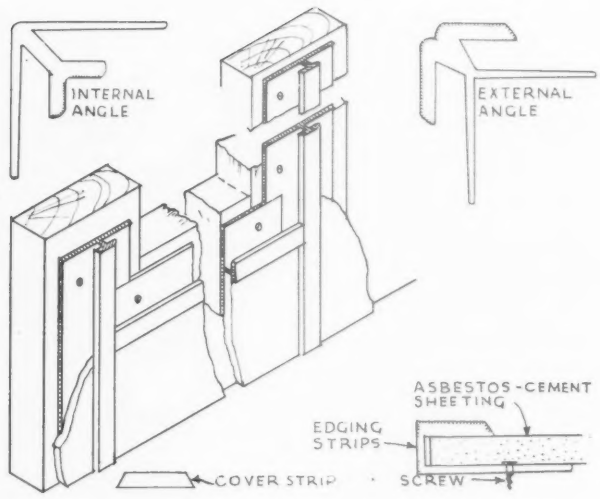
WHITE-COOPER AND SYDNEY R. TURNER



SERVICES.—*The church is wired for floodlighting and has concealed lighting in specially designed masks about 10 ft. from the floor. The dome of the tower has four octagonal lights, which allow daylight from the windows in the tower. These four lights are also fitted for electric light. Heating is by a low-pressure hot water circulating system through concealed vectairs, with front panel, recessed in the walls in the apse, nave and transepts, and cabinet vectairs on the piers in the tower and nave.*

CONTRACT PRICE—*£8,273, including temporary buildings. The photograph is of the interior of the pulpit, showing the reading desk, which can be raised or lowered by turning the winch handle beaneath it.*

For list of general and sub-contractors see page 600.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Fixing Sheet Wall Coverings

WITH all forms of large sheet wall covering there is the problem of fixing them in a simple but neat way. The ordinary cover strip fixed with screws works quite well, but the screw heads are liable to look rather untidy, the same criticism applying to the even simpler method of drilling the sheets themselves, for this gives a spotty appearance along the line of the joins. True, there are various hollow strips on the market which are split down the centre line half way through, being closed over the screws after fixing so that they look like an ordinary half-round or D section and show no screws at all. But it is doubtful if these strips could ever be opened up and used again; admittedly it would not often be necessary, but there *are* times when people want to fix shelves and other things and it seems a pity that they should not be able to do so without spoiling the look of the fixing strips.

●

A new range of fixing strips has recently been announced by Turners, who have realized that it is no good marketing a wall covering unless you make it simple for people to fix it. The idea is quite simple and consists of lengths of H-section channel with extra wide flanges on the wall side to take the screws, the panels being slipped into position after the strips are fixed, the result being that screws are only visible in the closing strip which covers the final join after you have been all the way round the room, though a certain number of screws may be visible at awkward places round windows or serving hatches. The drawing at the head of these notes shows typical details of fixing for horizontal and vertical joints, and the other sections available are also shown, including the internal and external corner units and the capping piece for dados or edging of any kind. Being made of aluminium the strips can be easily cut to length with a hack-saw and are very easy to drill, mitres being trimmed up with a flat file. In practice the general layout of the sheets should be determined first and the wall can then be plugged for the fixing screws or battens can be fixed at appropriate centres; any variation in the thickness of the asbestos cement sheets can be overcome either by filing away the back or by sticking small paper packing pieces on the back, one end of the paper being turned round the edge of the sheet so that it will not be pulled off when the sheet is pushed into its groove. Strip prices vary from 3d. to 1s. a foot run, the corner pieces naturally being the most expensive.

●

The marketing of this strip seems to me a sensible step on the part of the manufacturers concerned. Turners are not, after all, much interested in metal work of any kind, and the marketing of this strip might easily have been left to the aluminium people, but it is very much easier to buy the wall panels and the fixing strips from the same firm and Turners are very wise to do the selling themselves. Aluminium, too, was a sensible choice, for apart from the ease with which it can be worked it looks good as well and has none of the rather cold brilliance of chromium plate or stainless. While I prefer the slight dullness of the oxide film, it is quite easy to keep the first bright finish by using ordinary furniture polish. This procedure does not seem to be recommended by any of the aluminium companies, but I have used it for six or seven years without any apparent ill effects. —(*Turners Asbestos Cement Co., Trafford Park, Manchester, 17.*)

Automatic Stokers

While automatic stokers have been in use for many years on industrial jobs it is only recently that they have come to be taken for granted in the private house or the office block. It is interesting therefore to find that Hopes are applying a number of their stokers for straightforward heating and process work in factories, and that they have also been responsible for quite a lot of cleaning up in the usual untidy and gloomy stoke hole. Their unit fits quite neatly in front of most types of industrial boiler, the sideways taper of the hopper leaving the doors of a Lancashire boiler clear so that the fireman can still work a slice bar for cleaning fires. The choice of suitable boilers and stokers for factories is perhaps more the job of the maintenance engineer than of the architect, but Hopes have just produced a series of leaflets showing how their stokers have been applied to most types of boiler, and the underfeed type has the advantage that smoke emission is reduced. Nobody quarrels with the top feed type on the score of efficiency, but feeding the fuel on top of the fire is bound to produce more smoke, as the volatiles pass direct to the stack with very little chance for getting properly burnt. —(*Hope's Heating and Lighting, Ltd., Halford Works, Smethwick, Birmingham.*)

Thermolux Developments

Thermolux started life as a light diffusing and heat insulating glass in which the main emphasis was laid on efficiency rather than on beauty. But it was always a pleasant and restful material to look at, simply because it did its job in a nice quiet sort of way and never pretended to be anything fancy. As a heat transmitter it is poor, so that buildings are cooler in summer and warmer in winter; as a diffuser and glare eliminator it is almost perfect; as an obscured glass it is the only one which is dead smooth on both sides and therefore easy to clean. The exhibition at James Clark's Blackfriars Road showrooms demonstrated these and other virtues, and a recently issued catalogue sets out all the essential information in a perfectly clear and straightforward way. The catalogue, by the way, is a revised and enlarged edition of the one which was noted in these columns some months ago and praised as being a full and sane presentation of a first-class product. At Clark's exhibition there was shown, however, a new Thermolux development which has immense possibilities both for good and evil. Thermolux, as you know, consists of two sheets of glass with a layer of glass silk in the middle of the sandwich. But the glass silk can be made in a variety of colours, "and these can be mixed in much the same way as a painter mixes colours on his palette," the result giving you something very like stained glass without any lead-work, the maximum panel size being 10 ft. by 6 ft. Now for such things as shop fronts this seems to me an admirable idea, for any design of name or trade-mark could easily be incorporated in the fascia and would stand out well by day while becoming an illuminated sign by night, for the internal lighting of the shop would shine out through it, thus killing three birds with one stone, for you would also get more light into the shop during the day. For public buildings of all kinds the idea seems good too; hotels, for instance, could have appropriate designs on bathroom and other doors. No upkeep either, and no little boys scrabbling painted signs and turning them into something quite different.

●

And for the private house? Here the idea seems a little less good, for the use even of ordinary Thermolux raises one or two problems, the most important being that voids do not look like voids at all, but appear as whiteish panels in the wall. Colour in staircase windows and transoms may be very pleasant in the hands of a good designer, but with all new materials of this kind one instinctively thinks of the horrors someone is certain to perpetrate sooner or later and one therefore has a quite illogical

prejudice against it. Illogical because it is obvious that any material can be ruined by insensitive handling, and manufacturers should not be blamed for the crimes of designers, though of course they nearly always are. My early impression of slightly shocked surprise is clearly indefensible and the Thermolux people should be congratulated on providing a means for doing something which could not be done before. —(*The Thermolux Glass Co., Ltd., 1 Albemarle Street, Piccadilly, London, W.1.*)

Lighting Specialists

I have received a further letter from Mr. G. V. Downer about a note which appeared in these columns on March 10, and in which I maintained that, just as the doctor is trained to write his own prescriptions, so should the architect be able to understand current lighting technique. Mr. Downer's letter is printed below.

> With reference to your comments on my letter, I would point out that while a doctor is trained to write his own prescriptions and does so in general practice, he does not attempt to do the specialist's work for him when he calls one into consultation, nor does he choose a specialist on technical grounds based on his own equal or superior knowledge of the specialist's work. If he were able to do so he would have no need of the specialist's services. No, he judges the specialist in his special field.
>
> I agree that the architect is an independent consultant, but he corresponds to the general practitioner in medicine, and we (G.V.D.) are in the position of the specialist (in lighting). I submit there is no point in our trying to teach the architect our special knowledge of lighting any more than the brain or heart specialist need instruct the G.P. in the details of his own work before he can expect to be called in for brain or heart cases.
>
> On the other hand, an understanding of general principles is always an advantage in enabling the G.P. or architect to co-operate intelligently with the specialist.

•

Judging by the final paragraph of this letter I think that Mr. Downer and I are largely in agreement, but we differ in the amount of information which we think should be given to the architect. Some manufacturers produce fittings which sell mainly on appearance, and a series of pictures is all that any architect wants. Mr. Downer sells on efficiency, more foot-candles for fewer watts, and I maintain that he *cannot* give the architect too much information, even though it may appear to be a waste of time. But because I think I am right, that is no conclusive proof that Mr. Downer is wrong.—(*G.V.D. Illuminators, Ltd., Aldwych House, Aldwych, London, W.C.2.*)

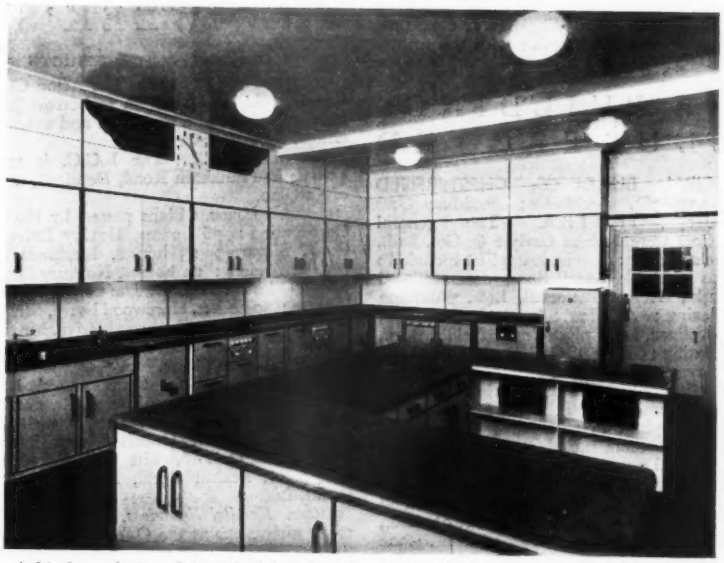
LAW REPORT

BUILDER'S UNSUCCESSFUL APPEAL

Jones v. *Temple.—Court of Appeal. Before Lords Justices Greer, Slesser and Clauson*

THIS was an appeal by Mr. L. J. Jones, a builder, of Sevenoaks, from a judgment of his honour C. M. Pitman, K.C., one of the Official Referees of the High Court, in favour of Mr. Wm. Temple, who was developing an estate at Carters Hill, Sevenoaks.

Mr. Miller, K.C., and Mr. Howard appeared for the appellant, and Mr. Fortune and Mr. Thompson for Mr. Temple.



A kitchen, designed by M. Marsden for use in factories or industrial canteens, which has recently been installed by the Yorkshire Electric Power Co., at the Thornhill Power Station.

The question in the reference was as to the cause of a serious subsidence in one of two houses built by Mr. Jones for Mr. Temple on land at Carters Hill, Sevenoaks, owned by Mr. Temple. Mr. Jones claimed the balance of account in regard to the erection of the houses and there was a counterclaim by Mr. Temple in relation to alleged breaches of contract by Mr. Jones in connection with the erection of one of the houses. In the result the Official Referee gave judgment, on balance, for Mr. Temple for the sum of £1,909 odd, with certain interest. The appeal was based on the submission, assuming the facts as found, that the Referee had gone wrong in the assessment of the damages and had applied a wrong measure of damages.

It appeared that one house, built on a slope of the hill, showed cracks and subsidence, and Mr. Jones's case was that this was due to a movement in the land, similar to a landslip. Mr. Temple, on the other hand, contended that the damage was due to inadequate foundations. This Mr. Jones denied, and said if a small sum had been spent on underpinning, it would have been effective, but nothing was done.

The Court, after hearing legal argument, dismissed the appeal, subject to a variation of the order as to interest.

Lord Justice Greer, in giving judgment, said the appellant contended that the Referee went wrong in law in finding the amount of damages which he (the appellant) should pay. Mr. Miller had contended that the Referee was wrong in not confining the damages to what it would have cost to underpin the house. But here no evidence was called as to whether underpinning would have saved the house and the Court could not therefore send the matter back for re-trial on that ground.

The next question was one of some greater difficulty. Mr. Miller had said that in any event the measure of damages applied by the Referee was wrong in law, because he thought the damages should not be the cost of replacement, but the actual loss, viz., the difference between the value of the building, as it should have been, and the site, less the cost of taking down the unsatisfactory building. But when the Court considered all the circumstances of the case it was, his lordship thought, open to the Official Referee to award as damages a reasonable estimate of the cost of building a house which would replace the defective structure. It was open to the Referee to give as damages a reasonable estimate of the cost of building the house so as to leave Mr. Temple in the same position as he would have been in if there had never been any breach of contract. Therefore Mr. Miller failed on this point.

The Court thought that £176 should be deducted from the amount of interest awarded. The appeal would be dismissed, subject to that variation of the order.

Lords Justices Slesser and Clauson agreed, and remarked that they had nothing to add to Lord Justice Greer's judgment.

•

Manufacturers' Items

In order to cope with the increasing ramifications and responsibilities of the company the following additions have been made to the directorate of Thos. W. Ward, Ltd., Sheffield: Mr. Harold W. Secker and Mr. Harold Vernon have been appointed full directors of the company; Messrs. Joseph Staves, William Wood, H. Glover Faull and C. Leslie Fry have been appointed local directors.

•

A bulletin entitled *Architectural Metalwork: Its Protection and Maintenance*, has just been issued by the Lead Industries Development Council, of 38 King William Street, E.C.4. The foreword states: "The double protection afforded by red lead makes it the best primer available. For an impartial evaluation of the performance of red lead and for reference to protection against corrosion generally the fourth report of the Corrosion Committee of the Iron and Steel Institute should be consulted. This bulletin contains the relevant information from this report and gives the recommended formulæ for red lead."

•

Messrs. Shanks & Co., Ltd., inform us that, as from March 9, the prices of luxury baths are subject to one 10 per cent. plusage, not plus 10 per cent. plus 10 per cent. as formerly.

We regret to record the death of Mr. J. A. Tomlinson, director of Wheatley & Co., Ltd., after nearly 59 years' service with the firm.

THE BUILDINGS ILLUSTRATED

MUNICIPAL BUILDINGS, CHESTERFIELD (pages 573–576). Architects: Bradshaw Gass and Hope, FF.R.I.B.A. The general contractors were Robert Carlyle & Co., Ltd., and the sub-contractors and suppliers included: Thomas Walmsley and Sons, constructional steelwork; Henry Tattersall, Ltd., plumbing and glazing; A. Sharrocks, Ltd., painting; A. S. Wallace, Ltd., plastering; Pickles Bros., Ltd., slating; Robert Carlyle & Co., Ltd., hollow type concrete floors; John Dickinson & Co. (Bolton), Ltd., asphalte damp-course work; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt to roof flats; Hodkin and Jones, Ltd., reconstructed stone; Art Pavements and Decorations, Ltd. reconstructed marble work; Carter & Co., Ltd., wall and floor tiling; Hollis Bros. & Co., Ltd., wood block flooring; J. B. Johnson & Co., Ltd., fibrous plasterwork; F. Tory and Sons, stone carving; W. H. Heywood & Co., Ltd., patent glazing; Compton Bros., Ltd., special copper-light glazing; J. A. King & Co., Ltd., concrete and glass decklights; George Wragge, Ltd., ornamental metalwork; W. and R. Leggot, Ltd., locks and door furniture; S. Dixon and Sons, fire appliances; G. N. Haden and Sons, Ltd., heating and ventilating installation; Electrical Installations, Ltd., electric lighting installation: Etchells, Congdon and Muir, Ltd., electric passenger and book lifts: Faulkner and Sons, Ltd., lightning protection installation: H. H. Martyn & Co., Ltd., special panellings, Gillett and Johnston, Ltd., electric clocks; Wm. Higgin, Ltd., special furnishings; Morison & Co., council chamber furnishings; Post Office Telephones Department and The Automatic Telephone and Electric Co., Ltd., telephone installation; Ericsson Telephones, Ltd., inter-communicating telephones in Borough Treasurer's Department. Approach Roadway and Staircase from West Bars: General contractor, A. F. White. Hodkin and Jones, Ltd., artificial stonework.

METHODIST CHURCH, FRIERN BARNET (pages 595-597). Architects: R. C. White-Cooper and Sydney R. Turner. The general contractors were John Willmott and Sons, Ltd., and the sub-contractors and suppliers included: Lawford Asphalte Co., asphalt; Maidenhead Brick and Tile Co., facing bricks; Dawnays, Ltd., structural steel; Roberts Adlard & Co., tiles; Jos. Ebner & Co., wood-block flooring; Mumford, Bailey and Preston, central heating; E. Wight & Co., electric wiring; Keith Blackman, Ltd., ventilation and fan; John Bolding and Sons, sanitary fittings; Rowe Bros. & Co., casements; Haywards, Ltd., iron staircases; May Acoustics, Ltd., plaster.

•

Slum Clearance

The most recent figures showing the position of slum clearance are summarized below:—

Clearance Areas and Orders

During February local authorities declared areas comprising 5,049 houses, representing the displacement of 18,901 persons, as compared with 6,590 houses and a displacement of 27,232 persons in January.

The Orders submitted during February covered 3,713 houses and the displacement of 13,487 persons, as compared with 4,579 houses and the displacement of 19,088 persons in January.

The Orders confirmed during February covered 3,541 houses and 17,193 persons as compared with 1,880 houses and 6,793 persons in January. The total number of houses in confirmed Orders is now 176,466 involving the displacement of 753,095 persons.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

ACTON. *Town Hall, etc.* The Acton Corporation has obtained sanction to borrow £20,951, for the erection of a town hall and extension of offices.

DEPTFORD. *Flats.* The L.C.C. is to erect 44 flats in Frankham Road, Deptford, at a cost of £28,600.

ILFORD. *Houses.* Plans passed by the Ilford Corporation: 56 houses, Huxley Drive, Mr. G. F. Siegerts; 25 houses, Marlands Road, Mr. T. Anders; 24 houses, Norbury Gardens, Mr. J. Giles; 10 houses, The Glade, Mr. E. W. Palmer; 30 houses, Harewood Drive, Mr. T. W. Parker; 10 houses, Harewood Drive, Mr. W. M. Edwards; seven houses, Tolworth Gardens, P. G. Ashton and Sons.

LEWISHAM. *Houses.* Plans passed by the Lewisham B.C.: Seven houses, Ravensbourne Park, F. Thoburn, Ltd.; flats, Russell Street, Sydenham, L. A. Gulliford and Partners; flats, Loampit Hill, Fitt and Prior Hale; 10 houses, Bexhill Road, New Ideal Homesteads, Ltd.

SIDCUP. *Hospital Extensions.* The L.C.C. is to make alterations at the Queen Mary Hospital, Sidcup, and provide verandahs and a billiard room, at a cost of £6,600.

SOUTHGATE. *Shops, etc.* Plans passed by the Southgate Corporation: Seven shops with flats over, Green Lanes, and 13 shops with maisonettes over, Chase Side, Marshall and Tweedy; 64 flats, Eversley Park Road, Mr. A. E. Moffatt.

SOUTHWARK. *Flats.* The L.C.C. is to erect 70 flats in the Mermaid Court area, Southwark, at a cost of £44,000.

SOUTHWARK. *Re-housing.* The L.C.C. is to clear further areas in Zoar Street, Southwark, and provide re-housing at a cost of £32,000.

ST. PANCRAS. *Boiler House, etc.* The L.C.C. is to provide new boiler house and equipment at St. Pancras Hospital, at a cost of £38,000.

WOOD GREEN. *School.* The Wood Green Corporation is to erect new premises for White Hart Lane Council School, at a cost of £44,010.

PROVINCES

BACUP. *Houses.* The Bacup Corporation is to erect 98 houses on the Cutler Green site, at a cost of £44,879.

BATH. *Fire Station.* The Bath Corporation is to erect a fire station at a cost of £26,802.

BOLTON. *Houses, etc.* Plans passed by the Bolton Corporation: 20 houses, Blackburn Road, etc., F. and H. Douglas; 18 houses, Sunnymeade Avenue, Mr. W. E. Yates; eight houses, Trevor Avenue, Palatine Builders and Estates, Ltd.; 14 houses, Kenwood Road, Mr. F. Merrison; 14 houses, Caldbeck Avenue, Mr. A. Lawder; nine houses, Crompton Way, Mr. John Archer.

BOLTON. *School.* The Bolton Education Committee has acquired a site at Lever Edge Lane, for a senior school.

BOSTON. *Houses.* The Boston R.D.C. is to erect 76 houses, at a cost of £27,948.

BRENTFORD. *School Enlargement.* The Joint Education Committee for Brentford and Chiswick is to enlarge the Lionel Road Council School and the Beverley Road Council (Infants') School, at a total estimated cost of £8,731.

BRIGHTON. *Art College, etc.* The Brighton Corporation has approved the following schemes: College of Art, £146,970; school for mentally defective children and possible new schools, Woodingdean and East Moulsecoomb, £33,000; Laughton Lodge institution for mental defectives, additional villas: fire-station, Rottingdean; car park, Old Steine, £37,000; housing schemes, £285,000; magistrates' courts, police offices, etc., £183,000.

BRIGHTON. *Club House.* The Brighton Corporation is to erect a new club house at the Hollingbury Park golf links, at a cost of £11,920.

BRISTOL. *School.* The Bristol Education Committee is to erect an elementary school at Petherton Road, Whitchurch, at a cost of £22,981.

BURSLEM. *Houses.* Plans passed at Burslem: 10 houses, Abbots Drive, for Mr. C. W. Critchley; 10 houses, Shaftesbury Avenue, for Mr. J. Dickinson; eight houses, Davenport Street, for Messrs. Bailey and Tilstone; six houses, Abbots Drive, for Messrs. Shenton Bros.

CARDIFF. *Clinics, etc.* The Cardiff Corporation is to erect school clinics and welfare centres, at a cost of £14,986.

CASTLE BROMWICH. *School.* The Warwickshire Education Committee has purchased a site for a senior school at Castle Bromwich.

COVENTRY. *School Enlargement.* The Coventry Education Committee is to enlarge the Whoberley school, at a cost of £18,538.

CURDWORTH. *Factory.* The British Oxygen Co., Ltd., is to establish a factory on a site of 80 acres at Curdworth, Warwickshire.

DENHAM COURT ESTATE. *School.* The Middlesex Education Committee is to adapt the mansion on the Denham Court Estate for use as an approved school for senior girls, at an estimated cost of £6,900.

DOVERCOURT. *Schools.* The Essex Education Committee is to purchase land in Hall Lane, for new premises of the County High School, and land in Low Road and Halfacre Lane, Dovercourt, for new premises for the senior school.

DUDLEY. *Houses.* The Dudley Corporation has obtained sanction to borrow £49,324 for the erection of 144 houses on the Cole Street site.

ECCLES. *School.* The Governors of Godfrey Ermen Memorial School, Eccles, are to erect a new senior school.

ESTON. *Houses.* The Eston U.D.C. is to erect 14 houses at Normanby.

ESTON. *Cinema.* Plans passed by the Eston U.D.C.: Cinema, Bolckow Road, Mr. O. Lanny.

GRIMSBY. *School.* The Grimsby Education Committee is to erect an elementary school at Nunsthorpe for 350 infants.

GRIMSBY. *Enlargement of Library.* The Grimsby Corporation is to enlarge the library buildings, at an estimated cost of £29,500.

GRIMSBY. *Clinic.* The Grimsby Corporation is to erect a welfare centre and dental clinic in Hope Street, at a cost of £5,100.

GWYRFAI. *Houses.* The Gwyrfai R.D.C. is to erect 86 houses at a cost of £34,366.

HORNCHURCH. *Casual Wards.* The Essex C.C. is to erect casual wards, etc., at Suttons institution, Hornchurch, at a cost of £18,941.

A general view of the new factory for Aidas Electric Ltd., Rowdell Road, Northolt. By M. Fermin.

PRICES

Fluctuations in timber prices have been already noted in the Prices Supplement since it began, but have so far not been serious. The factors which have influenced timber prices in the past year are, however, of great importance, and, since their effects are not yet ended, the JOURNAL *considers the following review of the situation by a member of a well-known firm of importers will be of interest to the industry.*

TIMBER PRICES

DURING THE LAST YEAR

By T. P. COPELAND

THE fluctuations of prices in the timber trade today are sufficiently complicated to justify some sort of explanation. Last year saw a steady rise in prices which seemed as if they would never reach top; no price remained fixed for more than a month and each change was a change for the higher.

In the summer of 1936 it was predicted that the price of 2 × 4, which can be taken as the barometer of the trade, would rise from its then normal price of about 15 guineas a standard to at least £20. At the time this prophecy was ridiculed; yet, as after events showed, it was correct, even erring on the low side. By the summer of 1937, 2 × 4 was selling at between £22 and £23 a standard; other sizes had followed suit, and a rise of nearly 33⅓ per cent. was general throughout the trade. What was the cause?

In a case such as this there are usually a number of causes and it is difficult to point out any one thing as being primarily responsible. Undoubtedly the general improvement in world trade had some bearing on the rise in prices, as raw materials in all countries increased in value daily; and in England in particular it appeared as if the rearmament programme would be responsible for the consumption of an abnormally large amount of timber. These two things had a marked effect on the prices of soft woods in Scandinavia, but the main reason for the sudden rise lay undoubtedly in the Timber Quota that was self-imposed by the exporters in the Baltic and in Russia. For a number of years the mills in Scandinavia had made little or no profit. In Sweden, rather than let them close down, those mills that got into difficulties were subsidized by the State. The position eventually became impossible and it was decided to try to raise prices by fixing a quota on the amount of timber that could be exported. It was thought that if the normal output were to be reduced in 1937 by 10 per cent., it would have the effect of raising the purchasing prices.

Opinion in this country was divided as to the effect of this quota. One section of the timber trade in England thought that prices would rise suddenly, and saw in this an opportunity to speculate. The more conservative members of the trade pointed out that it was only an export quota and not an import one; they rightly stressed the point that although trade in this country had recovered from the depression of 1933, the recovery was not so marked abroad, and this applied especially to France; moreover, German trade was doubtful; and these two countries, with South Africa and Holland, were the biggest buyers of Baltic wood after England. If trade did not revive in these countries, then England would be the dumping ground for any surplus stocks from Scandinavia that remained unsold. This would have the effect of nullifying the quota.

The school of thought that expected a rise, however, decided to speculate and began to buy for the 1937 season's market as early as July and August, 1936, although the buying season does not usually start until October or November. The natural result followed and the shippers, seeing an apparently ready market for their stocks at least three months before the normal time, began slowly to advance their prices. This forced further buying in England and prices began to rocket. Buying continued through the winter of 1936 and during the first three months of 1937, and throughout this time there was a steady rise in the cost abroad. In March, 1937, the prices asked by the shippers were so exorbitant that buying stopped completely. By this time the shippers had sold some 80 per cent. of their output and having seven months still to go before the ports froze up, were content to wait until they were able to obtain the high prices they were asking—rather than sell the balance of the quota at a reduced figure. In England, in the meantime, the early speculators found that they were able to sell their stocks to those importers who had delayed their buying, at a price below that of the shippers, and still make an ample profit. In some cases parcels changed hands as many as five times, and in each case the seller made a profit varying from 7s. 6d. to 15s. a standard.

During this early part of 1937 the building trade was busy and builders and contractors were forced to pay the high prices asked by the merchants. Everyone had looked forward to 1937 as being a boom year and from all appearances the building trade was not belying this prophecy. After the Coronation, however, building began to wane. Speculative builders had been forced, owing to the rise in price of not only timber but of almost all building materials, either to raise the prices of their houses or to omit some expensive feature. This coincided with a temporary saturation point in building; the result was a drop in house sales. No immediate effect was felt on the timber trade as the Government continued to use very much more than usual, again owing to the rearmament programme, and there were a large number of contract houses and factories in the course of erection. However, the state of the speculative building trade, which is a very large consumer of timber, caused some qualms in the minds of the merchants, who are the

people most in touch with the builders. In September, 1937, the log auctions took place abroad and what qualms the merchants may have felt were temporarily allayed by the news that logs were fetching up to 20 per cent. more than at the auctions a year before. Their peace of mind, however, was short-lived, because the shippers found that they still had some 20 per cent. of their quota unsold with the season practically over. They had made big profits during the early part of the year and rather than over-winter this balance and so keep the stock yards partly filled, some of the weak holders decided to sell their remaining stocks at any prices they would fetch. To their surprise the importers found their offices filled with agents offering parcels of timber at two different prices: goods for immediate delivery before the ports froze up at one price, and goods for the coming season at a figure very much higher than this. The response to the offer of cheap parcels for immediate shipment was not good, but a certain amount was bought. Practically no importers bought for the coming season, each buyer preferring to wait for someone else to begin; however, those importers who had bought some of the cheap parcels offered for immediate shipment began to sell them at prices well below the existing market value. This led to a weakening of the market all round and merchants, seeing the possibility of being left with large stocks of timber, bought in some cases at very high figures, decided to cut their profits, and began offering their goods at considerably reduced prices. The response by the consumers to this reduction in price was not good; there was not enough business about to warrant the purchase of any great quantity of timber for building simply because the price had eased. The effect on the merchants of this attitude was that they became more and more insistent on selling their stocks at whatever they would fetch, rather than start the New Year with a falling market and an abnormally large quantity of timber in their yards and the docks.

In the autumn of 1937 the shippers decided to reduce their output by a further 10 per cent. in the hope of creating the same market conditions for the 1937–38 buying season as they had for the 1936–37 season. Nevertheless, by the middle of January, 1938, no appreciable amount of buying had taken place. At this time the price of 2×4 had dropped by at least £2 a standard and other sizes had followed suit, with certain exceptions where the prices were maintained owing to scarcity. In spite of the fall in value of spot goods, the Scandinavians still refused to drop their prices. To try to spur the buyers to action the quota was reduced by a further 5 per cent.; even this had no marked effect on the importers in this country—each one waiting for the next to start buying. This attitude was continued throughout February and the agents found that no amount of persuasion would convince the English buyers that they were doing the wrong thing by waiting.

Then the First Schedule for Russian goods was published and it was found that the Russians had made a clever and sensible move; their prices for the First Schedule were, for the most part, about the same as those asked in the First Schedule of 1937 and considerably below those of the Second, Third and Fourth Schedules of that year. The publication of the Russian figures brought down the Finnish and Swedish prices a little and some importers began to buy. The majority, however, thought that the prices asked were still too high and, owing to the uncertainty of the English market, preferred to wait until they were reduced still further.

Towards the end of February and the beginning of March, 1938, the building trade showed a slight revival, but as the stocks of timber in this country were some 20 per cent. higher than normal for the time of year, the merchants were able to complete their orders without trouble. The shippers in the meantime, seeing a general revival of trade in this country, decided that sooner or later the English importers would have to buy from them and continued to hold out for their high prices. The importers for their part, knowing that the sawing season had already started in Scandinavia, felt that before long the shippers would have to give way in order to clear their stock yards.

That is still the position today. Each side is hoping that the other will be forced to give in first; which of them will do so it is difficult to say, but whatever happens must happen within the next month. The result is awaited with considerable interest.

● *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) ..	
Single scaffolding .. .. per yard super	2/–
Independent scaffolding .. per yard super	2/8

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 ¾″ 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	–/5¾
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

⅝″ diameter and upwards mild steel rod reinforcement, cut to lengths, including bends and hooked ends and embedding in concrete lintols .. .. per cwt.	24/–
Under ⅝″ diameter ditto .. .. .. per cwt.	25/6

Formwork

Close boarded formwork to soffites 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 soffites 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 ¼″ joints .. .. per rod	23 0 4	32 9 0	
Ditto, ⅜″ joints .. per rod	22 13 4	31 7 3	
Reduced brickwork in cement mortar 1 : 3 with ¼″ joints .. .. per rod	24 15 4	34 3 8	51 15 8
Ditto with ⅜″ joints .. per rod	24 14 0	33 7 0	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 ¼″ joints .. .. .. per yard super	5/1	7/2	
Ditto in cement mortar 1 : 3 .. .. .. per yard super	5/5½	7/6½	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″ × 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/–

	9″ × 3″	9″ × 6″
Form opening for air brick including slate lintol and render around in cement and sand to 13½″ 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 ..		42/3		

Facings

Prices are extra over Fletton brickwork and are for raking out joints and pointing with a neat struck weathered ¼″ 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. 95/– .. per yard super	5/1	5/6	4/2
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 8¾″ × 2⅝″ on face with ¼″ joints add or deduct per yard super	9d.	10d.	6½d.

CURRENT PRICES

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

BRICKLAYER, DRAINLAYER, ASPHALTER AND PAVIOR

BRICKLAYER—(*continued*)

Facings—(continued)

	Rustic Flettons	Stock Facings	Sand Faced Hand Made Reds
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	9/10½	12/–
Ditto and pointed both sides per yd. super	10/6	11/9	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	17/11	22/1
Ditto and pointed both sides per yd. super	17/3	19/9	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 ground	Clay
Trenches not exceeding 3′ 0″ deep	–/2¼	–/3
Ditto, exceeding 3′ 0″ and not exceeding 5′ 0″	–/5½	–/7
Ditto, exceeding 5′ 0″ and not exceeding 10′ 0″	–/8½	–/9½

		4″ pipes	6″ pipes	9″ pipes
6″ thick Portland cement concrete bed 6 : 1, 12″ wider than diameter of pipe, and flaunched halfway up sides of pipe ..	per foot run	–/8½	–/10	1/7
6″ ditto, and completely encasing	per foot run	1/7	1/11	2/3

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 Over 2-ton lots	4″ pipes Under 2 tons, 100 pieces upwards	6″ pipes Over 2-ton lots	6″ pipes Under 2 tons, 100 pieces upwards	9″ pipes Over 2-ton lots	9″ pipes Under 2 tons, 100 pieces upwards
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″
Pipes in 9′ 0″ lengths and laying in trench, including caulked lead joints per foot run	3/6	5/3	9/3
Cutting and waste .. .. each	1/9	3/6	—
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

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/–	

		White glazed	Salt glazed
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
Manhole covers and frame bedded in grease and set in cement mortar	each	4/–	

ASPHALTER

Various qualities of asphalte 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 asphalte obtainable.

		Natural Rock Asphalte Best Quality	Natural Rock Asphalte 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	–/6¼	–/5¼
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	–/6¼	—
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	–/3¼	–/3¼
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
⅝″ 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″×½″ deep ebonite strips, on and including cement and sand screed. Total thickness 1½″	per yard super			19/5
Ditto, but white chips set in grey Portland cement	per yard super			17/4
Terrazzo tiles, white chips set in white cement :—				
Size 9″ × 9″ × ¾″	per yard super			20/6
Size 12″ × 12″ × 1″	per yard super			18/8
Ditto, but white chips set in grey Portland cement :—				
Size 9″ × 9″ × ¾″	per yard super			18/11
Size 12″ × 12″ × 1″	per yard super			17/1

		⅛″	3/16″	¼″
Sheet rubber	per yard super	12/1	15/3	18/4½
Rubber tiles	per yard super	15/3	18/4½	21/6

		9/16″	⅜″	½″
Cork tiles, polished ..	per yard super	12/10½	11/–	10/–

CURRENT PRICES

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

MASON, SLATER, TILER AND ROOFER, AND CARPENTER

PAVIOR—(*continued*)

Hard red paving bricks laid flat (9″ × 4½″ × 2⅝″)	per yard super	9/–
Ditto, laid on edge	per yard super	11/9

	⅝″ thick	⅞″ thick
6″ × 6″ best quality red quarry tiles	per yard super 10/–	11/–
6″ × 6″ best quality buff quarry tiles	per yard super 10/6	11/6

2″ Yorkshire stone paving, square joints and bedding	per yard super	22/–
2″ Finished path of coarse gravel finished with good binding gravel to slight camber	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	per foot cube	11/9	17/–

Yorkstone

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

Artificial Stone

In steps, copings, band courses, etc., per foot cube, from		9/–

Reconstructed Stone

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

Slate

		1″	1¼″	1½″
Slate slabs, sawn to size, not exceeding 10 ft. sup. and planed, with rubbed face and fixing as shelving, etc.	per foot super	4/6	5/–	6/–
Ditto, not exceeding 20 ft. sup.	per foot super	5/4	5/10	7/–
Rubbed edges	per foot run	–/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	per square	79/–	77/–	80/–

Old Delabole Slates

		20″ × 12″	16″ × 10″
Grey medium gradings	per square	86/–	84/6
Unselected greens (V.M.S.) (weathering greens and grey greens mixed)	per square	96/6	94/6

Randoms		No. 1 Gradings 24″/22″ to 12″/10″
Ordinary grey greens	per square	91/3
Weathering grey greens (V.M.S.)	per square	101/9

		No. 2 Gradings 24″/22″ to 12″/10″
Weathering greens (V.M.S.)	per square	107/–

Westmorland Green Slates

Randoms		Bests 24″ to 12″ long proportionate widths
No. 1 Buttermere, fine light green	per square	122/9
No. 2 Buttermere, light green (coarse grained)	per square	120/9
No. 5 Buttermere, olive green (coarse grained)	per square	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

Asbestos

Russet brown asbestos cement roofing tiles 15¾″ × 15¾″ laid diagonally with 2¾″ lap,	per square	38/–

CARPENTER

Centering

Turning piece to flat soffites 4½″ wide (For Formwork see "Concretor.")	per foot run	–/4

Fir Sawn and Fixed

Plates, dragon ties, sleeper joists and lintols, ground floor (4″ × 2″ and 4″ × 3″)	per foot cube	3/9
Upper floor ditto (7″ × 2″)	per foot cube	4/4
Partitions (stud) (4″ × 2″ and 4″ × 3″)	per foot cube	5/–
Rafters and ceiling joists (4″ × 2″ and 4″ × 3″)	per foot cube	4/9
Purlins, (6″ × 4″)	per foot cube	5/4
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 including cutting ends of rafters against same	per foot run	–/6¾
1½″ × 11″ hips or valleys ditto	per foot run	–/8¼
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	each	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	11/–
2″ × 1″ ditto for Ladies (16″ × 8″)	per square	14/6
2″ × 1″ ditto for Duchess (24″ × 12″) ditto	per square	9/–
2″ × 1″ ditto for randoms 24″/22″ to 12″/10″	per square	12/2
1½″ × ¾″ ditto for plain tiles (10½″ × 6½″) to a 4″ gauge	per square	15/4
1½″ × 1″ ditto for pantiles to approximately 11¼″ gauge	per square	6/7

Roof Boarding

		¾″	1″
Deal roof boarding in batten widths close jointed	per square	29/2	35/6
Ditto, prepared for patent flat roofing and including firrings to falls	per square	39/7	45/10
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 1¼″ laps	per square	31/3
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 soffite tongued both edges, including grooves	per foot run	–/7½

(To be continued in next Issue)

IN PARLIAMENT

BY OUR SPECIAL REPRESENTATIVE

MR. KEELING asked the Minister of Transport whether his attention had been drawn to the proposal of the London, Midland and Scottish Railway to destroy the Doric gateway of Euston in the course of building a new station with money borrowed under Treasury guarantee; whether he was aware of its beauty and historic interest; and whether he would consult the Royal Fine Arts Commission as to whether it could and should be moved to another site.

Mr. Burgin said he was informed by the London, Midland and Scottish Railway Co. that, in the preparation of the drawings for the new building at Euston, very careful consideration had been given by the architects to the possibility of embodying the Hardwick portico in the design, but that it had not been found feasible to do so. The company was willing to consult the Royal Fine Arts Commission with regard to the feasibility of the removal of the portico to another site. He was assured that the company fully appreciated the historic interest attaching to this gateway and were entirely sympathetic towards the proposal that steps should be taken to secure its preservation. They would gladly give permission for the removal and re-erection of the gateway on another site if those interested in its preservation were willing to bear the expense which would be incurred over and above the ordinary costs of demolition.

Mr. Mander asked the First Commissioner of Works if he would state the position with regard to the proposed destruction of Whitehall Gardens; what steps were being taken to preserve these historical period houses; and whether the advice of the Royal Fine Arts Commission had been sought and taken.

Sir P. Sassoon said it was anticipated that the demolition of the houses in Whitehall Gardens would be commenced in the latter part of June, in order to clear the site of the first portion of the new Whitehall building; six of the most important panelled rooms in these houses had been selected for incorporation in the new building and were being carefully preserved for this purpose, certain specimens of metalwork and furniture were being reserved for the Victoria and Albert Museum, and various other items, mainly mantelpieces and a staircase, had either already been utilized in other suitable buildings or would be taken into store for future use. The advice of the Royal Fine Arts Commission had been sought in regard to both the details of the development of the site and the elevational treatment of the new building.

Mr. Day asked the First Commissioner of Works whether he would state the quantity and value of timber of Empire and/or foreign origin, respectively, that had been purchased by his department during the 12 months ended to the last convenient date.

Sir P. Sassoon said that as nearly all the timber used by his department was provided by contractors for incorporation in buildings or in supplies of furniture which were the subject of lump sum contracts, he regretted that it was not possible, without the expenditure of an unreasonable amount of labour, to give even approximate statistics on this point. He could, however, assure the hon. member that it was the practice to specify Empire timber almost exclusively for building contracts and that, for furniture, Empire timber was used whenever it was suitable and was not unduly expensive.

Sir N. Grattan-Doyle asked the First Commissioner of Works what provision was being made in Government offices to protect the staffs employed against air attack.

Sir P. Sassoon said that a survey of all Government buildings with a view to selecting the most suitable accommodation for refuge purposes was well in hand. Accommodation which provided the best structural protection against blast and splinter was being selected, and it was also proposed to provide against the dangers of gas and broken window glass. First-aid posts would also be provided. Arrangements had been made for dealing with the risk of fire from air attack. The training of staff in anti-gas precautions in Government offices and the organization of first-aid parties was not a matter for his department, but he understood that a good deal of progress had been made.

Sir P. Harris asked the Secretary to the Treasury by what authority certain sculptures executed by eminent foreign artists designed to be exhibited in this country had been refused admission by the customs authorities.

Col. Colville said he was not aware that the customs authorities had refused admission to sculptures imported for exhibition. Imported sculptures were chargeable with duty under the Import Duties Act, 1932, unless a certificate was give by the Director of the Tate Gallery that they were works of art of the class or description to which the Import Duties (Exemption) (No. 15) Order, 1937, applied. The hon. member appeared to have in mind a recent case where, in the absence of such a certificate, the importers of certain articles were informed by the Customs that the appropriate duty must be paid. He was now advised, however, that it was not incumbent on the director to be satisfied of the artistic merit of articles for which his certificate was required but that he was only called upon to decide whether the articles were works of art of a class or description to which the Exemptions Order applied. The director was willing to reconsider previous applications on this basis.

In the course of a debate on unemployment, Mr. E. Brown, Minister of Labour, said that employment had improved in the building industry. There was an increase in the insured population of 174,000, together with a reduction in unemployment of 102,000. In other words, the industry employed 250,000 more persons that it did six years ago. The present number of unemployed was 170,000 of an insured population which last July numbered over 1,000,000. Houses were being built in England and Wales at the rate of 330,000 annually, and of these 70,000 were being provided by local authorities and 260,000 by private enterprise. That compared with 202,000 in 1932. The figure for 1929 was 203,000, and the figure for 1930 was 162,000. The number of houses provided by local authorities in the year ended September, 1937, was 71,500 and the loans sanctioned by the Ministry of Health for housing for the 11 months from April 1, 1937, to February 28, 1938, amounted to £35,300,000, compared with £38,000,000 for the whole of the financial year 1936–37. Taking health and miscellaneous services, the loans sanctioned during the 11 months ended on February 28, 1938, amounted to £30,200,000 compared with £26,000,000 for the whole of the previous financial year.

•

Position of the Building Industry

"The position of the building industry is not so well maintained as at this time in recent years, the number of building operatives unemployed in February being some 12 per cent. greater than a year ago," states the current issue of *The Building Industries Survey*, published by the Building Industries National Council. "During the three winter months — December, January and February—there has been a continuing deterioration in employment.

"The building plan figures, on the other hand, were better, the preliminary figure for January being 2·2 per cent. greater than a year ago. This improvement was confined to housing, all the non-residential categories showing declines.

"The new Housing (Financial Provisions) Bill extends the operation of existing rates of subsidy for building in connection with slum clearance and the abatement of overcrowding until the end of the year, thus providing a transitional period of nine months before the new rates of subsidy come into force. This will avoid any break in activity and will enable a smooth change-over. It is officially estimated that 430,000 houses will be provided under the Bill; 200,000 for slum replacement; 200,000 for the abatement of overcrowding; and 30,000 for the agricultural population in rural districts. The Minister of Health stated in the House of Commons that this reserve of work would be used to fill any gap which might be left by a falling off in the present rate of output by private enterprise, and declared that 'we shall be able, by planning ahead, to maintain a steady rate of output for the building industry of the country as a whole.'

"As regards non-residential building, plans for factories during the three months ended January were 25·6 per cent. below the corresponding period of the previous year, schools and public buildings were 16·0 per cent. below, business premises 9.4 per cent. below, and other building 8·2 per cent. below. Total building plans were unchanged, increased housing making up the decline in the other categories."

Edinburgh Architects

At the 80th annual general meeting of the Edinburgh Architectural Association, Mr. J. R. M'Kay, A.R.I.B.A., was elected president for session 1938–39, with Messrs. J. Wilson Paterson, A.R.I.B.A., and Mr. T. Bowhill Gibson, F.R.I.A.S., as vice-presidents.

Institution of Electrical Engineers

Details of the summer meeting of the above Institution, to be held at Birmingham from July 4 to July 8, are now obtainable from the Secretary, Savoy Place, W.C.2.