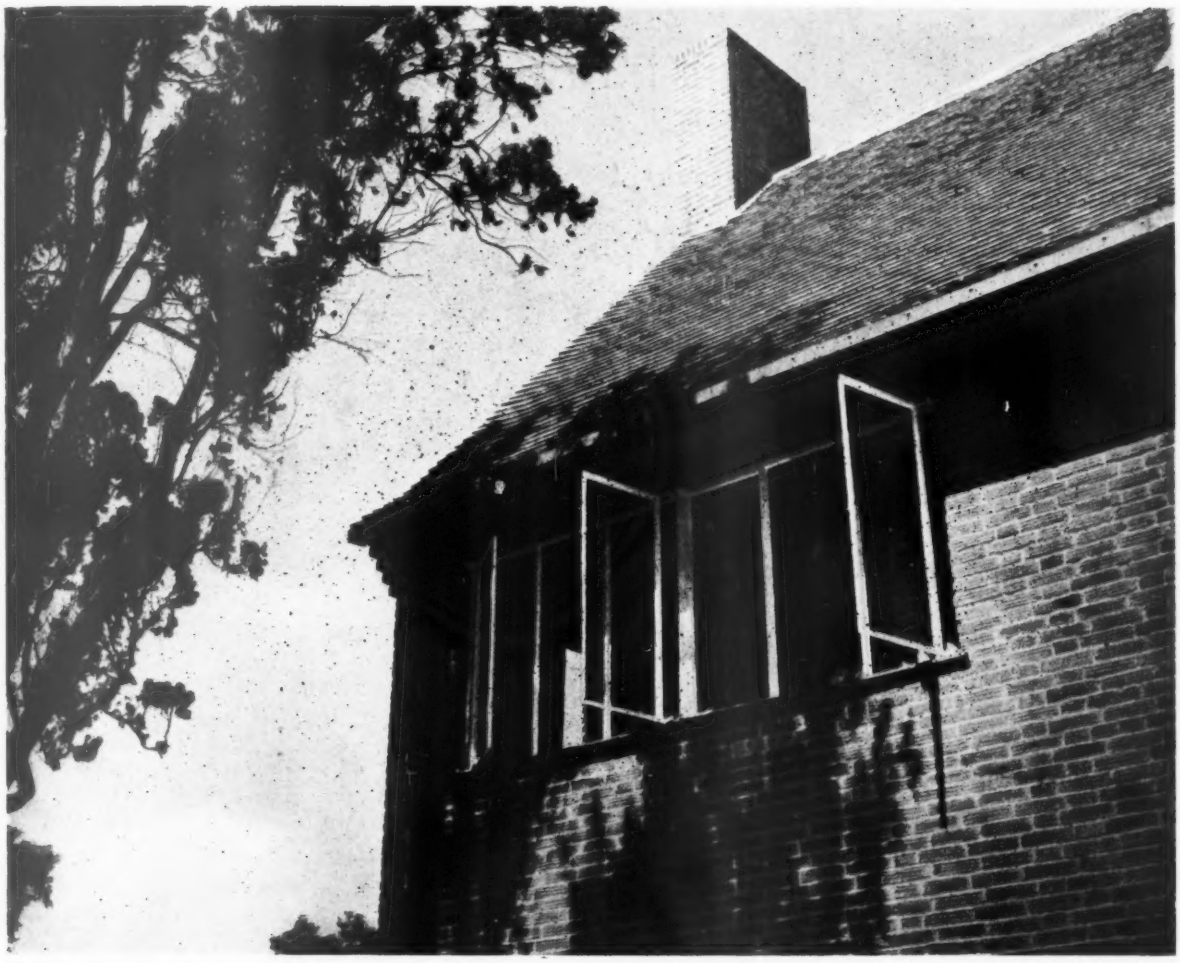


Malden Vicarage, Surrey. Architects: H. Edmund Mathews and E. D. Jefferiss Mathews. Contractors: H. & G. Jackson Ltd.

2" 'Phorpres' Rustics

PHORPRES
(Your bricks 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
SHEFFIELD DELIVERY DEPOT: L.N.E.R. Goods Stn. Tinsley. Attercliffe 41573. BRISTOL DEPOT: Ashley Hill Goods Depot (G.W.R.) Ashley Hill Bristol 46572

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

*

9-11 *Queen Anne's Gate, Westminster, London, S.W.1.*
TELEPHONE : WHITEHALL 9212-7 (OWN EXCHANGE)
TELEGRAPHIC ADDRESS : BUILDABLE, PARL., LONDON

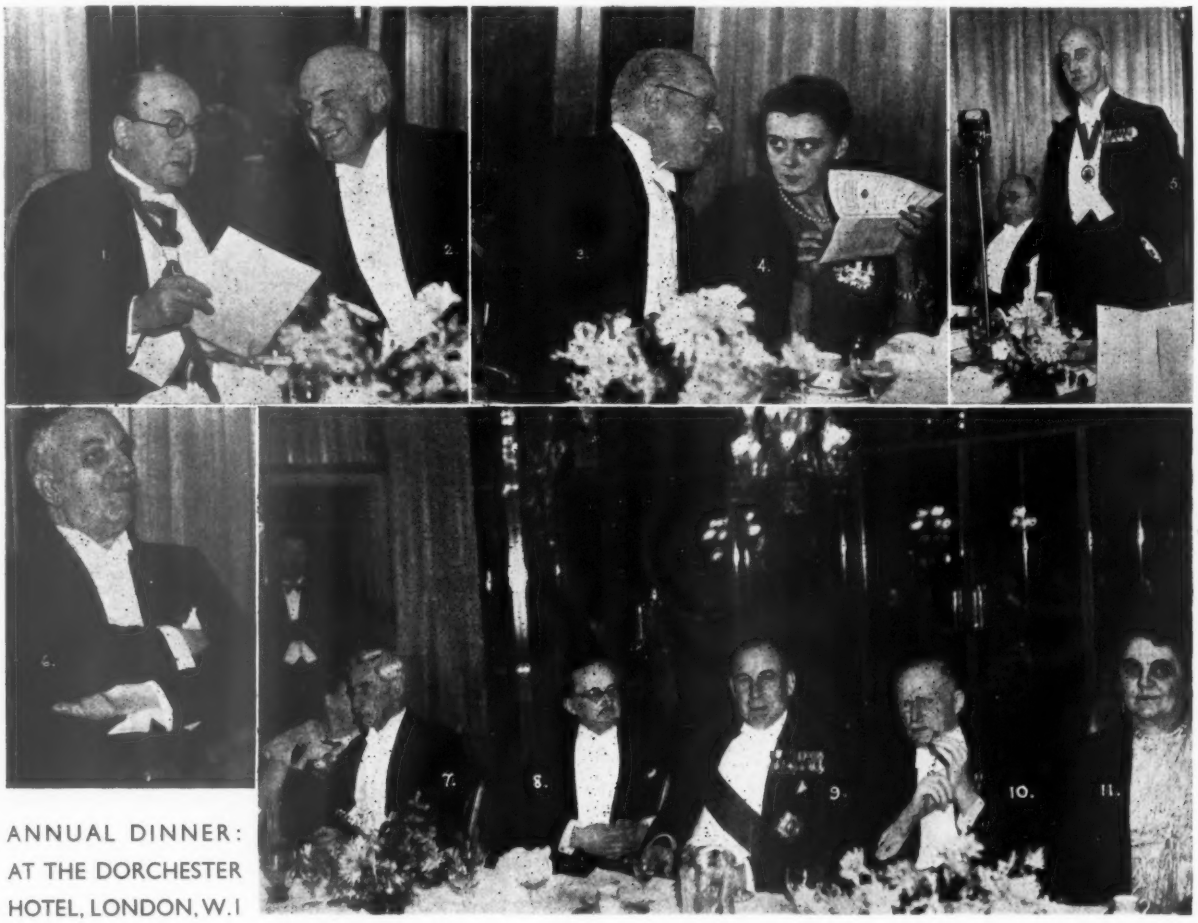
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, DECEMBER 15, 1938. NUMBER 2291 : VOLUME 88

PRINCIPAL CONTENTS

	PAGE
I.A.A.S.	967
Extension to the B.B.C. Headquarters	968
This Week's Leading Article	969
Notes and Topics *Astragal's Notes on current events*	970
News	972
The Architects' Diary	972
Germany Builds : 1—The Rural Scene *By John Gloag*	973
Letters from Readers	974
Working Details *Council Chamber Seating, Norwich City Hall (C. H. James and S. Rowland Pierce)*	975
Information Sheets *Plumbing (687)* *Bricks—Standard Specials (688—81 revised)*	977
House at Bromsgrove, Worcestershire. By F. E. Bromilow	983
Analysis of a Building : School at Birmingham. By William T. Benslyn	984
Literature	993
Competition for Community Centre and Fire Station, Ilkeston. Winning Design. By Alan Reiach	995
Trade Notes *By Philip Scholberg*	997
Current Market Prices of Materials : Part I	1000

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS



ANNUAL DINNER: AT THE DORCHESTER HOTEL, LONDON, W.1

Above, photographs taken at the annual dinner of the Incorporated Association of Architects and Surveyors: 1, Sir Edwin Cooper, R.A. (President); 2, Lord Kennet; 3, Mr. Sydney Tatchell (Chairman, Architects' Registration Council); 4, Mrs. Rodney Tatchell; 5, Mr. J. E. Swindlehurst (Chairman of the I.A.A.S. Council); 6, Ch. Simopoulos (the Greek Minister); 7, Sir Robert Tasker; 8, Lord Horder; 9, Sir John Anderson (Lord Privy Seal and Minister for Civilian Defence); 10, Mr. S. M. Lanigan O'Keeffe (High Commissioner for Southern Rhodesia); 11, Lady Cooper.

See also page 972.

EXTENSION TO THE B.B.C. HEADQUARTERS

EXCAVATION of the Portland Place site upon which Broadcasting House will be extended to more than double its present size is to begin immediately. It is expected that the work will be complete by about the middle of next year. Soon afterwards work will begin on the construction of the new building, which, it is hoped, will be ready for occupation by the end of 1940.

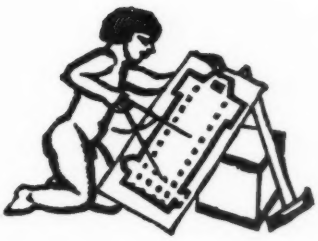
The site area at ground floor level is 20,950 square feet, compared with 17,390 square feet of the existing building.

The elevation—one of five schemes submitted—has been approved by the Royal Fine Art Commission. The architectural treatment of the extension will continue and amplify that of the existing façade to Portland Place, the two portions of the building forming a complete architectural entity.

Five underground studios will be incorporated in the extension. Above ground-floor level the extension will contain offices, with rather more accommodation than Broadcasting House has at present. A control room suite will be situated on the seventh floor and this will be in addition to the present control room. On the sixth floor will be a staff rest-room, while a restaurant with accommodation for nearly three hundred people is to be built on the top (eighth) floor. A light court will occupy the centre of the extension above first-floor level; the building itself will have a maximum height of approximately 110 feet in continuation of the skyline of the uppermost part of the existing building. A new main entrance will be provided for the staff in the Portland Place frontage.

The architects for the extension, associated with Mr. M. T. Tudsbery, M.Inst.C.E., the B.B.C.'s Civil Engineer, are Messrs. Val Myer and Watson Hart, and Messrs. Wimperis, Simpson and Guthrie.

Above is a perspective of the whole scheme: the existing building is shown on the right.



4D. A HEAD

IT is time to put things rather plainly. In the first week of November the President of the R.I.B.A. asked all architects to come to the assistance of the Architects' Benevolent Society. The A.B.S. is the only organization for helping those who have come to grief in a very risky calling ; it is eighteen years since the whole profession was reminded that ordinary year-by-year claims were exceeding the funds available ; the appeal was made to all architects—partners in private firms, heads of departments, senior assistants and the most junior assistant in his first job. The results have been contemptible.

All architects, members of the R.I.B.A. or not, can expect the help of the A.B.S. if they are ever unfortunate enough to need it, and all of them should in common decency contribute something to providing it for the relatively small number who need it badly now. It is a decided shock to anyone who knows numbers of individual architects to find that the profession simply does not seem to feel this. Out of about 12,000 architects in Britain, 1,000 subscribed before Mr. Goodhart-Rendel's appeal. Five weeks later the additional amount promised in subscriptions was under £190. Before this sum one must sit in dismay, but hardly in silent dismay.

Let us get the matter clear. Despite assertions in the *Evening Standard* under the interesting headline : ARE ARCHITECTS MEAN ?—architects are not wealthy. And because big incomes, as the City regards incomes, are rarely theirs, they may be improvident and thoughtless. Their individual generosity, however, has been usually great enough to be almost an extension of their improvidence ; and few of them are so unfortunate that £1 a year would be badly missed.

At the moment many appeals in desperate causes are being made to the public. Architects are no doubt helping in them. But the first claim of all upon architects—for the sake of elementary professional dignity, if for nothing else—must be those who have met exceptional misfortune in their own profession. No desperate scraping is needed to do this amply. £1 a year from every architect—the price of a hat, or a lunch with a client—would leave the A.B.S. stupefied with gratitude. Ten shillings a year would provide for its needs. What will not provide for its needs and does not present architects in a rosy enough light is £190 from 11,000 people : just about 4d. a head.

Last week the *Builder* put the case in a sequence of painful clarity : the need has by now been plainly made known to architects ; some of the reputedly most prosperous firms in the country subscribe either not at all or derisory amounts ; the mass of architects have apparently never thought of subscribing and refuse to think of it now ; and if the profession cannot raise the necessary sums by voluntary methods, it may be compelled to do so by raising subscriptions or in some other compulsory way. And the *Builder* is read, one must remember, not only by very many architects but by builders great and small all over the country whose opinion of the architectural profession matters a great deal.

That is the present situation. What is to be done ? The simplest way, for everyone who has bothered to read this and has not yet subscribed, is to fling one's cap over the windmill, remember it is only ten days till Christmas and fill up the Order on page 967. A second way, requiring a little preparation, is for architects to follow the builders and hand round a box every pay-day in every office, and go on handing it round.

But some way, somehow, the unpleasant implications of that £190 must be got rid of quickly.

To show that we do not exaggerate the need we print below a letter received as we go to press.

SIR,—On behalf of the A.B.S. Council I am writing to thank you, and indeed the whole of the technical press, for the publicity given so freely to the President's appeal for funds. In every case the papers added their own appeal, and called attention in their Editorial columns to the urgent need of larger funds to enable adequate aid to be given to those who, in many cases, are in dire distress.

This appeal, owing to your valuable help, must have reached many thousands of practising architects, but I regret to say that only 130 answers to it have been received at the Offices of the Society up to date, enclosing cheques, etc., amounting to £229 12s. In addition, the President of the Birmingham Society, who made a personal appeal to his members, received 51 replies and cheques, etc., amounting to £72 16s. (practically one-third of the amount subscribed by the rest of the profession).

Such a response makes those of us who work for the A.B.S.—and they are many—despair of ever increasing the funds to a level even approaching what is required. In 1920 a similar appeal produced rather more than three times as much.

It is not too late for those who have not yet subscribed to make good the omission before the end of the year. I beg of them to do so, and amounts however small, will help us in the coming year. Subscriptions in the present appeal have ranged from 5s. to £25.

MAURICE E. WEBB,
Hon. Treasurer.

Architects' Benevolent Society,
66 Portland Place, W.1.

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

NOTES & TOPICS

P.R.A.

SOME time ago, in discussing the National Theatre, I suggested that the best solution would be a competition, or failing that, that the job should go to Sir Edwin Lutyens. Best of all, of course, would be a competition in which he was the winner.

*

This is what happened last week when Sir Edwin was elected President of the Royal Academy, the third architect ever to receive this honour,* and the most distinguished. His work and life are too well known to need reiteration, but there can be little doubt that he is not only the greatest architect of his own generation, but also of many generations before. Every architect will wish him well in his new appointment.

*

When the news was announced, newspaper files were combed for biographical details, which, of course, were found to consist principally of jokes—most of them good ones. The famous "prospects of a woman architect," the well-known doodle on P. & O. notepaper, the mirror curtain for the National Theatre, the Liverpool cathedral procession, the "Bakerloo," the Venus de Milo inscribed: "This is what comes of biting your nails."

*

Interviewed by reporters, Sir Edwin parried questions about art by replying: "What do you think of the weather," and emphasized his official position by producing a large indiarubber with which, he said, his drawings could be rubbed out, but never his speeches. (Nor his buildings, for that matter, except those in Delhi, which are always at the mercy of rubber India—if he will forgive the laboured intrusion into Lutyens preserves).

*

It is plain that his high spirits are temporarily a little restrained by the solemnity of his office—while he stated that, in his opinion, the Royal Academy was always bound to be a little old-fashioned owing to the preponderance in membership of old men, he obviously preferred other subjects such as the comparative strength of a stallion's—or an ostrich's—kick.

* The other two were James Wyatt (1805) and Sir Aston Webb (1919-24).

One thing is certain. At the next R.A. Banquet there will be no one who will wish for his nose to bleed, at any rate during the presidential speech.

NATIONAL SERVICE

Last night Professor J. B. S. Haldane and Mr. R. T. F. Skinner opened a candid discussion on Architects and A.R.P. Today I am told there will be a Press Conference at the R.I.B.A. about the National Register of Architects which the Institute is preparing in collaboration with interested Government departments.

*

Both of these events are important. On both clear thinking is necessary. For instance, in listing architects for war service, a clear division must be drawn between the *first three months*, and afterwards.

*

In the first three months every architect will be needed for A.R.P. in one of its branches, and nothing could be more essential than to allocate architects in advance for various duties, and if possible to give them some opportunity of advance training in them. *Afterwards* architects may be drafted to the Royal Engineers and other military services: that can be left *till* afterwards.

*

But this first requirement will be utterly wasted unless there is available a reasonably complete A.R.P. plan for each big city with which architects can co-ordinate their services.

*

No such plan is yet available and the plain duty of the R.I.B.A. is to shout and go on shouting until one is forthcoming.

*

In London passive defence could fall under four headings: evacuation; fire, rescue and casualty services; light trench shelters wherever ground is available *near* buildings; and pre-fabricated small shelters which can be dumped in large numbers in built-up areas (say down the centre of streets) and covered with sandbags within 24 hours.

*

With such a plan, or a better one, architects could dovetail their services. At present they have nothing but posters to make arrangements with.

DIRT OVER ENGLAND

This is one of the catchphrases used in the new exhibition at Charing Cross Underground Station. It is produced for the National Smoke Abatement Society by the Gas Light and Coke Company, and has been designed by Misha Black and F. H. K. Henrion.

*

The layout of the exhibition, unusually exciting, is an example of that brilliantly developed technique in the art of getting things across which we have learnt to expect from Misha Black.

*

And smoke abatement is certainly an idea which has *got* to be got across. It is a vital technical problem not to be forgotten in our attempts to reorganise city life.

ALPHABET

Sir Edwin Cooper, at a dinner of I.A.A.S., held at the Dorchester last week, said he hoped to see the start of a "small school where the student and the young practising architect could be assisted by men who really knew their alphabet—not with the primary object of obtaining diplomas or letters of qualification, but to secure help and advice upon scholarly lines." He had received a generous offer of assistance from one who wished to remain anonymous.

The new President of the Royal Academy, Sir Edwin Lutyens (right), and his predecessor in office, Sir William Llewellyn

Alphabet . . . scholarly lines. Where have we heard these words before? I hardly believed there was room for yet another school of architecture in London until, talking yesterday to a fifth year student of a certain famous school, I found he had never heard of a metope, and thought entasis was some kind of a disease. Perhaps Sir Edwin Cooper's seminary will in fact fill a long-felt want.

LORD DERWENT

I have been wondering for a week exactly how best to reply to Lord Derwent's letter—see last week's correspondence columns. For this question of criticism of new buildings is an important one—quite as important really as saving old ones—and to avoid any more misunderstanding, let me add that I contribute my guinea a year to help Lord Derwent save them.

*

I said:

(1) I agreed with Mr. Goodhart-Rendel's appeal for a vigilance committee with power to criticize the designs for new public buildings before they are put up.

(2) I wondered where the members of such a committee could be found.

(3) I doubted whether a society like the Georgian Group would be in a position to supply them as I had seen no signs in that quarter of any understanding of contemporary architecture.

Lord Derwent said:

(1) The Georgian Group was doing its great work because it believed the Georgian period to have produced the finest architecture in England.

(2) The Georgian Group admired modern architecture, particularly that put up by the Air Ministry.

(3) He, personally, liked modern architecture if it was like Battersea Power Station, the B.B.C. or ("even") the Underground Building.

(4) He, personally, disliked Berkeley Square House (in spite of (2), above); but admired the new Imperial Airways building near Victoria Station.

Now, where does that leave us?

To begin with, of course, if none of the above-mentioned buildings are good modern architecture, I win. We must look elsewhere for our vigilance committee members.

On the other hand, if all of the above-mentioned buildings, with the exception of Berkeley Square House, are good modern architecture *he* wins. But again, if some are up to standard and some not, I win, since if the architectural taste of the committee can't be relied upon its vigilance won't be a lot of use.

*

More it would not be proper for me to say. Here once more are the buildings which Lord Derwent cites as providing a decent æsthetic standard for modern architecture,

New R.A.F. aerodromes and barracks; Battersea Power Station; Broadcasting House; Radio City, New York; Scarborough Hospital; Underground Building; Imperial Airways Headquarters.

THE YEARS BETWEEN

It is now eight years since a committee was appointed to advise on the amendment of the London Building Act. The appropriate L.C.C. committees have now reported on the advisory committee's report and the Council is putting before Parliament this session a Bill (London Building Acts (Amendment)) which should carry the reform of London building legislation a step further. Like most modern Acts of Parliament most of the Bill is in a vague form, giving the Council power to do things without specifying these things in detail. Thus their power to make by-laws is increased to cover, among other things, means of escape, construction of lifts, installation of gas meters and the "prohibition of broken glass on any fence."

*

One important section deals with District Surveyors. Under this they and their staffs will be paid fixed salaries by the L.C.C. and will no longer be dependent on the fees which they can collect. Their offices will also be provided by the Council, who presumably will set a higher standard in the matter of accommodation than have the surveyors themselves. Incidentally, the average annual gross fees paid to district surveyors for the past seven years was £101,000, and their expenses were £29,400, leaving a net remuneration of £71,700. Those interested can thus obtain the average district surveyor's profits, but this would be a very misleading figure.

NEW YORK ON £10?

For months and months the propaganda department of the New York World's Fair (next summer in case you forget) has been broadcasting special releases about the Theme Building and the Amusement Park and the Automobile Pavilion. But not a word on how you get there; and I have a suspicion that an International Exhibition isn't all that fun unless you have a good bunch of international visitors. A correspondent now asks how to get there, cheaply. This seems a matter for the shipping companies. If you collect, say, fifty people who want to go, what sort of a reduction can you get in the fares? And what *are* the fares, anyway?

ONE MORE APOLOGY

I wrote such a short note last week about *Nothing Personal*, this year's A.A. Pantomime, that a mistake seemed impossible. But I did not know my own powers.

*

The pantomime can be seen (or was seen) on December 13–16 inclusive at 8.30 p.m. at the A.A. and *not* on December 21, 22, 23.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

Judgment in the Bradford Building Society v. Borders case will be delivered on Wednesday next .. 972

Today, at a press conference at the R.I.B.A., Mr. H. S. Goodhart-Rendel, P.R.I.B.A., will announce the arrangements made for a National Register of Architects which the R.I.B.A. is compiling with the approval of the Minister for Civil Defence and the Minister of Labour 972

"The I.A.A.S. hopes to start a small school where the student and the young practising architect could be assisted by men who really know their alphabet" .. 972

Winning design in the competition for Community Centre and Fire Station, Ilkeston 995

HOLIDAY HOME FOR TENANTS OF HOUSING ESTATES

A holiday home, designed by Mr. John L. Denman, has been built by the Guinness Trust for the use of tenants and their families from the Trust's twelve London housing estates. The site lies between the villages of South Heighton and Denton.

BRADFORD BUILDING SOCIETY v. BORDERS

Judgment in the above case will be delivered on Wednesday, December 21. The plaintiffs, Bradford Third Equitable Benefit Building Society, claimed from the defendant, Mrs. Elsy Florence Eva Borders, possession, under a mortgage deed, of a house in Kingsway, West Wickham, Kent, on the ground that subscriptions due under that deed were more than three months in arrear.

I.A.A.S.

The annual dinner of the Incorporated Association of Architects and Surveyors was held at the Dorchester Hotel, London, on Friday last. Sir Edwin Cooper, R.A., president, occupied the chair. The toast list was as follows: "Lords and Commons," proposed by the Dean of St. Paul's (Rev. W. R. Mathews), and responded to by Lord Kennet and Sir John Anderson (Lord Privy Seal and Minister for Civil Defence). "The Association," proposed by Lord Gorell and responded to by the president. "Our Guests," proposed by Mr. J. E. Swindlehurst, F.I.A.A., and responded to by Sir Cyril Norwood, M.A.

Sir Edwin Cooper said: "During this year the Registration Bill has become law. Though I think it unfortunate that all architects have to be registered in the form prescribed under an Act of Parliament, the law must be complied with, and it is our duty to the younger men to ensure that every effort is made to fit them to become architects in the true sense, whatever standard of scientific proficiency is prescribed. Do not any of you be deceived into thinking that architects will be created or that art will be fostered, or encouraged, by registration.

"So far as this Association is concerned, I had hoped to see the start of a small school where the student and the young practising architect could be assisted by men who really know their alphabet. Not with the primary object of obtaining diplomas, or letters of qualification, but to secure help and advice upon scholarly lines. It will, I am sure, be of interest to you to know that I have had a most generous offer of financial assistance from a donor who for the present wishes to remain anonymous. He offers to help to start this small school in our new home, to which we shall shortly remove, owing to the rebuilding of Grosvenor Place."

Sir John Anderson, discussing the task on which he was engaged, said that to provide bomb-proof shelters would mean going very many feet underground, and adequate shelter underground would involve many serious considerations. There was first the consideration of cost. He was told that a tube like the one we had in the London clay would cost about £900,000 a mile. If we were to contemplate providing underground shelters that would be free from the risk of destruction by a direct hit from a heavy bomb we would have to face expenditure the measure of which could be calculated only by members of another learned profession—astronomers.

THE ARCHITECTS' DIARY

Thursday, December 15

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Octavia Hill Centenary Exhibition. Until December 22.*

AIR FORCE ARTISTS' ASSOCIATION. *Fourth annual exhibition at the Building Centre, 158 New Bond Street, W.1. Until December 20. Week-days 10 a.m.–6 p.m. Saturdays, 10 a.m.–1 p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, W.1. "Excavations in Oldbury Camp, Ightham." By J. B. Ward Perkins. 8.30 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS, 10 *Upper Belgrave Street, S.W.1. "The Construction of Exhibition Buildings." By D. Bethune-Williams. 6.30 p.m.*

INSTITUTION OF CIVIL ENGINEERS. *Birmingham and District Association. Annual Dinner. At the Queen's Hotel, Birmingham.*

ARCHITECTS' LEFT-BOOK CLUB, 113 *High Holborn, W.C.1. Discussion: "Thoughts after Munich."*

Friday, December 16

BOROUGH POLYTECHNIC, *Borough Road, S.E.1. Exhibition of Students' Work. 6 to 9 p.m. Also, December 17, 4 to 9.30 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Midland Counties Branch. At York House, St. Charles Street, Birmingham. "Repeated Stresses on Welded and Riveted Structures." By Professor F. C. Lea. 6.30 p.m. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Architecture." By C. F. W. Dening. 7.15 p.m.*

REIMANN SCHOOL, 4 *Regency Street, S.W.1. "Form." By Professor Richard Gleadowe. 6.15 p.m.*

ARCHITECTS' REGISTRATION COUNCIL, 68 *Portland Place, W.1. 27th Ordinary Meeting.*

ROYAL SANITARY INSTITUTE. *At the Town Hall, Leicester. Discussion on "Ministry of Health Model Series IV Building Byelaws (1937): The Problem of Revision of Existing Byelaws." To be opened by Harold Webster.*

Monday, December 19

LONDON SOCIETY. *Visit to Cadby Hall, W.14. 2.30 p.m.*

Wednesday, December 21

BRIGHTON CHAPTER OF SOUTH-EASTERN SOCIETY OF ARCHITECTS. *At the Ship Hotel, Brighton. Lecture by Raymond Walker.*

R.I.B.A. MEDALS

The Council of the R.I.B.A., on the recommendation of the Board of Architectural Education, has made the following awards:—

R.I.B.A. Silver Medal and £5 in Books.—The R.I.B.A. silver medal and £5 in books for schools of architecture recognized for exemption from the R.I.B.A. Final Examination has been awarded to Mr. Frank Booth, of the Leeds School of Architecture. A certificate of honourable mention has been awarded to Mr. D. P. Thomas, of the Liverpool School of Architecture, University of Liverpool.

Mr. Frank Booth, who is 21 years of age, received his general education at Whitcliffe Mount Grammar School, Cleckheaton, and has held West Riding Junior and County Architectural Scholarships. He was one of two candidates of the school to gain a "distinction" in the Diploma in Architecture Final Examination in July last. He is now undertaking town planning research in the school, and was recently awarded a West Riding County Scholarship for this purpose.

R.I.B.A. Bronze Medal and £5 in Books.—The R.I.B.A. bronze medal and £5 in books for schools of architecture recognized for exemption from the R.I.B.A. Intermediate Examination has been awarded to Mr. G. Robson, of the School of Architecture, The Architectural Association, London.

R.I.B.A. PRIZES AND STUDENTSHIPS

The exhibition of drawings submitted in competition for the R.I.B.A. prizes and studentships, 1939, will be held at the R.I.B.A. from Tuesday, January 10, to Saturday, January 28, between the hours of 10 a.m. and 8 p.m., Saturdays, 10 a.m. and 5 p.m.

The award of prizes and studentships will be read at the general meeting of the R.I.B.A. on Monday, January 9, at 8 p.m., at which a criticism of the drawings submitted will be given by Mr. S. Rowland Pierce, F.R.I.B.A.

The prizes will be presented at the general meeting of the R.I.B.A. on Monday, January 23, at 8.30 p.m., when the president, Mr. H. S. Goodhart-Rendel, will deliver an address to students.

NATIONAL REGISTER AND THE ARCHITECTURAL PROFESSION

Today, at a press conference at the R.I.B.A., at 4 p.m., Mr. H. S. Goodhart-Rendel, P.R.I.B.A., will announce the arrangements made for a National Register of Architects which the R.I.B.A. is compiling with the approval of the Minister for Civil Defence and the Minister of Labour. The purpose of the register will be to ensure the efficient utilization of the services of the architectural profession in the event of a national emergency. The register will be open to all registered architects.

COMPETITION RESULT

Mr. Charles G. Soutar, president of the Royal Incorporation of Architects in Scotland, assessor of the architectural competition open to all architects in Scotland in connection with plans for the new £40,000 nurses' home to be built at Falkirk and District Royal Infirmary, has now issued his award.

The competition produced 33 entries from architects in Glasgow, Edinburgh, Inverness, Lanark, Perth, Leven, and Dundee, and the result of the competition is as follows:—

First award (£150), Messrs. Rowand Anderson and Paul and Partners, 16 Rutland Square, Edinburgh. Second award (£100), Mr. Stuart R. Matthew, 37 Queensferry Street, Edinburgh. Third award (£50), Messrs. T. M. Copland and Blakey, 76 High Street, Falkirk. Commended, Messrs. John B. Wilson, Son and Honeyman, 92 Bath Street, Glasgow.

EXHIBITIONS

[*By D. COSENS*]

THE old masters of impressionism have been canonized with the rest. Their contribution to painting no longer arouses controversy, and in the perspective of nearly half a century it is becoming almost possible to assess their exact position in the history of art. Yet no painter in history, and few writers, have held an unchallenged place for more than a century or so, and fashion will almost certainly rearrange their order of precedence and from time to time over- or under-value their individual importance. Degas may one day be thought greater than Cézanne, Seurat then Van Gogh, and Gauguin may altogether disappear from their company. The Pissarro, Renoir, Monet, Sisley group whose work is being shown at Rosenberg and Helft's contributed, each in varying degree, to the impressionist movement—Pissarro perhaps most of all through his

direct influence on Cézanne—and each is here represented by some of his finest painting. A world that thought in a different idiom to ours is already implicit in the pictorial qualities of their work, but their claim to rank as great masters lies, not so much in the method of recording any particular incident, as in giving to one moment in time a timeless inevitability. In painting, literature, or any art it is this quality alone that differentiates between the commonplace and the great, and there is no formula whatsoever for its manufacture. It certainly has little to do with the artist's personality, and far less than is generally supposed with technical ability—or let us say technical ability of the highest order can exist without it. In one work, at least, by each of the painters at Rosenberg and Helft's, this quality is arresting, and this is an exhibition that few can fail to enjoy or will leave quickly.

•

The Royal Society of Painters in Water Colours are holding their autumn exhibition at their new gallery in Conduit Street, a gallery which, with its series of recessed bays, is kinder to small paintings than were the old, closely hung rooms. Nearly all the 184 paintings on show there need kindness. The exceptions, those paintings which without provoking any particular emotion, either intellectual or æsthetic, do, nevertheless, stand out in a different category to the rest, are few. Singularly alone in this company is Charles Ginner with his "English Country House" (28), and "The Kennet at Mildenhall" (125). There are two sincere and thoughtful Jowetts, "Bedroom Window" (157) and "Wild Flowers" (14), several paintings of varying success by Walter Bayes, straightforward work by Ethelbert White, of which "Banks of the Bormida" (64) is, in its rhythmic design, one of the best things in the exhibition, "Orchard Cottage" (138), by Thomas Hennell, and "Rochester" (179) and "Breezy Day, St. Tropez" (181), by the late Job Nixon. All these set a standard of thoughtful work which is particularly noticeable amongst all the pretty tricks of so much of the rest.

•

Picture Hire have a collection of contemporary reproductions in Christmas card form. The range might perhaps be wider, and a thought more reckless, but the idea is a good one and some of the paintings are very suitable. The greater number, and the best, are by Paul Nash and John Nash. Wadsworth's "Functional Landscape" has, unfortunately, not stood up as well to reproduction as has his "Low Tide," but Sickert, Matthew Smith, and Stanley Spencer are excellent. Some of the originals are hanging on the walls. Amongst them is Fergus Graham's "The Second Coming" (not reproduced), a remote strange landscape with the silence of a dream, that combines many of the best qualities of both abstract and surreal painting, and is perhaps the most intelligent and sensitive work in the gallery.

•

Monet, Pissarro, Renoir, Sisley. Rosenberg and Helft's, 31 Bruton Street. Until December 24.

Royal Society of Painters in Water Colours. 26 Conduit Street. Until December 17.

Contemporary English Paintings. Picture Hire, 56 Brook Street. Until December 24.

GERMANY BUILDS

[By JOHN GLOAG]

Hitler, once a frustrated architect, is busy rebuilding, mostly in stone and marble, a whole State to his own taste : an opportunity, it can safely be said, no frustrated architect has ever had before.

The results are now beginning to appear and are summarized for the JOURNAL *in four articles by Mr. John Gloag, who has just returned from studying the art and architecture of Nazism. The first article appears below.*

The views Mr. Gloag expresses are, needless to say, his own and not those of the JOURNAL.—Ed., A.J.

1: THE RURAL SCENE

UNLESS you begin to understand what the new German State is trying to do for the German people, you won't appreciate the architecture that in the rural areas, the residential suburbs and in the cities is giving something fresh and strong and vital to contemporary life. Look at this new architecture piecemeal, and it will arouse your favourite prejudices, if you are left-wing, modern, functional, and a teeny-weeny bit Bloomsbury-cum-Hampstead; or it will bring your cherished and most respectable emotions gently to the boil if you are a scholarly old traditionalist with a nice practice. Again, if you have what may be called the hand-woven outlook and believe rather earnestly in joyful work and arty-crafty gaiety, you will find this architecture reflecting a system of education that the William Morris school of socialism would have loved dearly.

If you get rid of all your pre-conceived notions about Germany, read no newspapers of any kind, English or foreign, and see what is to be seen with open eyes and, what is equally important, an open mind, then you may get the shock of your life, for you'll realize that in Germany the State is deliberately smoothing out the inequalities and inconsistencies that seem inevitable in a modern industrial civilization. Grasp this as the root idea of their education and planning and you'll see how their architecture underlines every impression and habit their training seeks to establish. On the surface, National Socialism appears to be the most democratic system. If the work to which its creators and organizers have set their hands is carried through, in a quarter of a century the German people will be the physical artistocracy of the world, and their land the most orderly, well planned and beautiful in the world.

Meanwhile, they are tidying up their country; draining swamps, planting belts of trees to screen those huge flat expanses of earth from the winds that roar across them, and settling people on the land—expanding agriculture and making new farmers. Also they are taking steps to break down the antagonism and misunderstanding that has grown up between the townsman and the countryman. The labour service system, which gives every boy of every class six months' experience of work in the country—actually on the land or on some scheme for the improvement of the land—imparts to future German citizens a practical appreciation of the farmer's life and problems. This protects the countryside from the casual savagery of city dwelling visitors, from litter, from shoddy building, and other by-products of ignorance about the land.

Germany has got a vernacular architecture. In the country it fits the landscape admirably; providing a touch of warm enrichment to those wide open

The headpiece to this article is reproduced from the *Daily Sketch* for December 13.

spaces of cultivated land that might otherwise seem a little bleak. Much of this flat country is drained land, with all the problems fens provide for builders. The old-fashioned modern movement, pre-occupied with a few once-fashionable shapes, has been replaced by something much more human. Instead of those streamlined concrete dwellings, sleek as saurians and about as cold-blooded, the new settlements for farmers in the countryside are designed as homes. The houses, with their group of buildings, stables and barns, cost about 25,000 marks. After four years they become the property of the new settlers; and after twenty-five years, these settlers, by that time farmers and launching a new generation of farmers, own their land.

Experiments have been made with various materials, but the most satisfactory structure has been produced by timber framing, with brick filling; similar to the traditional half-timbered houses of the sixteenth and seventeenth centuries. A thatched roof, generous windows, walls thick enough to keep the house warm against the biting, raging winds that harry the plains, and an air of welcome and comfort. Not a copy of an old house—but the use of a traditional method of building.

These houses blend agreeably with existing buildings and they are going to last and to grow old gracefully. People here are in rebellion against mere functional boxes. Concessions have been made to the lovable human weaknesses; the little, pleasantly illogical things that people like; and architecture in this, as in other fields, is helping educational aims, is helping to inculcate a love of homely surroundings, is making hundreds and thousands of young men long to own one of these farmsteads and to raise a family and belong to the land.

This is the rural aspect of German building plans. Roads, drains, afforestation are all part of the splendid vision that (unlike most visions) has been committed to paper and is being worked out in detail by the most practical and most passionately sincere people. I have seen the work of a Labour Service Camp; I have talked with the camp commandant (Ober Feld-Meister) and his staff, and the training those young men are getting at the expense of the State may one day make people in other lands envy the privileges of German youth.* The architecture that is being developed by this experiment lacks the infectious stimulation of originality; but you can be at peace with it, at home with it, unconscious of the revolutionary urgencies that in an old-fashioned modern-movement building clamour for your attention. The rural buildings may win your respectful regard; they won't rouse you to shouting enthusiasm—whatever views you cherish; but you may well feel that in the environment they afford people can live a sane, healthy and happy life—qualities that make a firm plinth for civilization.

(*To be continued*)

* The district I inspected was the marshland at Wustrau, near Neuruppin, some thirty miles north-west of Berlin.

LETTERS

Pub

SIR,—Now that I have had an opportunity of studying in detail your JOURNAL for November 24, bearing in particular on recently designed public-houses, there are some observations which I should like to make upon it.

Grateful as I am for the publication as a whole, it seems to me unfortunate that, of the fifty-four examples illustrated, only three, so far as I am able to tell, are situated north of Birmingham and district. (In passing, may I note that this is not an infrequent occurrence in most architectural publications and is, in my view, out of proportion to the amount of architectural work of merit as between the North on the one hand and the South and South Midlands on the other.) Liverpool, in particular, where to my knowledge there are many examples of outstanding interest, is represented by one house; Manchester by none at all; and Yorkshire, "a county where beer is beloved," by only two.

I do not make this observation for any narrow parochial motive, but rather because the climatic and local conditions impose different standards, and current work in the North is therefore of more value to your Northern readers, who must be a large enough proportion to warrant a little more consideration.

In no branch of architecture is the difference of planning more pronounced than in the public-house, and from my experience many of the plans selected by you, admirable though they may be in themselves, would be unacceptable to clients and magistrates in the Northern Provinces. The differences chiefly seem to lie in the arrangement of the lavatories and the service and, as these are the crux of the whole matter, are fundamental.

Lavatories

First, there are four ways of providing lavatories for a given room:

(1) Entered directly out of the room.
(2) Entered from a passage leading to the room.
(3) Outside the building, with access across a yard or car park.
(4) Approached across another room.

Of these methods, (3) and (4) are permitted in my experience in this district only if unavoidable, that is to say, in cases of alterations, but rarely in new buildings; whereas I understand that (3) is particularly required by certain Southern benches.

Perhaps the milder climatic conditions have some influence, but it seems to me undesirable to ask your guests, for such they should be in a hostelry, to go outside on a wet or winter's night for relief.

The simplification of planning resulting from the adoption of methods (3) or (4) is obvious, and though many of your selected houses overcome the difficulties of provision on the lines of (1) and (2), I think you will agree that the majority certainly do not.

Service

Secondly, in the matter of service, it has now almost become an essential in the minds of clients and magistrates alike, that direct service should be given to each room, an outdoor department usually, and often to the garden also; this service being so arranged as not to cross the flow of the general public, either into the rooms or to the lavatories.

It seems to be a requirement common to the North and the South that the outdoor department should have a separate entrance without contact with the licensed part of the premises, and this is a complicating factor adding much to the architect's difficulties.

So far, children's rooms here are rarely asked for, and this also applies to games rooms, and generally tea and meals rooms, as opposed to legitimate restaurants and dining-rooms, are not required.

Doubtless if our magistrates called at houses in the South on their motoring holidays, requests for such rooms will be forthcoming, and it is interesting to speculate how far the experiences of the motoring public in visiting road-houses have dictated a higher standard of licensed premises in our towns and cities.

Elevations are probably very largely dictated by the individual whims of clients, but it is encouraging to see a decreasing use of "Brewery Tudor" in favour of a more scholarly Georgian style, and often frankly modern façades.

G. L. GREAVES
(Stoke-on-Trent)

World's Fair

SIR,—I am an architectural assistant at the beginning of my career, not one of the plutocrats (unfortunately not too common in our profession) in the final stages of success, and I wish to go to the New York World's Fair next year, as I think it will be of extreme educational interest.

I have enquired at various steamship lines as to whether there will be any special rates similar to excursions, but evidently these people (who appear only to cater for the above-mentioned plutocrats) are not considering the matter at all, and I, and many others in my position, will be unable to manage the ordinary fare.

I wonder if you could mention anything about this in your columns, with the possibility of making up a party, or starting an agitation for a reduction in fares.

There is even the possibility of the R.I.B.A. doing something to stir up these steamship lines to their responsibility for our architectural education.

B. A. PHILLIPS-HOWARD
(Teddington, Middlesex)

WORKING DETAILS : 707

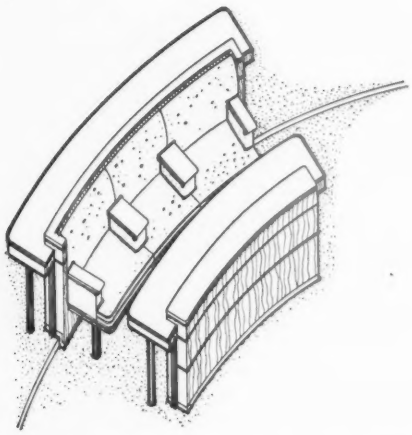
COUNCIL CHAMBER SEATING • NORWICH CITY HALL • C. H. JAMES AND S. ROWLAND PIERCE

All the panelling and furniture in the Council Chamber is in mahogany (Honduras solids and Cuban veneers) inlaid with brass bands, edges and skirtings. Seating for the councillors consists of continuous seat and table fixtures. The seating is upholstered and covered with grey pinhead morocco with mahogany and leather-covered arm rests. The table tops are supported on circular reeded legs at 2 ft. 4 in. centres, the legs supporting the seats being similar but of square section.

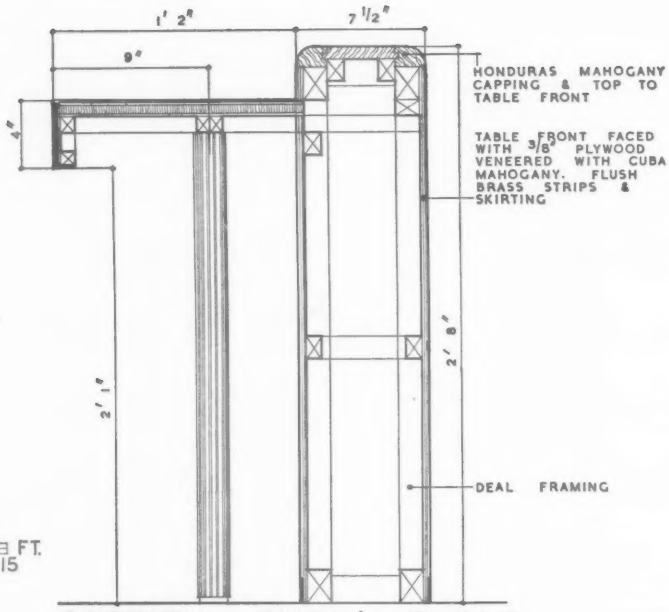
Details are shown overleaf.

WORKING DETAILS : 708

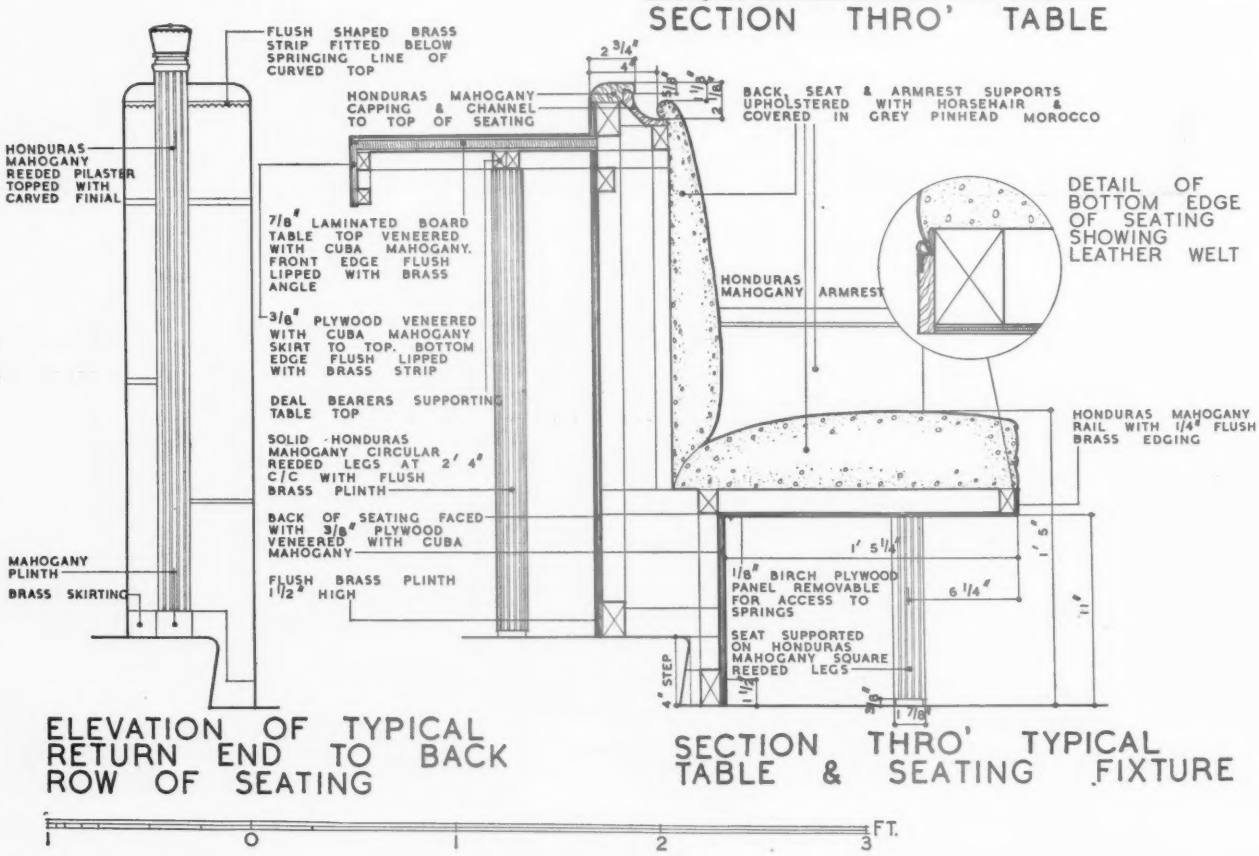
COUNCIL CHAMBER SEATING • NORWICH CITY HALL • C. H. JAMES AND S. ROWLAND PIERCE



AXONOMETRIC OF TYPICAL FRONT ROW SEATING



SECTION THRO' TABLE



ELEVATION OF TYPICAL RETURN END TO BACK ROW OF SEATING

SECTION THRO' TYPICAL TABLE & SEATING FIXTURE

Axonometric and details of the council chamber seating illustrated overleaf.

The Architects' Journal Library of Planned Information

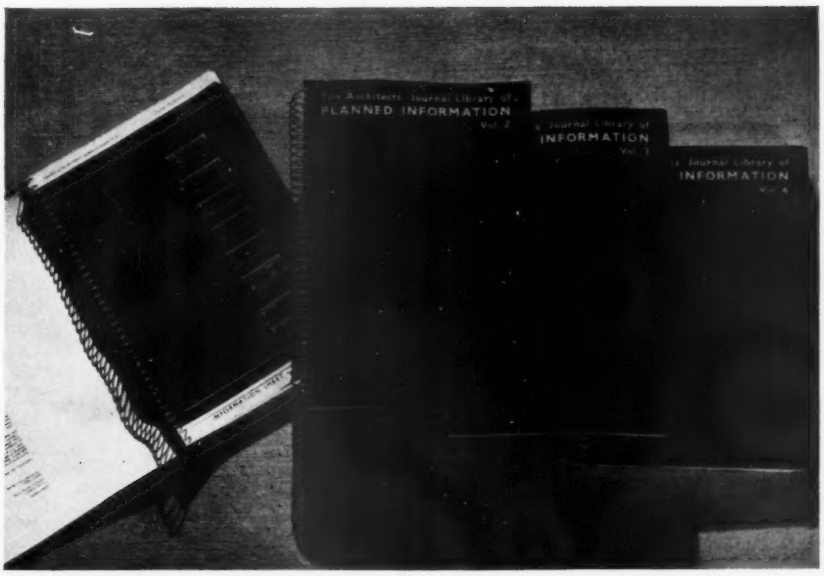
INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

687 Plumbing

688 Bricks (Standard Specials)



All the Information Sheets published in The Architects' Journal Library of Planned Information since the inception of the series to the end of 1937, have been reprinted and are available in the four volumes illustrated here. Price 21s. each.

Sheets issued since index :

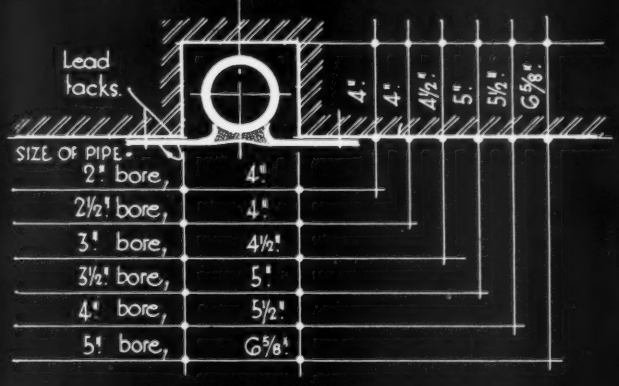
601 : Sanitary Equipment
602 : Enamel Paints
603 : Hot Water Boilers—III
604 : Gas Cookers
605 : Insulation and Protection of Buildings
606 : Heating Equipment
607 : The Equipment of Buildings
608 : Water Heating
609 : Fireplaces
610 : Weatherings—I
611 : Fire Protection and Insulation
612 : Glass Masonry
613 : Roofing
614 : Central Heating
615 : Heating : Open Fires
616 : External Renderings
617 : Kitchen Equipment
618 : Roof and Pavement Lights
619 : Glass Walls, Windows, Screens, and Partitions
620 : Weatherings—II
621 : Sanitary Equipment
622 : The Insulation of Boiler Bases
623 : Brickwork
624 : Metal Trim
625 : Kitchen Equipment
626 : Weatherings—III
627 : Sound Insulation
628 : Fireclay Sinks
629 : Plumbing
630 : Central Heating
631 : Kitchen Equipment
632 : Doors and Door Gear
633 : Sanitary Equipment
634 : Weatherings—IV
635 : Kitchen Equipment
636 : Doors and Door Gear
637 : Electrical Equipment, Lighting
638 : Elementary Schools—VII
639 : Electrical Equipment, Lighting
640 : Roofing
641 : Sliding Gear
642 : Glazing
643 : Glazing
644 : Elementary Schools—VIII
645 : Metal Curtain Rails
646 : Plumbing
647 : Veneers
648 : U.S.A. Plumbing—V
649 : U.S.A. Plumbing—VI
650 : Ventilation of Factories and Workshops—I
651 : School Cloakrooms (Boys)
652 : U.S.A. Plumbing—VII
653 : Plumbing
654 : U.S.A. Plumbing—VIII
655 : School Cloakrooms (Girls)
656 : Ventilation of Factories and Workshops—II
657 : Floor Construction
658 : Partitions
659 : Equipment
660 : Asbestos-Cement Decorated Sheets
661 : Aluminium
662 : Sound Resistance
663 : Adjustable Steel Shelving
664 : Sheet Lead Work
665 : Adjustable Steel Shelving
666 : Sound Insulation
667 : A.R.P.
668 : Aerodromes
669 : Aluminium
670 : Metal Trim
671 : Rainwater Gutters
672 : Waterproofing
673 : Aluminium
674 : Roof Insulation
675 : Furniture
676 : Ventilation of Factories and Workshops—III
677 : Oil Paint
678 : Ventilation of Factories and Workshops—IV
679 : Plumbing
680 : Aluminium
681 : Corded Curtain Rails
682 : Sound Insulation
683 : Roofing Tiles
684 : Sheet Metals
685 : Partitions
686 : Aluminium

DIAGRAMS SHOWING SIZES OF CHASES AND DUCTS FOR LEAD PIPES FIXED BY VARIOUS METHODS:

CONCEALED PIPES: To ensure access to pipes and their free movement under temperature variations, as well as protection against possible freezing in external walls, the chasing in of pipes is preferable to bedding them in plaster.

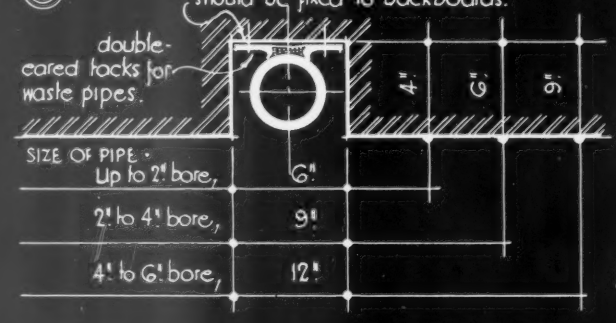
(A) CHASE FOR ONE LEAD PIPE WITH WIPED JOINTS.

(B) CHASE FOR ONE LEAD PIPE OF 2" OR OVER, SUPPORTED BY LEAD TACKS WIPED ON FACE OF PIPE.



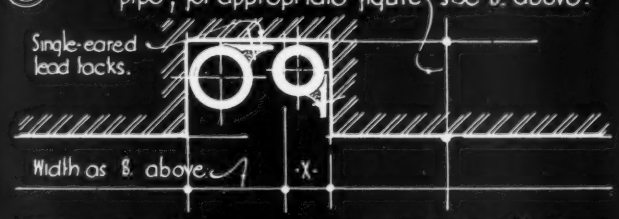
CHASE FOR ONE LEAD PIPE SUPPORTED BY LEAD TACKS SOLDERED ON BACK OF PIPE.

(C.) Where depth is available, vertical lead pipes should be fixed to backboards.



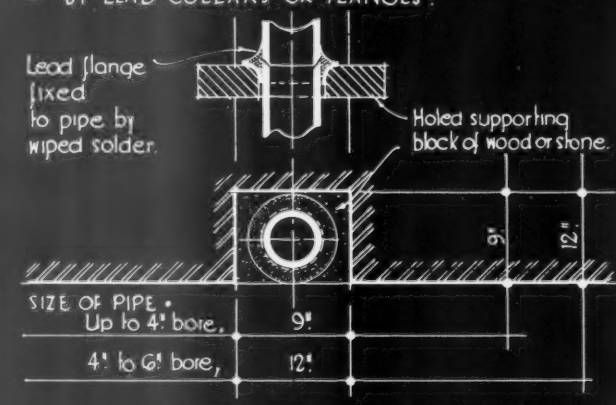
CHASES FOR TWO OR MORE LEAD PIPES SUPPORTED BY LEAD TACK SOLDERED ON BACK OF PIPE.

(D.) Depth of chase is governed by diam. of largest pipe; for appropriate figure see B. above.



EXTRA WIDTH "X" for pipes of various diameter: When fixing is by means of tacks, extra width of chase "X" is equal to overall diam. of joint of additional pipe, see table below.

(E.) CHASES FOR SINGLE LEAD PIPES 3" & OVER SUPPORTED BY LEAD COLLARS OR FLANGES.



(F.) TABLE GIVING APPROXIMATE OUTSIDE DIAMETER OF WIPED JOINTS.

SERVICE PIPES.		WASTE PIPES.	
BORE OF PIPE.	DIAMETER OF JOINT.	BORE OF PIPE.	DIAMETER OF JOINT.
½"	1½"	2½"	3½"
¾"	1⅞"	3"	4"
1"	2¼"	3½"	4½"
1¼"	2⅝"	4"	5"
1½"	2⅞"	5"	6⅛"
2"	3½"	6"	7⅛"

DUCT COVERS: For details of typical chase and duct covers, see previous Information Sheets Nos. 161 & 646, serial numbers 4 and 49 of this group.

Information from Lead Industries Development Council.

INFORMATION SHEET: CHASES & DUCTS FOR LEAD PIPES: No. 54

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

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 687 •

PLUMBING

Subject: Chases and ducts for lead pipes

General :

Details of lead tacks and pipe hooks and some methods of fixing and supporting lead pipes in horizontal and vertical positions are given in Information Sheets 161 and 646. Further details are given here setting out the sizes of chases required for lead waste and service pipes of various diameters.

Concealing Pipes :

The simplest way of running pipes of all kinds is to fix them to the face of the wall, adequately supported, either at points or continuously according to the type and size of pipe ; they are then always visible and readily accessible at all times. This, however, is not the usual modern practice in important places in new buildings. All soil, waste and service pipes are now generally concealed. The methods of concealing them can be broadly summarized as :—

(*a*) Solid building-in.
(*b*) Free building-in.
(*c*) Permanent enclosure.
(*d*) Removable enclosure.

(*a*) *Solid building-in.* Solid building-in, whether in concrete, brickwork, or in a rendering or plaster, should never be allowed because it makes no provision for expansion and contraction or for subsequent access and because the pipe may be corroded by both lime and cement during the setting process.

(*b*) *Free building-in.* This phrase covers all those methods of coating, covering or wrapping the pipe with protective material before it is built-in. Such coverings allow expansion and contraction to take place and protect the pipe from the adjoining materials. Light building papers or felts are recommended for this work. Free building-in conceals and protects the pipe but access can be obtained only by cutting away the adjoining work. It is not so satisfactory as properly arranged chases.

(*c*) *Permanent enclosure.* Permanent enclosure behind wood fittings, false ceilings and such work and in ducts or chases is entirely satisfactory except for the difficulty of access. The sizes, fixings and other details given on this Sheet apply to ducts whether they are to be covered by permanent or removable enclosures.

(*d*) *Removable enclosure.* The housing of pipes in ducts or chases with removable enclosures is perhaps the ideal system for all piping work.

Small chases for single pipes may sometimes be cut out of the wall after the structural work has been completed. It is, however, more satisfactory to plan the piping system as a whole and then arrange for the chases and ducts to be provided during building, wherever they are required. The type of removable cover used depends upon the size of the duct and upon the character of the adjoining work. Those in common use include wood and plywood panels, metal sheet, metal frames with plaster or expanded metal filling, plaster-board and wall-board facings and various light facing slab materials.

Size of Chases :

The diagrams given here show all chases of rectangular shape, such as would be obtained if they were provided during building ; chases which are cut out after the building is complete should be so arranged to ensure that enough space for fitting and fixing is allowed and that the work is not left in a state so rough that fixing is made difficult.

The depth of chase given is the clear depth required before the chase is covered in.

The sizes given for the chases allow for the pipe, its joints and for fixing, the making of the joints (in the case of wiped joints) being done outside the chase and the pipe being eased back into the chase afterwards. Where this cannot be done extra space must be allowed for wiping joints in position.

Under normal conditions the space required for lead pipe is considerably less than that required for pipe having screwed or caulked joints for which tool room and working space is needed within the chase itself.

Fixing of Pipes :

Stout lead fixing ears (single or double) are to be preferred in all piping work, but pipe hooks or tinned clips may be used for vertical pipes up to 2 in. diameter. For fuller details of lead tacks, ears, hooks, etc., see Sheets 161 and 646.

In first-class work pipes in ducts should be fixed to back-boards spiked to the back of the duct ; such boards provide a good even surface to receive the pipes, they allow ready fixing without frequent plugging and they keep the pipes clear of the wall and free from all contact with lime or cement. Where, for reasons of economy, such back-boards cannot be provided, a strip of building paper or felt should be run behind the pipe to prevent direct contact between the pipe and any adjoining cement or lime mortar.

Issued by : Lead Industries Development Council

Address : Rex House, 38 King William Street, London, E.C.4

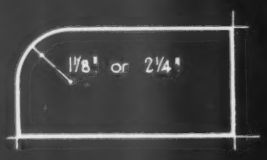
Telephone : Mansion House 2855

840.

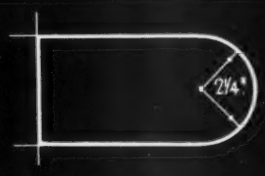
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

NOTE · All specials are made in 3" & 2⅝" sizes, & where not otherwise shown conform to the R.I.B.A standard sizes.

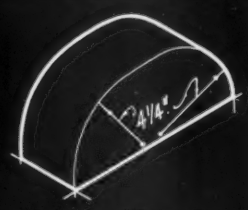
The numbers given below are the reference numbers of London Brick Company Limited.



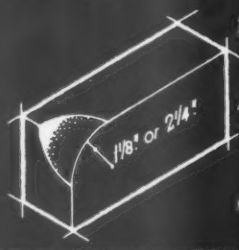
1. Single bullnose, 1⅛" radius.
2. Single bullnose, 2¼" radius.



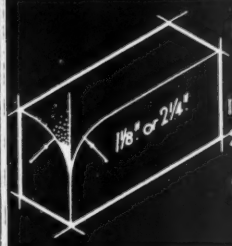
15. Bullnose on end (Cownose) 2¼" radius.



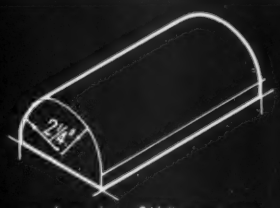
36. Coping brick, 4¼" radius.



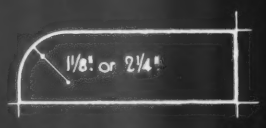
3. Single bullnose stop, 1⅛" radius, Right hand.
4. ditto, Left hand.
5. Single bullnose stop, 2¼" radius, Right hand.
6. ditto, Left hand.



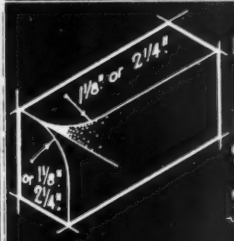
16. Bullnose internal return on end, 2¼" rad. Right hand.
17. ditto, Left hand.
22. ditto, 1⅛" radius, Right hand.
23. ditto, 1⅛" radius, Left hand.



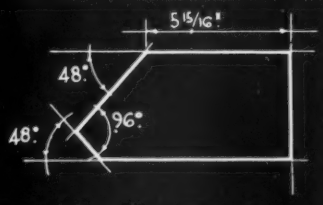
37. Coping brick 2¼" radius.



7. Bullnose header, 1⅛" radius.
8. Bullnose header, 2¼" radius.

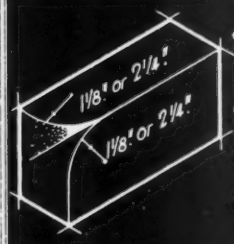


18. Bullnose internal return on flat, 2¼" rad. Right hand.
19. ditto, Left hand.
24. ditto, 1⅛" radius, Right hand.
25. ditto, 1⅛" radius, Left hand.

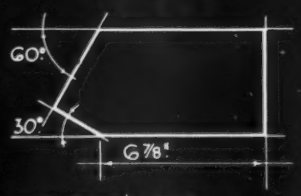


38. Squint brick, 48°

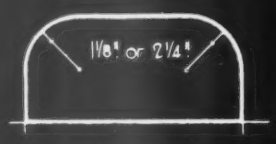
9. Bullnose stretcher, 1⅛" radius.
10. Bullnose stretcher, 2¼" radius.



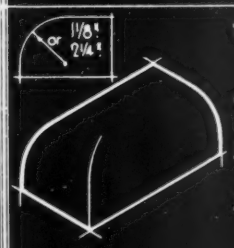
20. Bullnose internal return on edge, 2¼" rad. Right hand.
21. ditto, Left hand.
26. ditto, 1⅛" radius, Right hand.
27. ditto, 1⅛" radius, Left hand.



39. Squint brick 60°

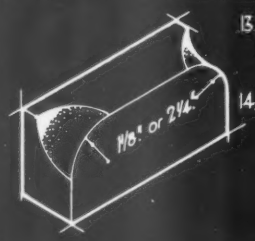


11. Double bullnose, 1⅛" radius.
12. Double bullnose, 2¼" radius.

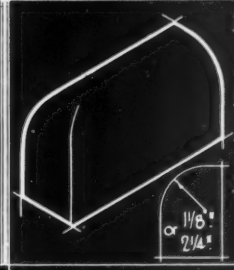


28. Bullnose external return on flat, 2¼" rad. Right hand.
29. ditto, Left hand.
32. ditto, 1⅛" radius, Right hand.
33. ditto, 1⅛" radius, Left hand.

40. Squint brick, 45°



13. Double bullnose stop, 1⅛" radius.
14. ditto, 2¼" radius.



30. Bullnose external return on edge, 2¼" rad. Right hand.
31. ditto, Left hand.
34. ditto, 1⅛" radius, Right hand.
35. ditto, 1⅛" radius, Left hand.

41. Squint brick, 68°

Information from London Brick Company Limited.

INFORMATION SHEET : PHORPRES BRICKS : STANDARD SPECIALS : 1 :

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

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 688 (81 revised) •

BRICKS
(STANDARD SPECIALS)

Product : " Phorpres "

Type Illustrated : Standard Specials, 1

Note—This Sheet supersedes No. 81, published in 1934, which is now cancelled.

Schedule of Special Bricks :

Makers' Number		
1.	Single Bullnose	1½" radius
2.	" "	2½" "
3.	" " Stop Right Hand	1½" "
4.	" " " Left Hand	1½" "
5.	" " " Right Hand	2½" "
6.	" " " Left Hand	2½" "
7.	Bullnose Header	1½" "
8.	" "	2½" "
9.	" Stretcher	1½" "
10.	" "	2½" "
11.	Double Bullnose	1½" "
12.	" "	2½" "
13.	" " Stop	1½" "
14.	" " "	2½" "
15.	Bullnose on End (Cownose)	2½" "
16.	" Internal Return on End Right Hand	2½" "
17.	" " Return on End Left Hand ..	2½" "
18.	" " Return on Flat Right Hand	2½" "
19.	" " Return on Flat Left Hand ..	2½" "
20.	" " Return on Edge Right Hand	2½" "
21.	" " Return on Edge Left Hand ..	2½" "
22.	" " Return on End Right Hand..	1½" "
23.	" " Return on End Left Hand ..	1½" "
24.	" " Return on Flat Right Hand	1½" "
25.	" " Return on Flat Left Hand ..	1½" "
26.	" " Return on Edge Right Hand	1½" "
27.	" " Return on Edge Left Hand ..	1½" "
28.	" External Return on Flat Right Hand	2½" "
29.	" " Return on Flat Left Hand ..	2½" "
30.	" " Return on Edge Right Hand	2½" "
31.	" " Return on Edge Left Hand ..	2½" "
32.	" " Return on Flat Right Hand	1½" "
33.	" " Return on Flat Left Hand ..	1½" "
34.	" " Return on Edge Right Hand	1½" "
35.	" " Return on Edge Left Hand ..	1½" "
36.	Coping Brick	4½" "
37.	" "	2½" "
38.	Squint 48°	
39.	" 60°	
40.	" 45°	
41.	" 68°	

The quotation of the numbers is sufficient indication of the type required.
Only some of the special bricks made by the Company are illustrated, for further and fuller details refer to the schedule of special bricks above.
The Company's process permits the manufacture of special shapes, other than those shown, which may be required for particular purposes.
Blue prints giving all measurements and angles of the special bricks illustrated can be obtained from the Head Office. The Cellular brick is not manufactured in special shapes.
Measurements throughout this Sheet are nominal, the dimensions of bricks being within the limits of the R.I.B.A. Standard of 1904, amended 1919.
Special shapes can be supplied rusticated or sandfaced.

Manufacturers : London Brick Company Ltd.

Address : Africa House, Kingsway, London, W.C.2

Telephone : Holborn 8282

HOUSE AT BROMSGROVE, WORCESTERSHIRE

PROBLEM AND SITE—*Ground slopes southwards towards mill pool situated diagonally to main road on to which site abuts. It was required that few windows should face main road, but as many rooms as possible should face view to east and south. Symmetricality of plan was governed by building line and client's requirements.*

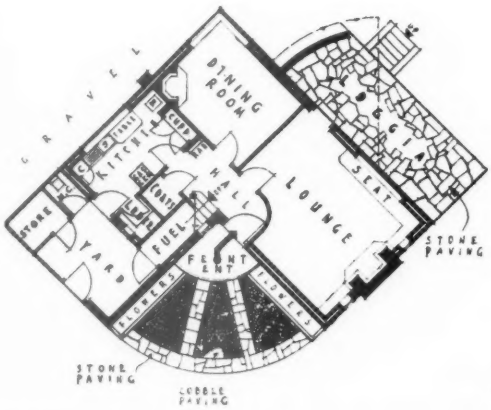
CONSTRUCTION—*11 in. brick cavity walls. Facings in 2½ in. common local bricks (laid with special raked out horizontal joint). Roof, hand-made sand-faced plain tiles. Partitions: 4½ in. brick, and 3 in. wood studding. Standard steel casements. External door: 2¼ in. panelled with central panel in teak carved by O. O'Connor Barrett; door is painted in 12 different colours.*

FINISHES—*Lounge has stippled matt finish painted in pale tones; other rooms are distempered. Floors: 3 in. T. and G., 1 in. oak boards wax polished (in dining-room and lounge), quarry tiles (in kitchen and hall). Built-in cupboards and fitments.*

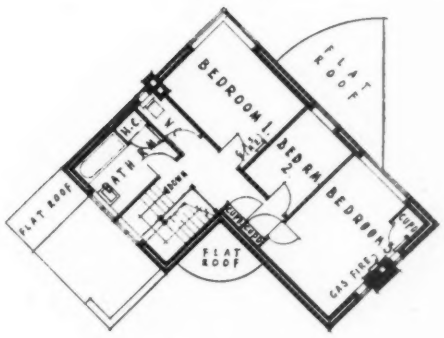
SERVICES—*Coal and gas fires. H.W. from independent boiler. Gas cooking. House wired for electric light.*

COST—*Just under £800. 1s. 0¾d. per cu. ft.*

DESIGNED BY F. E. BROMILOW

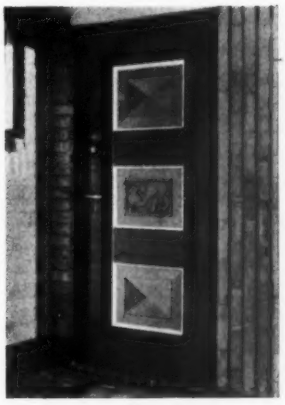


GROUND FLOOR PLAN



FIRST FLOOR PLAN

The illustrations show: (at top) the house from the north-west; (below, left), a view from the south-west; (below, right), the front door.



1 The York Road elevation, south.

ANALYSIS OF A BUILDING

YORK ROAD SCHOOL, HALL GREEN

BIRMINGHAM

DESIGNED BY WILLIAM T. BENSLYN

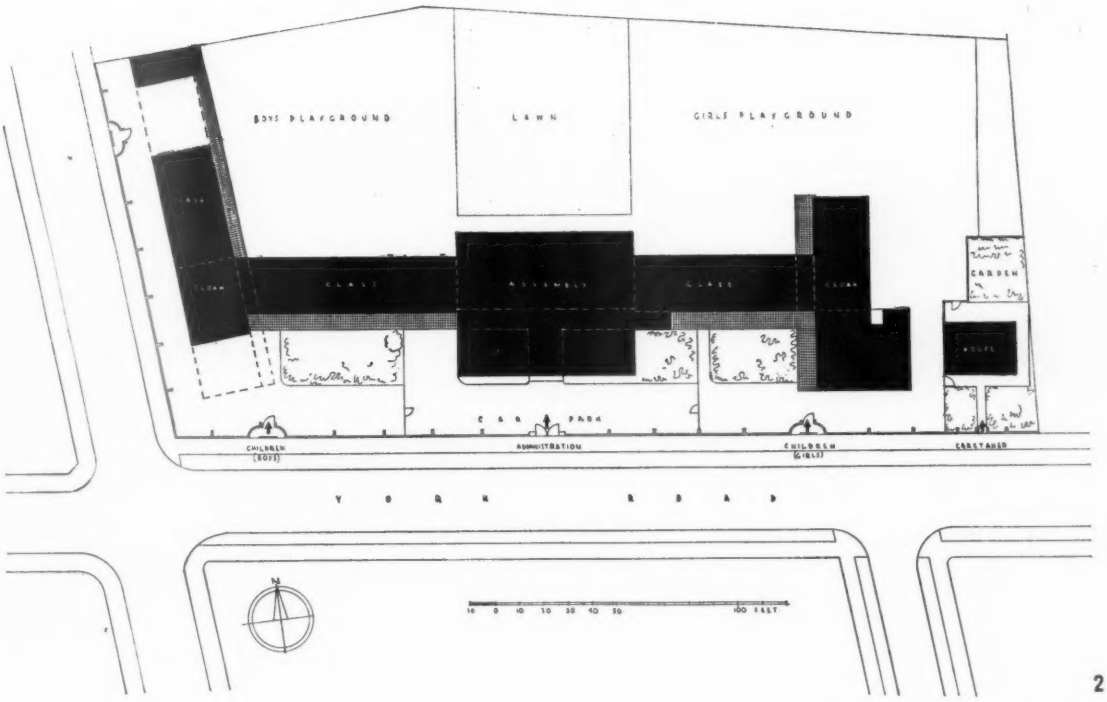
REQUIREMENTS—A Junior School for the City of Birmingham Education Department to accommodate 384 children with provision for extension to 480. House for resident caretaker.

COSTS—

Cube of Building	242,097	cu. ft.
Open Verandas and Covered Ways ...	14,270	,,
Cube of Buildings ... ... Total	256,367	,,
Cube of Caretaker's House	14,520	,,

	£	s.	d.
Cost of Caretaker's House (including drainage)	832	17	1
Cost of School	11,544	8	5
Cost of Heating	753	0	0
Cost of Lighting	137	9	6
Cost of Tar Paving	460	0	0
	13,727	15	0

Cost of School per ft. cube	10·8d.
Cost of Caretaker's House per ft. cube ...	13·7d.



2

SITE—The site, 2, was the only one available in a very developed district. It is somewhat limited in area for the accommodation required.

The site is a long rectangle with its principal frontage (to York Road) on the south. The buildings are arranged on an east to west axis with the rooms facing north and south. The Assembly Hall is placed in the centre, with the class-rooms on either side.

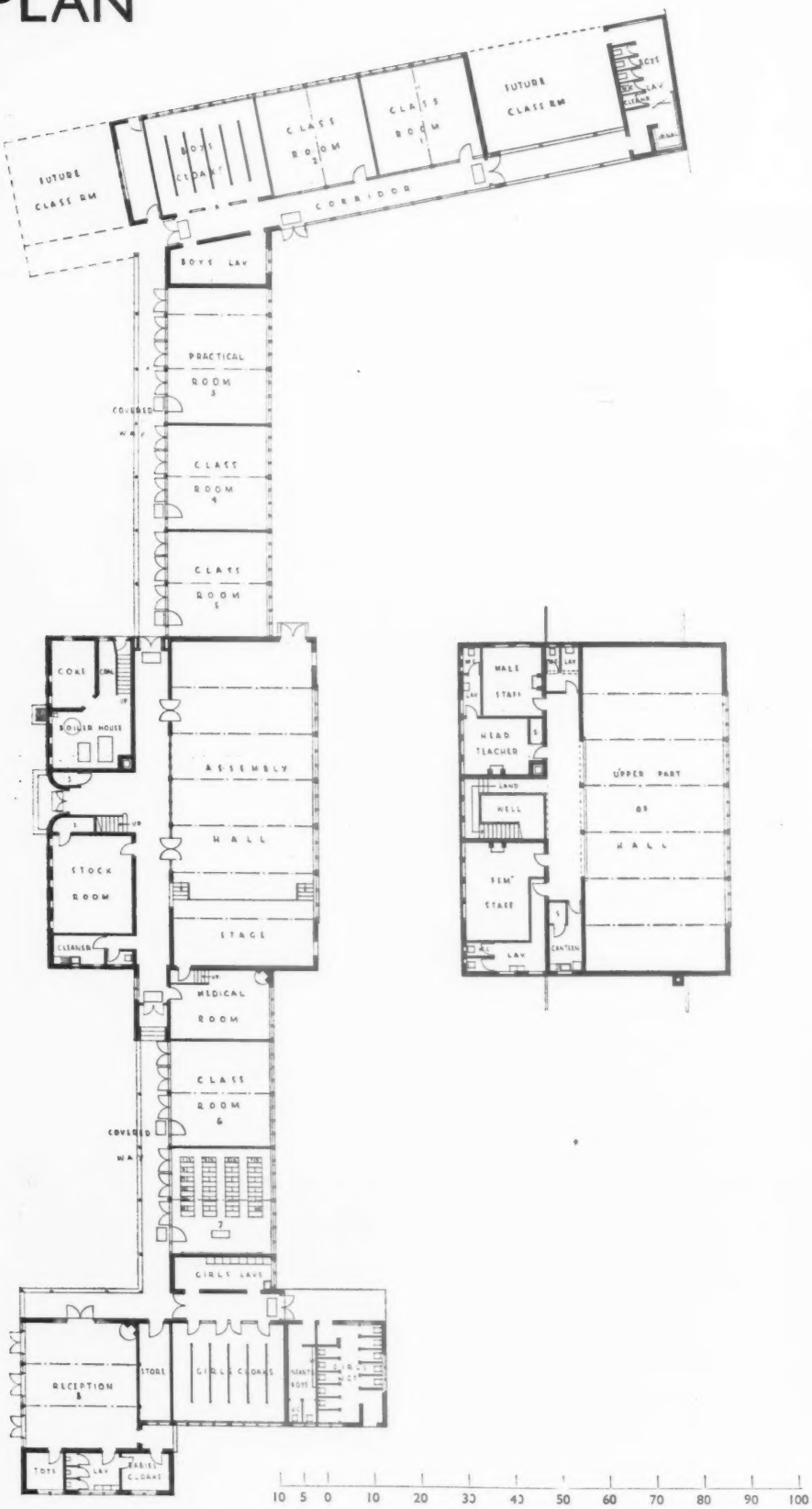
The caretaker's cottage is on the extreme east of the site, with immediate access from the road and access to the playground and school.

BUILDING TYPE—Single storey, open plan, with north and south lighting to class-rooms, and open access verandas on the south.

EXTERNAL FINISHES—1 and 3. Machine-made bricks with dragged face in reds and golden browns, mostly light shades. Wood windows and frames painted cream. Doors and down pipes painted emerald green. Metal fascia, copper.

Elevation from playground, north. 3

PLAN



4

LAYOUT AND CIRCULATION, 2 and 4—Main entrance on the centre of the York Road frontage gives access to car park, assembly hall, and staff-rooms. Boys' entrances on the west and girls' on the east sides of the main entrance give access to the verandas, which lead to their respective cloak- and class-rooms. Thus the staff entrance is independent of the children's entrance ; and children may go direct to the coat-rooms from which both lavatories and class-room corridors are immediately accessible. The playgrounds are separated by a lawn and entered from the verandas and from the assembly hall.

Lavatories are arranged so that they are easily accessible from the cloak-rooms, the class-rooms, and the playgrounds.

The administrative block in the centre is two storeys high. On the south front is the entrance hall, staircase, boiler-house, and stock-room, with the staff quarters on the first floor above; and on the north side is the assembly hall two storeys high. The boiler-house is entered from the car park so that fuel may be tipped straight through the metal doors into the coal and coke stores.

CONSTRUCTION

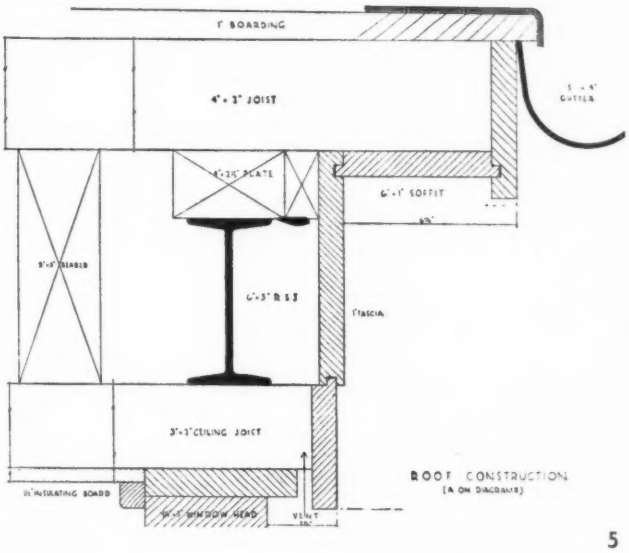
GENERAL—Owing to the exceptionally low cost of the building the constructional systems employed are of particular interest. Even having regard to the cheap finishes and equipment a figure of 10¾d. per ft. cube is so low that the constructional system is worthy of careful study.

The three chief materials are steel, wood, and brick. The steel is used in the form of a rigid framework to support the roof ; the wood is used for the roof construction and, together with glass, forms the external wall infilling ; and the brickwork is utilized for the division walls between rooms and dwarf walls below windows. Mass concrete is used for the whole of the ground floors, and there is a small quantity of reinforced concrete in the centre block.

CLASS-ROOMS—The class-room construction consists of a light steel framework, with walls between rooms of 4½ in. brick, one external wall of 11 in. cavity brickwork and wood window above, and the other of glazed doors with wood clerestory windows above. There are two bays per class-room. The stanchions are at 11 ft. 7 in. centres and are contained in the external walls. They are blocked out and cased in wood to form a continuous wood treatment with the windows on elevation, 3. 12 in. by 5 in. R.S.J.s span from stanchion to stanchion across the room, and 6 in. by 3 in. R.S.J.s in the external walls, 5 and 8.

The roof is constructed as follows : 9 in. by 3 in. wood bearers span between the deep joists and these, together with 4 in. by 2 in. plates bolted to the wall R.S.J.s, support 4 in. by 2 in. flat roof joists upon which is nailed the close boarding to take the bituminous felt. The roof is sealed by 3 in. by 2 in. joists fixed to the soffites of the 9 in. by 3 in. bearers ; the finish being ½ in. insulating board. This roof construction, apart from being light and therefore economical in cost, has good insulating value due to the deep air space, and presents a flat unbroken ceiling to the rooms below.

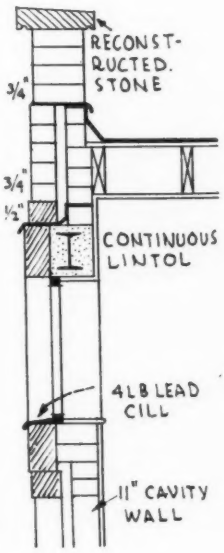
CENTRE BLOCK—The centre block has 11 in. brick external and end walls and is steel framed with stanchions at 10 ft. centres and 15 in. by 6 in. R.S.J.s spanning across the room. The roof is constructed with 9 in. by 3 in. bearers supporting the roof joists and the ceiling joists in exactly the same manner as the class-rooms.



5

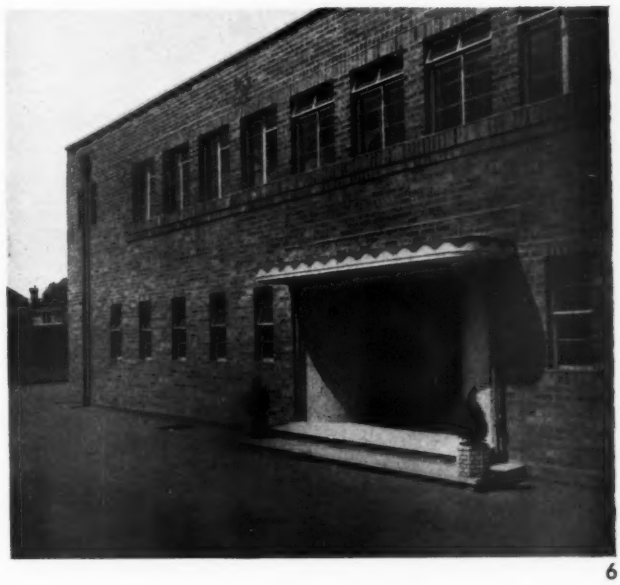
The administration side of the centre block is of 11 in. brick cavity walls, mass concrete ground floor, and reinforced concrete first floor. The roof is of 9 in. by 2 in. wood joists close boarded. The staircase is constructed of reinforced concrete with solid brick balustrade. The heating chamber has a 9 in. R.C. floor on 3 in. concrete and is tanked in asphalt below ground level.

VERANDA—The open access verandas, 14, consist of a close-boarded roof carried by 5 in. by 2 in. wrought joists at 16 in. centres. The joists are supported in the wall by a 7 in. by 3½ in. steel channel and on the outside by a 7 in. by 4 in. wood bearer, 8. The wood bearer is supported on 4½ in. by 4 in. posts on the same centres as the stanchions ; each post stands on a granolithic stool so that the wood cannot rot. The floor is 4 in. concrete separated from the garden by a 9 in. by 5 in. grano curb.



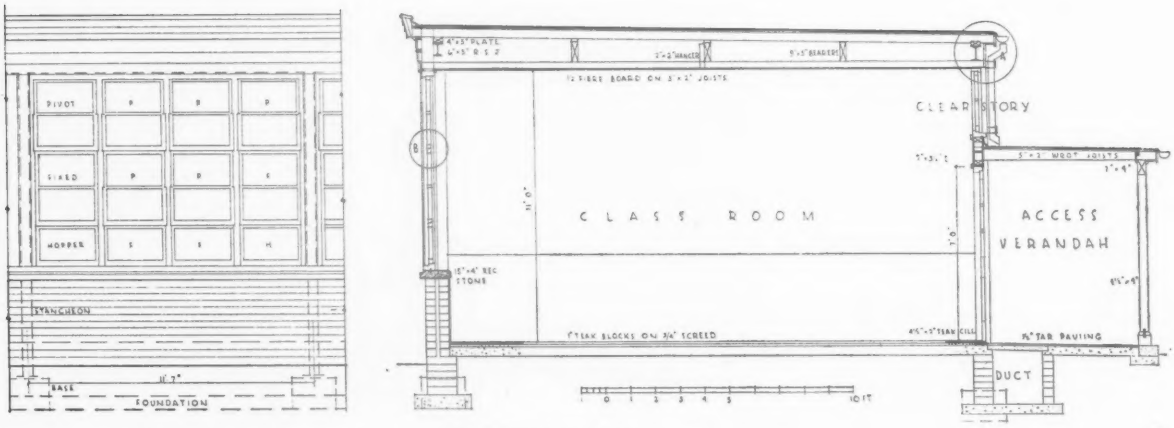
The main entrance has curved brick walls faced with yellow glazed tiles. The projecting hood is reinforced concrete with ⅝ in. cement facing and is covered with lead. The diagram shows the construction of the first floor window treatment.

7



6

CLASS-ROOM



Construction of class-room. 8

The class-rooms are all identical. Each consists of two bays of the steel grid, giving a room size of 21 ft. 4 in. by 22 ft. 9½ in. Each room will hold 48 pupils comfortably ; the seating is shown on a typical room on the plan, 4, page 986.

The rooms are separated by a solid 4½-in. brick wall.

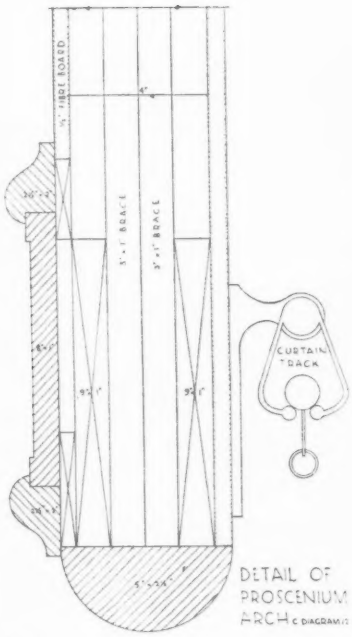
The north wall, 9, consists of windows stretching from cross wall to stanchions in the centre ; with a 3-ft. cill height and head tight against the ceiling.

The south wall, 14, consists of a series of pairs of glazed doors which open out on to the access veranda, and a single glazed door which opens into the room.

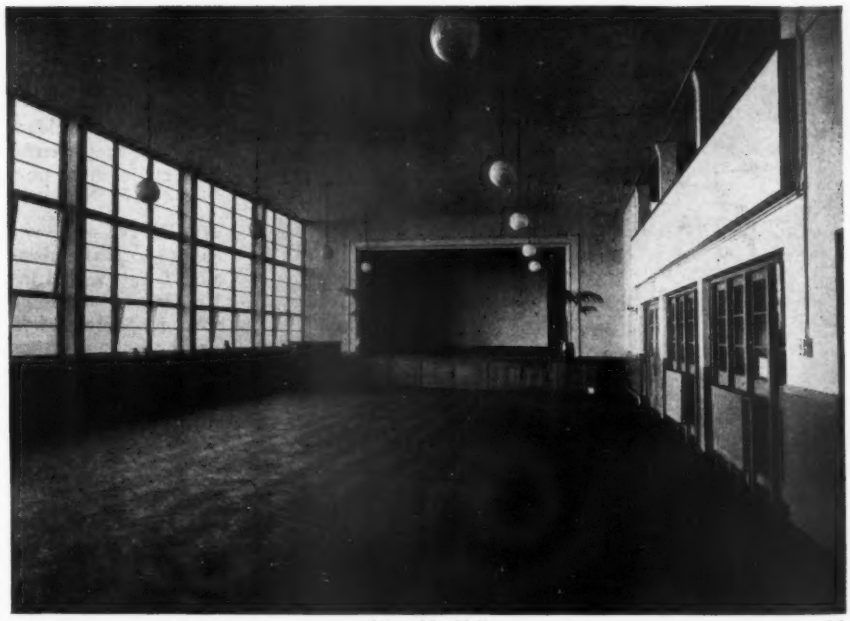
The open access veranda runs along the south side of the rooms, and as the roof over this obstructs to an extent the daylight, clerestory windows are arranged above. These windows are centre pivoted to obtain cross ventilation when the doors are closed.

Class-room. 9

ASSEMBLY HALL



10



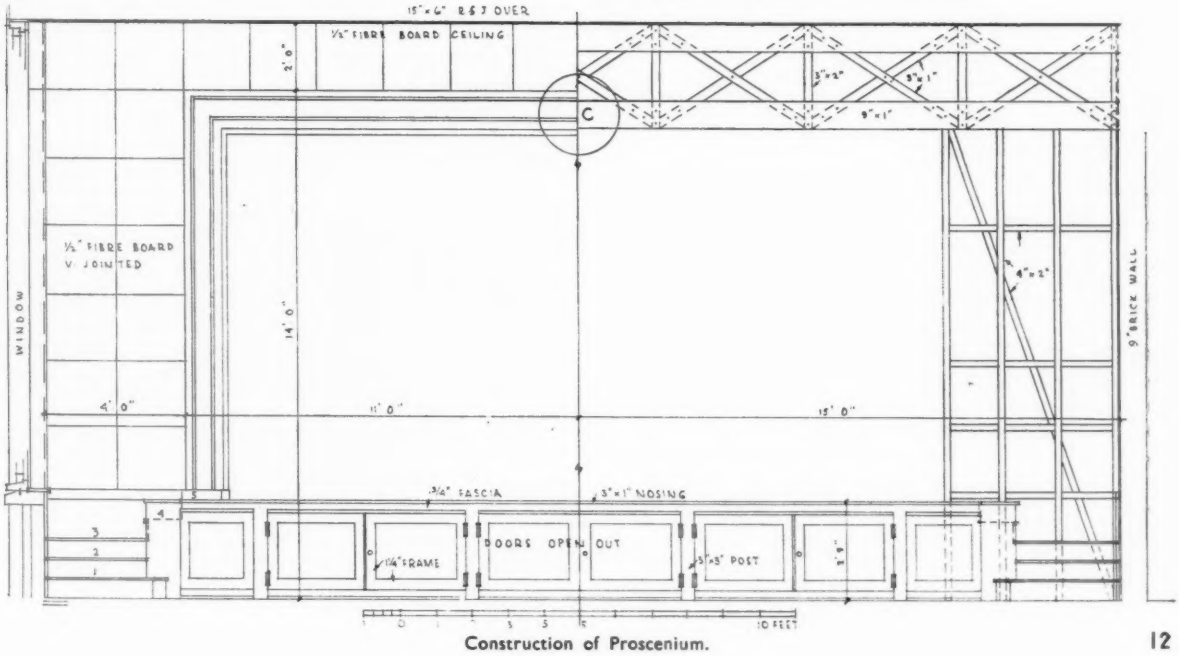
Assembly Hall. 11

The assembly hall, 11, is 70 ft. long by 30 ft. wide by 16 ft. high from floor to ceiling.

Six sets of steel stanchions and joists spaced at 10-ft. centres divide the length into seven equal parts, 4. The spaces between the stanchions on the north are filled with wood windows of the same section as those to the class-rooms. The south wall is 9-in. brickwork except the three centre bays which have glazed doors on the ground floor and an open gallery on the first. This open gallery gives a view of the hall from the teachers' quarters on the first floor, and also serves to keep the heart of the plan open and well lit. The end walls, dividing the hall from the class-rooms and open air, are 11-in. cavity brickwork.

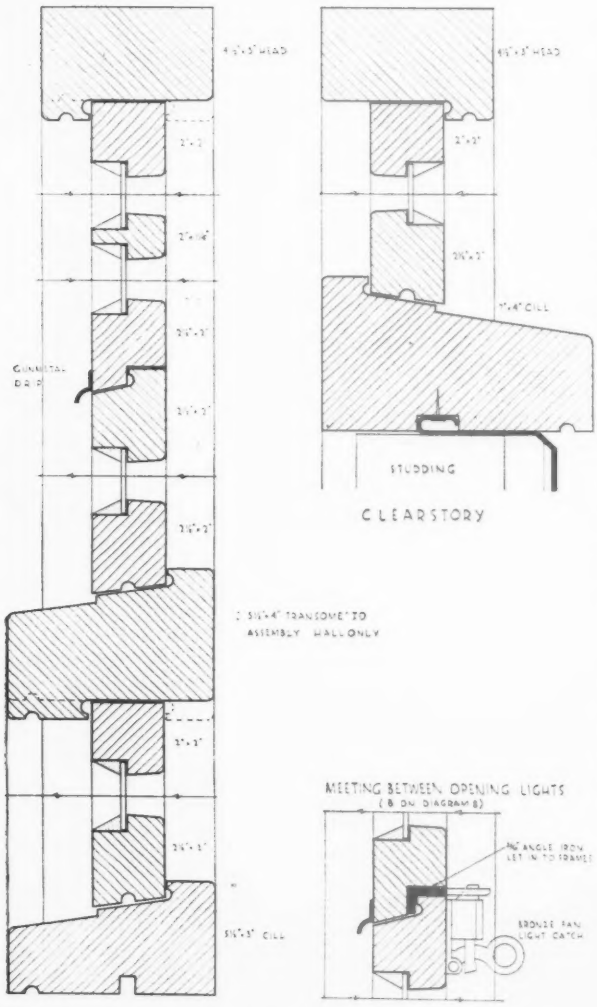
The stage at the end of the hall is entirely of timber construction. The proscenium arch, 12, consists of wings built up of 4 in. by 2 in. braced studding; and a flat arch over of 3 in. by 2 in. verticals with 9 in. by 1 in. top and bottom rails both sides of the 3 in. by 2 in. and 3 in. by 1 in. cross braces. The arch is faced with squares of building board with "V" groove joints, and the opening is emphasized by a built-up moulded architrave, 10.

The stage itself extends 4 ft. beyond the proscenium arch making a total depth of 14 ft. It consists of 3 in. by 3 in. framed bearers with 4 in. by 2 in. braces at approximately 6-ft. centres from front to back of the stage; vertical support is 5 in. by 2 in. joists at 16-in. centres.



Construction of Proscenium. 12

EQUIPMENT



13 Class-room Windows.

HEATING—Heating and hot water is on the accelerated low-pressure hot water system with sectional pattern heating boiler and sectional pattern boiler and calorifier for hot water. The main flow and return pipes are run in a duct formed under the veranda, 8.

PLUMBING — Standard practice : 5 in. by 4 in. C.I. eaves gutters; 2-in. and 3½-in. R.W.P.s ; 2½-in. wastes to lavatories; 4-in. soil and vent pipes and lead anti-syphonage pipes. Internal plumbing is in lead and copper. Services to lavatory basins, etc., are fixed on the surface.

SANITARY FITTINGS—Sanitary fittings generally to standard practice with 30 in. by 18 in. by 10 in. sinks to cleaners and canteen, and 22-in. lavatory basins. Children's lavatory basins are 20 in. wide in ranges and have faience waste discharging into open faience floor channels, 17. High level w.c.s with hardwood seat. Two drinking fountains with bubbling jet, one in either playground.

ELECTRICAL—The electrical installation is to standard practice with welded steel screwed conduit. Except to the ceiling of the assembly hall all conduit is run on the surface. Four ceiling light points are provided to each class-room.

WINDOWS—The windows generally are of red fir. The main windows to the class-rooms, shown in elevation on page 5, Nos. 8 and 9, and in detail on this page, 13, have 4½ in. by 3 in. frames and mullions and 5½ in. by 3 in. teak cills. The bottom opening lights are bottom hung and fall in on to sheet metal checks at either side so that when the window is open the air is deflected upwards and side draughts on to the children is avoided. The windows above are pivoted in the centre ; and the top and bottom rails of windows hung above each other meet on a $\frac{3}{16}$th angle iron. The fanlights above the class-room doors are centre pivoted.

The windows to the assembly hall are identical to those of the class-rooms, excepting that the windows being taller are braced by 5½ in. by 4 in. transomes, and the larger area of the opening portions is divided up by glazing bars. The windows to the south, east and west elevations of the centre block are standard section steel.

DOORS—The doors generally have 4½ in. by 3 in. frames. The doors are 2 in. thick with solid panels at the bottom and glazed panel above. The doors screening the class-rooms from the open veranda are hung in pairs, 14, and have rebated meeting rails. The level of the class-room floors is above that of the veranda ; the difference being overcome by a 4½ in. by 2 in. teak cill, which is rebated to stop draught.

14 Class-room access, folding doors and clerestory

FINISHES

CLASS-ROOMS—Floors : 1-in. teak block laid in herringbone pattern on ¾-in. screed. Walls : the blackboard end has 3 ft. 6 in. high painted cement dado with plaster wall above ; and the opposite wall is similar excepting that the wall is lined from the top of the dado to the picture rail with ½-in. fibre board on battens to avoid sound reflection, 15. Joinery painted. Ceiling : ½-in. fibre board, with joints covered with tape, with cream distemper finish.

ASSEMBLY HALL—Floors : 1-in. teak blocks laid in herringbone pattern on ¾-in. screed. Walls : painted plaster dado, distempered above ; joinery painted, excepting to stage which is of polished oak. Ceiling : distemper on patent fibre boards.

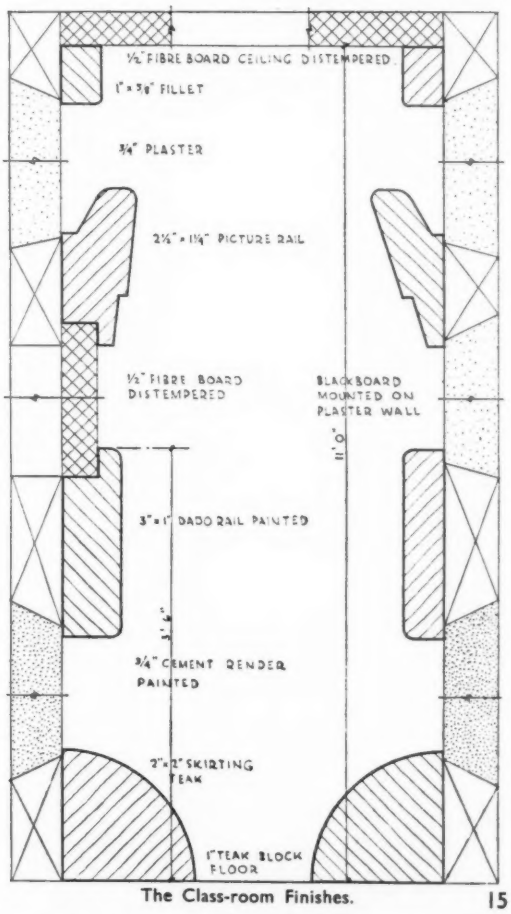
LAVATORIES—The cloakroom lavatories and w.c.s have painted fair face brickwork walls and granolithic floors, 17. Ranges of lavatories have glazed tile splash backs.

ENTRANCE HALL—The entrance hall has a terrazzo floor, painted plaster dado, and distempered wall above. The staircase has painted plaster solid balustrade finished with an oak capping and bronze handrail.

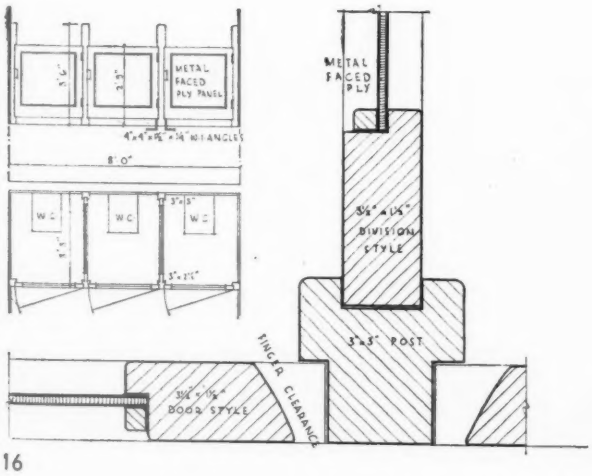
FIRST FLOOR—The staff quarters on the first floor have dark brown linoleum floors, stuck down on to screed, and distempered walls and ceilings. The lavatories have 6 in. by 6 in. red quarry tile floors and skirting.

EXTERNAL — The access verandas have limestone tar paving ½ in. thick, laid on concrete, and are finished on the outside edge by a granolithic curb.

The playgrounds are limestone tar paving laid on 4-in. bed of ashes.



The Class-room Finishes. 15

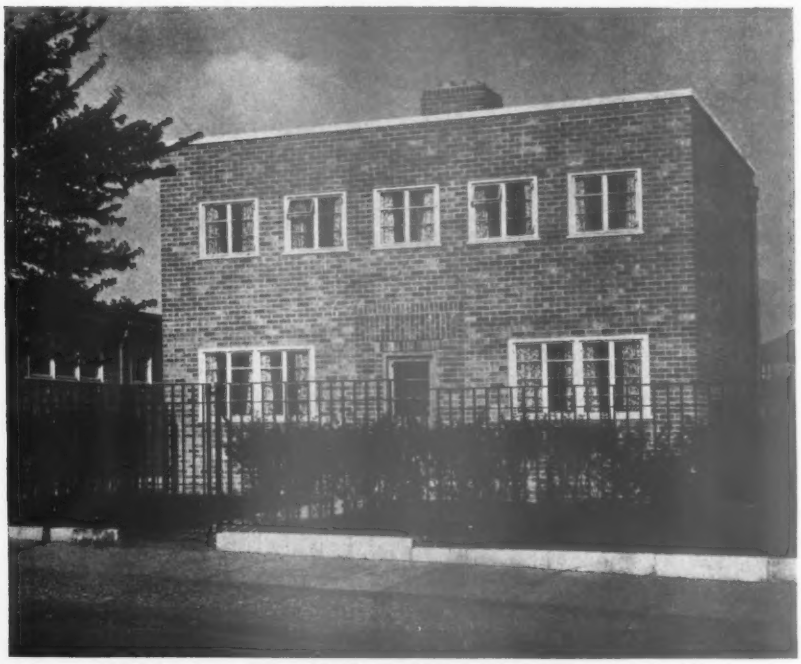


16

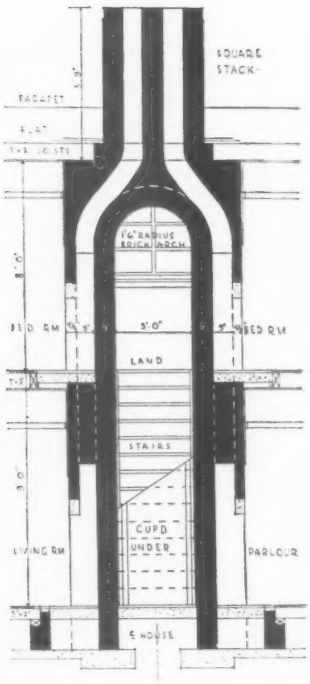
The diagram above shows the construction of the dwarf partitions to the babies' w.c.s These consist of metal-faced plywood panels held in 3½" x 1½" deal framing. The posts holding the doors and divisions are anchored to the floor by 4" x 4" w.i. angles, one arm being set in the concrete floor and the other screwed to the post. The picture on the right shows a range of sanitary fittings with open faience wastes and channel.

17

CARETAKER'S HOUSE



18 The elevations are in golden brown bricks, with cream painted windows



Method of carrying flues over staircase 19

PLAN—The plan is a rectangle 30 ft. by 22 ft. divided up into simple rectangular rooms, 20 and 21. On the ground floor a small entrance lobby gives access to the parlour, staircase, and living room. The living room is the general purpose room and, being used for meals, has an access door to the scullery where the food is prepared, 20. The bedrooms and bathroom on the first floor are grouped round a small landing, 21. The interesting feature of the plan is the centralization of the vertical elements, i.e. the staircase and flues. By planning the fireplaces back to back and running the staircase up between them an economical structure is obtained with the minimum of circulation area and all flues concentrated in one stack only. As may be seen in the diagram above, 19, the flues are gathered together over the staircase by means of a brick arch.

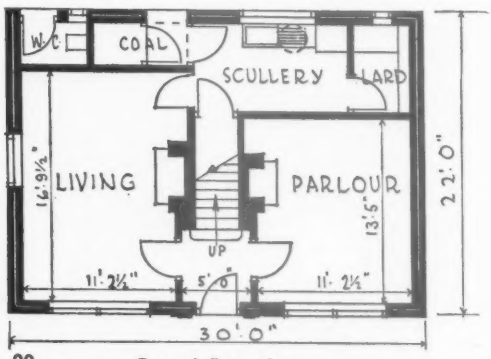
CONSTRUCTION—The house is constructed of 11-in. cavity external walls, and $4\frac{1}{2}$-in. brick walls and stud partitions internally. The ground floor consists of 5 in. by 2 in. joists on sleeper walls, and the first floor and roof of 7 in. by 2 in. joiscs spanning the short way of the rooms. The staircase has $1\frac{1}{4}$-in. treads with rounded nosing, 1-in. risers, 11 in. by $1\frac{1}{2}$ in. wall strings, and 2-in. oak mopstick handrails.

EQUIPMENT—Windows are standard steel casements in wood frames, and doors are the standard three-panel variety $1\frac{3}{4}$ in. thick. There are coal fires in the parlour and two bedrooms and a range for cooking in the living room. A hot water boiler is fixed at the back of the range. The kitchen is equipped with a gas cooker and boiler, sink and teak drainer ; and the bathroom with bath, lavatory basin, and w.c.

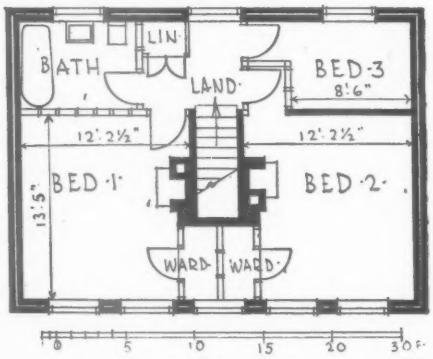
The wardrobes have hanging rails, and the linen cupboard slatted shelving.

FINISHES—The floors generally are $1\frac{1}{4}$ in. tongued and grooved Columbian pine. The porch, scullery, larder, coals, and w.c. have a floor finish of 6 in. by 6 in. red quarry tiles with a 4-in. tile cove skirting. Walls are rendered, floated and set with a distemper finish. Larder, lobby, coal, and w.c. have fair face brickwork distempered.

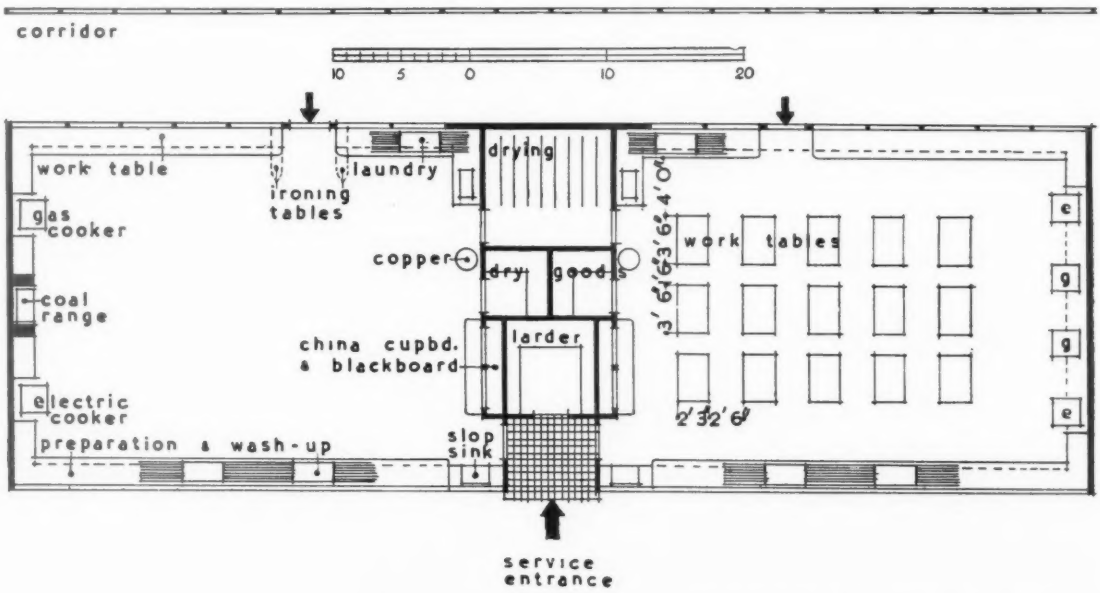
The external finishes, 18, are golden brown colour brickwork, reconstructed Portland stone coping, cream painted windows and emerald green painted door. The roof is covered with three layers of bituminous felt.



20 Ground floor plan



First floor plan 21



Above: diagrammatic plan of housecraft rooms for a 3-stream girls' Senior School. Facilities for cooking and laundry have to be provided in each room. In one room is shown the chief equipment arranged in normal sequence; in the other is shown the spacing of individual work tables. The rooms, each 850 sq. ft., are planned for half classes of 20 girls. Right: view of the housecraft room at Bottisham, Cambridgeshire, showing layout of sinks, benches, radiators and cupboards. Architect: S. E. Urwin. From "The Design of Nursery and Elementary Schools."

L I T E R A T U R E

THE NEW SCHOOL

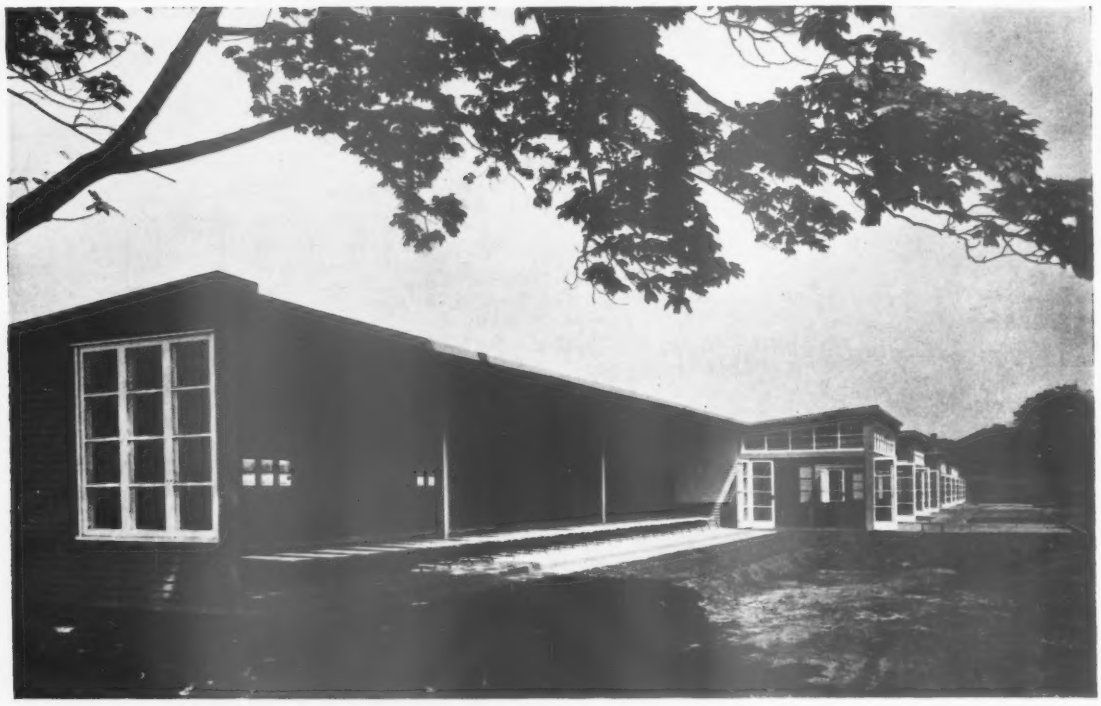
[*By RICHMOND POSTGATE*]

The Design of Nursery and Elementary Schools. By H. Myles Wright and R. Gardner-Medwin. Architectural Press. Price 10s. 6d.

THIS is a summary of the problems confronting an architect who is attempting to design a school for a local education authority today. It commences with a short section pointing out the main causes of difference between the school of before the war and today—the Hadow reorganization, the public's interest in and the official encouragement of nursery schools, the belief in activity rather than instruction as a method of teaching, and the rapid raising of the official requirements of space and equipment with which local education authorities and their architects have to comply.

The main part of the book deals in three sections with Nursery and Infant schools (up to 5 years), Junior schools (5–11), and Senior schools (for children over 11). Each section contains valuable summarized data about each type of school, starting with the operations of school life—what the children do, when they do it, and what the teachers need to help them. This leads, in logical sequence, to practical and reasonably detailed notes for the architect upon the siting, planning, heating, lighting, furnishing and finishes appropriate to the school's activities. Essential dimensions are given in each section, to show the sizes of furniture, and the heights of pegs and handles; and information from the Board of Education's pamphlets is inserted. A final section touches briefly upon methods of light construction. There is a page of bibliography, and numerous illustrations. For the architect who is new to the job of school-building, and who is prepared to treat building a new school as a new problem, and not as the adaptation of previous work, this work will prove an excellent stand-by.

For the authors, who are not, as are many architects of school buildings, specialists in the work, have had to think each question afresh. They have evidently asked what is wanted and then tried to see how it can be provided, and they are not unconcerned with the less tangible emotional and æsthetic effect of buildings upon unformed minds. This may seem an elementary virtue in an architect, but it is plain to all who will look at the school buildings now going up in the country, that it is one which is not universal. It is an extraordinary thing that while the changes in factory organization and building methods have evolved a new and often delightful manner of building, equally radical changes in educational



School at Swinton and Pendlebury, Lancashire. Architect, Hubert Bennett. The rest shelter and open-air classrooms from the garden, showing the interesting combination of steel and timber construction. From "The Design of Nursery and Elementary Schools."

methods and requirements, and the same revolution in building methods have not, with a few notable exceptions, produced a similar change in school buildings. An architect building for a local authority can still erect an inconvenient, ugly, inflexible and desperately permanent structure, and suffer no loss of prestige on that account. This is the more serious because this country, which is now building schools fast, will soon cease to do so, and the opportunity to wed modern education and modern construction to form an environment which assists the work, will be gone for ever.

The illustrations and plans are excellent and stimulating. It is noticeable that no less than eighteen deal with the work of the Cambridgeshire Education Committee, which shows at once the remarkable work of one committee and their officers in a poor rural area, and the authors' opinion of work elsewhere. On page 10 a picture of a Manchester school in the seventies has been reproduced to display the enormities of that time, and it is perhaps a pity that some examples of their modern counterpart are not introduced to act as a foil to the good work illustrated.

Much might be said about lazy design, particularly in this sphere; for the stability and security of the local government system, while it has many other good results, allows lazy design.

For schools built by public authorities, perhaps owing to the security of tenure enjoyed by those who work for them, often do not satisfy the detailed needs of the child, in the way that buildings built and paid for by a private client must do. But, as the authors point out, there is a limit to the improvements which thought can supply.

Many of the suggestions in the book depend, they say, "pre-eminently upon whether larger grants are available." In other words, good schools cost more to build than bad; as good teaching costs more than bad.

Are we prepared to pay?

HOUSE PURCHASE

Home Ownership. By Hubert B. Sully, P.A.S.I., M.R.San.I. London: Pitmans. Price 21s.

WITH the facilities for house purchase that are now available, almost every man who is about to set up a home considers buying. Mr. Sully doesn't question the wisdom of such an investment to the man of ordinary means, and in fact considers that setting up a home in this way is laudable as an act of citizenship even if the purchaser thus lives beyond his income.

Buying a ready-made house versus building to the special requirements of a plan and specification is discussed in a very useful way, and the principal facilities for house purchase are examined and explained under the following heads.

1. By private mortgage.
2. By bank loan (chiefly short-period loans).
3. By loan from local or county authority.
4. By building society mortgage.
5. By an endowment assurance policy.

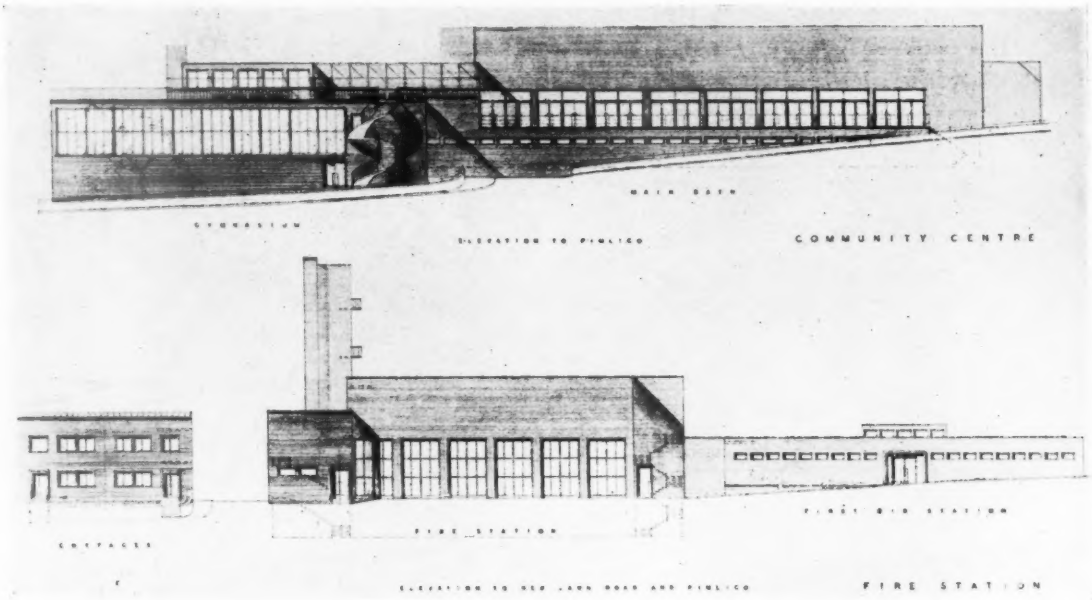
Selecting a building site is discussed in the first chapter, and as this is in some respects a delicate social matter, Mr. Sully handles it very sensitively, as is shown by the following extract from the text:—

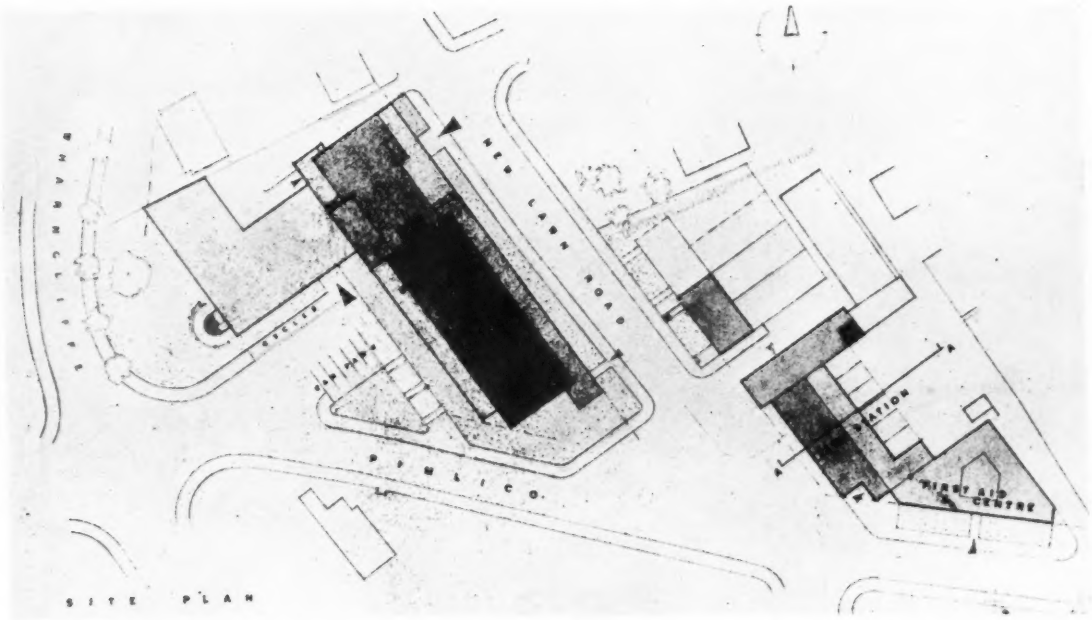
"The great and admirable work of rehousing people under first-class conditions is one that should and must go on; therefore the man who is investing capital in a private house must simply take care to select a locality where the march of events is not likely to reduce the value of his holding."

Structural considerations are discussed and illustrated in a highly technical way, but some of the recommendations made are not supported by generally acknowledged building practice. Asphalt on the oversite concrete is surely a very great extravagance unless the site is waterlogged and the sub-building requires tanking.

This volume is easy to read, but the section dealing with structural and sanitary considerations could have been usefully curtailed and discussed less technically. G. F.

COMPETITION FOR COMMUNITY CENTRE AND FIRE STATION, ILKESTON





WINNING DESIGN: BY ALAN REIACH

Professor Lionel B. Budden, F.R.I.B.A., the assessor of the competition for a community centre and fire station, Ilkeston, has made his award as follows :

Design placed first (£200) : Mr. Alan Reiach, A.R.I.B.A., of 12 Darnaway Street, Edinburgh, 3.

Design placed second (£100) : Messrs. A. Llewellyn Smith and A. B. Waters, AA.R.I.B.A., of 17 Bedford Square, London, W.C.1.

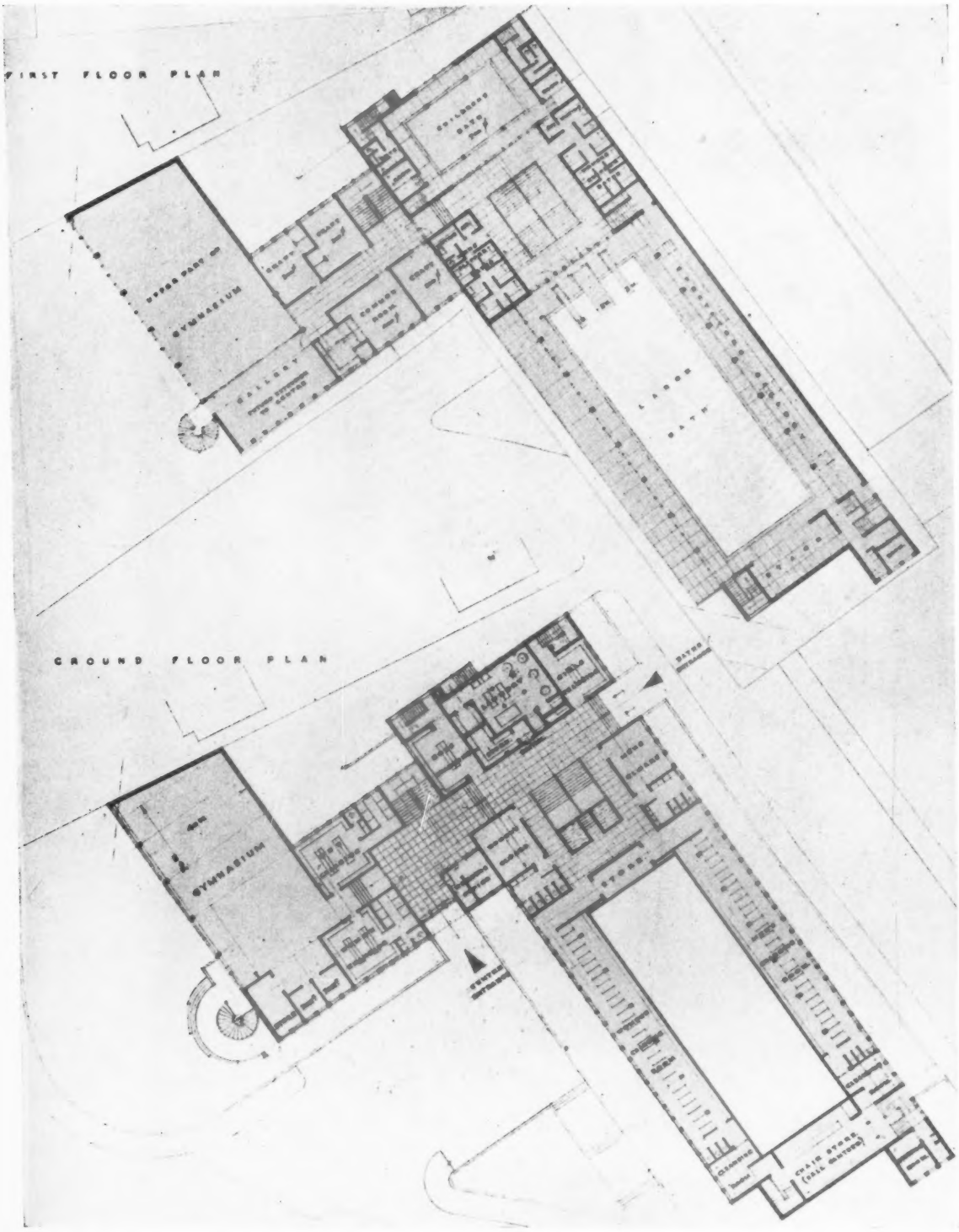
Design placed third (£50) : Messrs. R. C. Carvell and E. R. Delbridge, B.A. (Arch.), A.R.I.B.A., of 31 Woburn Square, London, W.C.1.

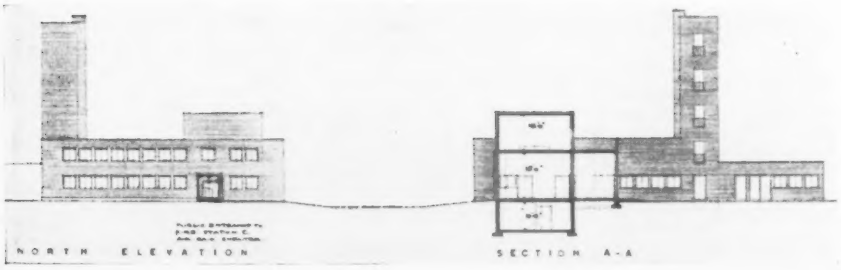
On this and the two pages following we reproduce the winning design and below are printed extracts from the assessor's report :

" Twenty-three designs were submitted in the competition. Amongst the problems to be solved were (a) to site and to provide access to the two groups of buildings to the best advantage on the irregularly shaped areas allotted to them ; (b) to relate in a convenient working arrangement the diverse elements of each group ; (c) to make the most effective use of the differences of level existing in the larger of the two sites, and (d) to fulfil the varied requirements of both the community centre and the fire station within the total limit of cost prescribed. The 23 schemes received exhibit many different ways of dealing with these issues.

"DESIGN PLACED FIRST—*A primary merit of this scheme is both the community centre and the fire station are well sited. Skilful use has been made of the levels of the ground on which the community centre has been placed to reduce cost and to obtain a convenient and interesting arrangement of the accommodation. The planning of the group of community buildings is admirably simple and direct ; it is economical and yet spacious, amply lighted and readily controlled. Regarded as a whole, the community group meets in an efficient and appropriate manner the needs of the various activities which will be centred in it. The fire station and the group of buildings associated with it are compactly and sensibly arranged. Some adjustments may be desirable in minor respects, but these should not involve any radical alterations."*

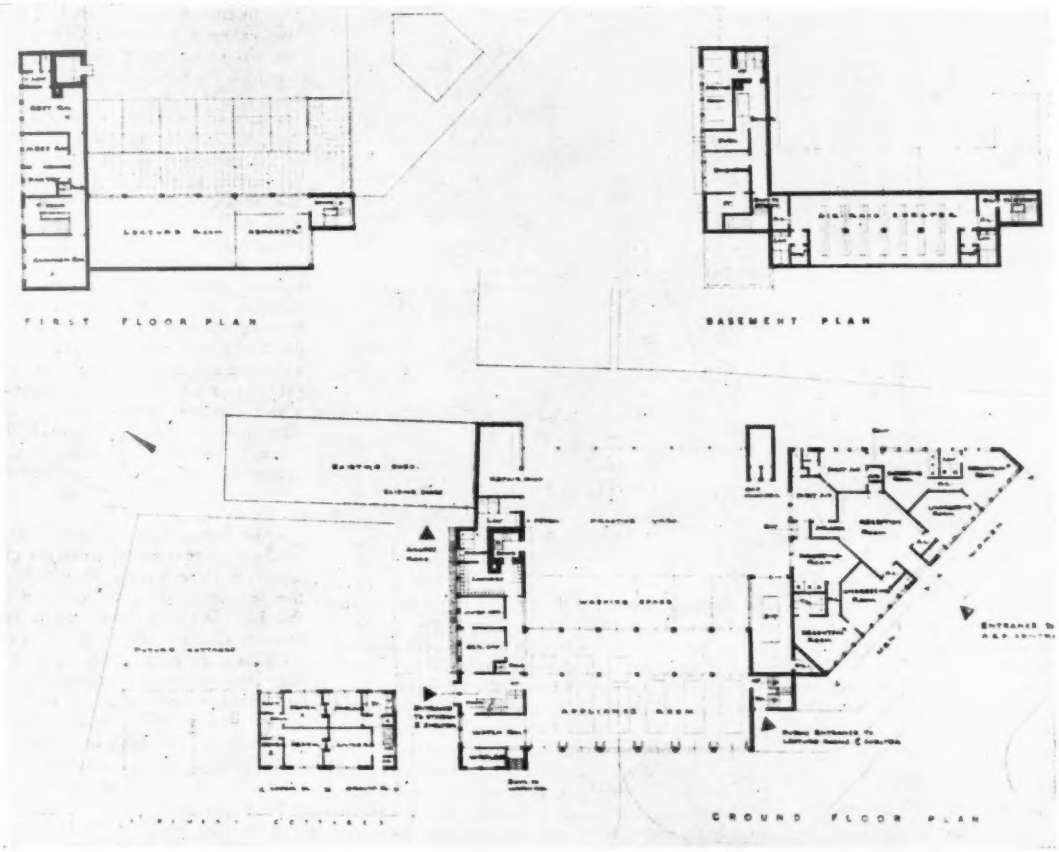
COMPETITION FOR COMMUNITY CENTRE AND FIRE





Above, ground and first floor plans of the Community Centre ; left, north elevation and section of the Fire Station and A.R.P. Shelter.

STATION, ILKESTON: WINNING DESIGN BY ALAN REIACH



Above, plans of the Fire Station and A.R.P. Shelter.
Extracts from Winner's Report:
GENERAL—*In order to relate the two groups of buildings on their separate and difficult sites, the main block of each has been placed parallel to the New Lawn Road frontage.*
CONSTRUCTION—*The community centre to be steel-framed with brick infilling. Pre-cast concrete floors. Main bath hall spanned by steel beams, concrete cased. First-aid centre to have R.C. flat roof. Fire station appliance room and lecture rooms steel framed, remainder of solid construction. A.R.P. shelter of special R.C. construction.*
COST—*Community centre, 657,310 cu. ft., at 1s. 3d.—£41,081; fire station, 161,290 cu. ft., at 1s. 3d.—£10,080; first-aid centre and gas shelter, 49,668 cu. ft., at 1s. 3d.—£3,103; two cottages, lay-out and filtration plant, £4,000. Total, £58,264.*

TRADE NOTES

[*By PHILIP SCHOLBERG*]

Zinc Roll Cap Roofing

IT is now, I believe, about a year since the Zinc Development Association was started, and the publication of booklets has now been begun in earnest. A year may seem a long time, but there is bound to be an immense amount of preliminary work in getting an organization of this kind going properly, hence a comparatively lengthy period of silence while the information is being collected from manufacturers and sifted into a coherent statement of current practice. Particularly so with zinc, for although there are manufacturers who know all about its physical properties it is not so easy to find people who know all the technique of, say, laying roofs. But it may be assumed that a good deal of the early work has now been done, for the Association published its first booklet during the summer (this, rather naturally, dealing with general principles), and the second, which deals with roll cap roofing, has been out about a month. As a roofing material, there is a lot to be said for zinc, which certainly does not deserve its present reputation as a cheap substitute for copper or lead. True, its life may not be quite as long, but, if properly laid, it is upwards of forty years, which is probably enough unless you happen to have got a job like London University, which has got to last for ever. Zinc on a roof forms its own protective coating, which is a basic carbonate of the same coefficient of expansion as the material itself, so that there is no danger of the coat peeling off with temperature changes. Judging from the number of pier pavilions roofed with this material it is quite capable of standing up to seaside atmospheres, and here it is worth remembering that the almost standard finish for metal work on ships is galvanizing. The weight recommended is 14 gauge or over; zinc gauges go the opposite way to the other sheet metal gauges, getting thicker as the number rises, and 14 corresponds roughly to 21 wire gauge.

•

The roll cap system is the most usual method of laying zinc roofs today, and makes it possible to do the job without the use of solder, except for a few minor details, and without any nails or screws passing through the exposed surfaces of the zinc, while full provision is at the same time allowed for temperature movements. The sketch (Figure 1) overleaf shows a typical pitched roof job, flat roofs being on much the same principle except for the provision of drips. The wood rolls are fixed over zinc clips, which are bent up the side of the rool and finally bent down over the upturned edge of the zinc sheet. The booklet is illustrated with a series of good clear drawings which explain the various constructional details such as welted and beaded drips, stops, saddle pieces, box gutters and corner pieces, while there are also some notes on eaves gutters and flashings. At the end of the book there are some specification clauses sensibly sub-divided under the headings of carpenter and zinc worker, the inclusion of the carpenter section being a very sensible step, for it

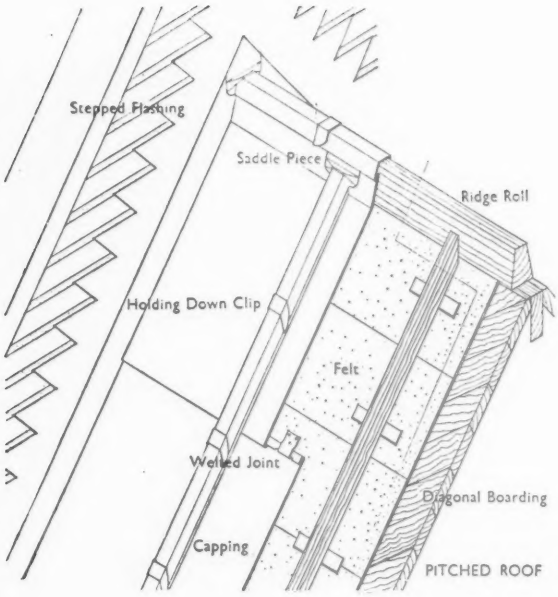


Figure 1. Zinc roll cap roofing. See note on page 997.

is obvious that no roof can be a success unless the boarding is properly carried out. A useful book which tells you most of the things you want to know in a reasonably small space.—(*The Zinc Development Association, Ltd., Great Westminster House, Horseferry Road, London, S.W.1.*)

Further Thoughts on the Coal Fire

While it might be thought that quite enough has been said and written on the ordinary coal fire, research still goes on and papers are read, the latest being by Dr. Rosin, who has been carrying out experiments for the Coal Utilisation Research Association and Lancashire Associated Collieries. A film has also been made with the somewhat grandiloquent title of the "Aerodynamics of the Coal Fire," but quite a lot of interesting facts emerged both from the paper and from the film. For experimental purposes a model was used, since a full-size fire has certain disadvantages in that the arrangement of the fire cannot easily be changed, the experiments are interfered with by the heat of the fire, and it is not easy to make the air flow visible. It was therefore decided to use water instead of air, since both these substances obey roughly the same hydro-dynamic laws. To represent the coal, salt was used, its rate of dissolution corresponding to the combustion of fuel in an air stream.

•

A celluloid model was constructed, representing a part of the room in front of the grate, the fireplace itself, and a part of the flue. Water flowed uniformly along a trough and entered the model in a way corresponding to the entry of air through a partly open door opposite the fireplace. The water then flowed through the fireplace, through the flue, and finally through a pipe in which it could be measured. The main results of the experiments are as follows. With a hearth-bottom grate most of the air moving along the floor of the room turns upwards and flows over the surface of the coal. The fire in a grate of this type therefore burns in an almost dead space, sheltered by the back, and is quite unaffected by the flow of the ventilation air. If, however, the grate is raised and has a fret an appreciable amount of the floor air passes through the fuel. The lines of the flow showed that the gases from the fuel-bed pass up the back of the fire and the back of the chimney, and mix very little with the cold air which passes up the front. They fill only about one-third or less of the chimney. This has been confirmed by experiments on a full-size fire, in which the temperature of the gases was measured at different points across the chimney and found to be much higher at the back than at the front. This result seems rather important, as it shows that chimneys could be a great deal smaller than they now are, but would still be able to get rid of the products of combustion effectively. Dr. Rosin maintains that there is no need to have a chimney with a cross section greater than 20 or 30 square inches, though this is at variance with existing bye-laws, which demand at least 80 square inches. Further full-scale research will naturally be necessary before any attempt is made to alter bye-laws.

From the point of view of fuel consumption it was found that the most important dimension was the distance from the fuel bed to the chimney breast, and that when this exceeds a certain figure the draught has no effect on the rate of combustion, the fuel burning at exactly the same rate as it would if there were no chimney at all. Its rate of burning is not dictated by the draught as in other combustion appliances, but is governed by the natural combustion properties of the fuel, by its size, and by the arrangement and temperature of the grooves in which it rests. The higher the temperature of the fuel bed the faster the combustion. In the normal hearth-bottom grate it is therefore impossible to increase the rate of combustion by a higher chimney draught or by opening a damper, for this would only increase the ventilation air, chill the fireback, and cool the room by carrying back into the chimney the heat which has just been given out by the fire. The stool grate differs in that the floor air streams through the fuel bed, and the draught has therefore more importance.

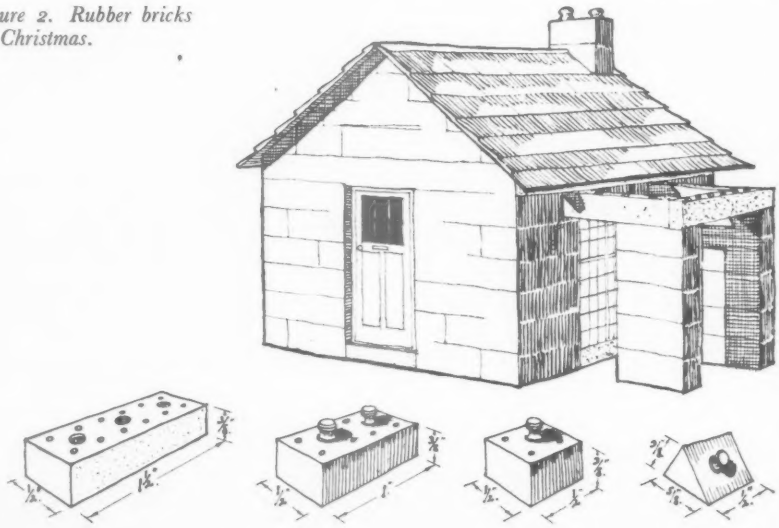
•

While the results of these researches are really of more importance to the grate manufacturers than to the architect, it is none the less interesting to know that work of this kind is being done. Nearly everybody has an affection for the coal fire, but this form of heating will not survive indefinitely on mere sentiment, and the coal interests are right in trying to find out more about the way in which their products are burnt. The film is available to those who have a suitable audience, but it would probably be worth reprinting the lecture with a few judicious illustrations from the film.—(*The British Coal Utilisation Research Association, 54 Victoria Street, London, S.W.1.*)

Christmas Presents

If you are stuck for a Christmas present for a small nephew I have just discovered some things called Minibrix which might fill the bill (Fig. 2). I gather that they are not new, but they seem a fairly sensible sort of present. They are made of rubber approximately to eighth scale, and each brick has a pair of nubs on one side and a corresponding pair of depressions on the other, so that the bricks can be sprung together. The sketch on this page shows you the general

Figure 2. Rubber bricks for Christmas.



idea and a number of different sets are available, ranging in price from 5s. to three guineas. You get bricks, half bricks, single- and double-angle bricks in red, lintols in white rubber, up to 3 in. long, Corinthian columns in separate drums, balustrades, tiles and window units of several different shapes. Some of the models in the instruction book are not all that could be desired, but that is not the fault of the materials, and anyway you will be able to discover whether your nephew is an original thinker like yourself or a mere instruction book copyist like whoever it was pinched your last job off you. I should, perhaps, add that there is a Mini-builders' Club (complete with buttonhole badge). If organizations like this make you feel slightly sick I can only suggest that you should open the box and extract the application form, though this is, of course, censorship of the most immoral kind. But anyway you will have some fun playing with the bricks yourself, and it is very diverting to find out how surprisingly far you can cantilever brickwork when the bricks are made of rubber.—(*The Premo Rubber Co., Ltd., Petersfield, Hants.*)

THE BUILDINGS ILLUSTRATED

JUNIOR SCHOOL, YORK ROAD, BIRMINGHAM (pages 984-992). Architect: W. T. Benslyn, F.R.I.B.A. G. Hart, M.I.H.V.E., designer of the central heating. The general contractors were C. Bryant and Sons, and the sub-contractors and suppliers included: Constable Hart & Co., Ltd., tar paving; Himley Brick Co., Ltd., bricks; J. C. and J. K. Dow, and Modern Surfaces, Ltd., artificial stone; W. Robbins, Ltd., structural steel; Carter & Co., Ltd., wall tiling; Northern Asphalte and Roofing Co., Ltd., special roofings; R. W. Brooke & Co., wood block flooring; S. Taylor & Co., Ltd., copper work on front of building and special copper fascias; J. Jackson & Co., central heating; Parker, Winder and Achurch, Ltd., grates; Lumbys, Ltd., No. 49 "Solar" boilers; W. E. Farrer, Ltd., sanitary fittings; Lyne and Sons, Ltd., stairtreads; Henry Hope and Sons, casements; Bayliss, Jones and Bayliss, railings and w.i. boundary railings; Midland Educational Co., Ltd., and Kingfisher, Ltd., furniture; H. Mills (Gardens), Ltd., shrubs and trees; Alfred Brown & Co., cloakroom fittings; W. Shuker, clocks; H. M. Lowe, oak fencing.

Manufacturers' Items

In the list of sub-contractors for Poplar Town Hall, published in our issue for November 17, we omitted the name of Robert Adams (Victor), Ltd., who supplied their Victor door springs. Messrs. Frank Mortimer, Ltd., inform us that on this job they were responsible for supplying and fixing natural Portland stone facings, and not for artificial stone, as stated.

•

We are informed by G.V.D. Illuminators, Ltd, that they were responsible for the cornice lighting in the lounge and saloon bar of the "Winning Post," Whitton, illustrated in our issue for November 24.

•

Arrangements whereby the manager and staff of the new Wortley Gasholder Station may carry on in safety during an air raid have been perfected by the incorporation of an Ediswan loudspeaker 'phone installation.

During the wiring of the equipment for normal intercommunication service, provision was made in the wiring for each unit, including the master, to be removed to various bomb-proof shelters, where remote control apparatus for operating the Gasholder Station has been installed. Thus, the entire organisation can be transferred and work go on in safety.

Under normal conditions, the master unit is connected to a 7-pin multi plug, and this is connected to a 7-pin baseboard type valve holder. In one shelter there is also a 7-pin baseboard into which the master can be plugged, the two holders being connected in parallel.

The change-over has been timed to take three minutes.

•

An interesting ceremony took place at St. John's Church, Wakefield, on November 24, when Lord Wolmer, on behalf of the cement industry, presented a pair of iron gates and a bronze tablet to the parish of St. John's, Wakefield, in memory of Joseph Aspdin, inventor of Portland cement. In his speech, Lord Wolmer remarked on the small amount of comment Aspdin's discovery aroused at the time it was patented. The only reference to it in the press was a short paragraph to the effect that "Joseph Aspdin, bricklayer of this town, has obtained a patent for a superior cement resembling Portland stone."

"After 100 years of experiment and development," Lord Wolmer said, "we are still only on the threshold of the concrete age. There is still, for example, the Channel tunnel to be built. The next twenty years will probably see our present achievements dwarfed through a fuller knowledge and improved technique in concrete construction."

•

John H. Brough & Co., Ltd., notify us that owing to the greatly increased demands in Leaderflush doors, they are commencing operations at their new and greatly enlarged works at Trowell, Notts.

In order to eliminate confusion with their premises at Station Road, a new company titled Leaderflush, Ltd., has been formed to control all activities in flush doors and laminated veneered panelling.

All communications dealing with these matters should be addressed to Leaderflush, Ltd., Leaderflush House, Stapleford Road, Trowell, Notts.

•

Mr. R. W. Sharman, M.I.STRUCT.E., structural engineer and contractor, who has been connected with the structural steelwork industry for 24 years, informs us that his business at Hanworth, Middlesex, is under his own personal ownership and supervision and that clients are able to obtain their fabricated steelwork direct, with or without erection, in any part of the country.

•

The directors of E. Pollard & Co., Ltd., have recommended the payment of an interim dividend for the year ending December 31, 1938, less income tax, on all 7 per cent. cumulative preference shares issued and registered in the company's books on or before December 13, 1938. The dividend warrants are to be posted on December 31, 1938.

•

In the list of sub-contractors for Berkeley Square House, published in our issue for December 1, we should have mentioned that Samuel Elliott and Sons (Reading), Ltd., were responsible for the lift cars, which were executed in mahogany and that they carried out a large quantity of joinery consisting of hardwood flush doors with mahogany frames and large quantities of walnut skirtings, mouldings and general joinery.

Obituary

We regret to record the death of Sir Thomas Octavius Callender, KT., M.I.E.E., Deputy Chairman and Managing Director of Callender's Cable and Construction Company, Ltd. He was eighty-three years of age.

Sir Thomas had been associated with the original firm since its foundation by his father in 1877, and it is almost entirely due to his personal efforts that the present company has developed from a small undertaking to its present world-wide operations.

He was also a pioneer in the development of the electrical industry, which owes much to his untiring exertions for more than fifty years.

•

We regret to record the death of Mr. William A. Ward, A.M.I.M.E., Assistant Managing Director of Thos. W. Ward, Limited, and eldest son of the Chairman, Mr. Joseph Ward, J.P.

BUILDING NEWS

LONDON

BETHNAL GREEN. *Re-housing.* The L.C.C. is to erect 55 tenements on the Coopers Garden area, Bethnal Green, at a cost of £31,900.

DULWICH. *School.* The managers of St. Joseph's R.C. school, Pitman Street, Dulwich, are to erect a senior school for 280 in County Grove, Camberwell.

ISLINGTON. *Rebuilding.* The L.C.C. is to rebuild Vittoria Place School, Islington, at a cost of £58,605.

LAMBETH. *Re-housing.* The L.C.C. is to clear the Royal Street area of Lambeth and provide re-housing, at a cost of £48,000.

SOUTHWARK. *Re-housing.* The L.C.C. is to clear the Lancaster Street area of Southwark and provide re-housing, at a cost of £130,000.

STEPNEY. *Re-housing.* The L.C.C. is to clear the Umberston Street area of Stepney and re-house 1,483 persons, at a cost of £173,000.

WEST HAM. *Housing.* The West Ham Corporation is to erect 174 dwellings on the Triangle site, Beckton Road, at a cost of £85,537.

WOOLWICH. *Relief stations.* The L.C.C. is to erect a relief station in Parkdale Road, Woolwich, at a cost of £10,130.

WOOLWICH. *Extensions.* The governors of Woolwich Polytechnic are to further extend the Polytechnic buildings, at a cost of £27,966.

PROVINCES

BIRMINGHAM. *Shops.* The Birmingham Corporation is to erect a block of lock-up shops and flats at the corner of Digbeth and Rea Streets, at an estimated cost of £13,000.

BIRMINGHAM. The Birmingham Education Committee is to erect a school at Dorrington Road, Perry Barr, at a cost of £19,230.

BIRMINGHAM. *School extensions.* The Birmingham Education Committee is to enlarge the Formans Road school, at an estimated cost of £13,300.

BIRMINGHAM. *School extensions.* The Birmingham Education Committee is to enlarge the Lea Village school, at an estimated cost of £37,600.

BIRMINGHAM. *School extensions.* The governors of Handsworth Grammar School, Birmingham, are to extend the premises, at a cost of £10,000.

CARLISLE. *Police Station, etc.* The Carlisle Corporation has obtained sanction to borrow £52,750 for the erection of police and fire stations.

CARMARTHEN. *County offices, etc.* The Carmarthen County Council is to erect county offices and court house, at a cost of £101,719.

FRIMLEY. *School.* The Surrey Education Committee has approved plans for the provision of a central mixed council school for eight class units on the Bristow Farm Estate, Frimley.

INCE-IN-MAKERFIELD. *Houses.* The Ince-in-Makerfield U.D.C. is to erect 140 houses on the Pennington estate, at a cost of £53,900.

LEEDS. *Housing.* The Leeds Corporation is to re-develop the Woodhouse areas by the erection of flats to accommodate approximately 140 families, including the provision of a communal laundry and a flat for a resident caretaker.

MANCHESTER. *Houses.* The Manchester Corporation is to erect 18 houses on the Wilbraham Estate, at a cost of £7,492.

MIDDLESEX. *Schools.* The Middlesex Education Committee has obtained sanction to borrow £43,716 for the erection of a secondary school at Harrow, and £47,890 for an elementary school at Hayes.

MILFORD. *Houses.* The Milford Haven U.D.C. reports that it is proposed to build 200 council houses in the Cromwell Road area.

MONKSWEARMOUTH. *School enlargements.* The Sunderland Education Committee is to enlarge the Monkswearmouth secondary school, at a cost of £47,275.

SEND. *School.* The Surrey Education Committee has approved plans for the erection of a mixed C. of E. central school for 200 at Send, at a cost of £15,250.

STOKE-ON-TRENT. *Houses.* Plans passed by the Stoke-on-Trent Corporation: 10 houses, Stoke Old Road, for Mr. J. Peake; 18 houses, Pool Street, Fenton, for Mr. G. Pennell.

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

PRICES

ON the following pages appears Prices of Materials —Part I, with the prices, last published on November 10, brought up to date.

Immediately below, Messrs. Davis and Belfield mention the principal changes which have occurred in the last month. Similar notes will be published on this page each month.

★ *ANSWERS TO QUESTIONS*

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

NOTES ON PRICE CHANGES

Prices generally remain at about the same level. Such changes as have occurred are marked as indicated below.

O. A. DAVIS, F.S.I.

● *Items marked thus have risen in price since last quotation on November 10.*

✱ *Items marked thus have fallen in price since last quotation on November 10.*

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

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

★ ***The previous complete Supplement is contained in the issues of the JOURNAL for November 10, November 17, December 1 and December 8.***

Prices vary according to quality and the quantity ordered.

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

PART 1

CURRENT MARKET PRICES OF MATERIALS—I

BY DAVIS AND BELFIELD

CONCRETOR

Cements

All delivered in paper bags (20 to the ton) free and non-returnable.

		4 Tons and over	In 80-ton freights F.A.S. Safe Wharf in River Thames, London Area.
Portland	per ton	42/–	39/6
Rapid hardening	per ton	48/–	45/6
Water repellent	per ton	72/–	—
Atlas White (1 barrel 376 lbs.)			.. per barrel 44/–
Colorcrete rapid hardening, Nos. 1 and 2 ..			per ton 69/–
✱ Colorcrete non rapid hardening ..			.. per ton 139/– to 309/–
Snowcrete			per ton 175/–

		1–10 cwts.	11–15 cwts.	16–20 cwts.	1 ton and upwards
Ciment Fondu, delivered Central London area	per cwt.	7/9	7/3	6/–	6/–

Aggregate and Sands (Full Loads)

✱ 2″ Unscreened ballast	per yard cube	5/9
✱ ¾″ (Down) Washed, crushed and graded shingle	per yard cube	6/–
✱ ⅜″ (Down) Ditto	per yard cube	7/3
2″ Broken brick	per yard cube	10/6
¾″ Ditto	per yard cube	11/9
Washed pan breeze	per yard cube	5/3
Coke breeze 1″ to dust	per yard cube	12/6
✱ 3/16″ Sharp washed sand	per yard cube	8/–
White Silver Sand for white cement (one ton lots)	per ton	25/–

(For Sands for Bricklaying and Plastering see respective trades)

Pavings

Brick hardcore	per yard cube	2/9
Concrete ditto	per yard cube	3/9
Clean furnace clinker and boiler ashes ..	per yard cube	3/3
Coarse gravel for paths	per yard cube	6/9
Fine ditto	per yard cube	9/6
Clean granite chippings	per ton	18/6
Red quarry tiles, 6″ × 6″ × ⅞″	per yard super	6/–
Buff ditto, 6″ × 6″ × ⅞″	per yard super	6/6
Hard red paving bricks	per 1,000	150/–

Reinforcement

Basis price for mild steel rods, ⅝″ diameter and upwards, from London stocks	per ton	£13 10 0
Extras for :—		
9/16″ and ½″ diameter	per ton	10/–
7/16″ diameter	per ton	15/–
⅜″ diameter	per ton	20/–
5/16″ diameter	per ton	30/–
¼″ diameter	per ton	40/–
3/16″ diameter	per ton	60/–
Lengths of 40 ft. to 45 ft.	per ton	10/–
Lengths of 45 ft. to 50 ft.	per ton	15/–

CONCRETOR—(*continued*)

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate)	per gallon	20/–	Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto. (for obtaining a bond)	per gallon	12/6	

BRICKLAYER

Common Bricks

Rough stocks	per 1,000	67/6
Third stocks	per 1,000	52/6
Mild stocks	per 1,000	69/6
Sand limes	per 1,000	50/–
* Phorpres pressed Flettons	per 1,000	46/3
* Phorpres keyed Flettons	per 1,000	48/3
Blue Staffordshire wirecuts	per 1,000	160/–
Lingfield engineering wirecuts	per 1,000	95/–
Breeze fixing bricks	per 1,000	57/6
Firebricks, best Stourbridge 2½″	per 1,000	155/–
Firebricks, best Stourbridge 3″	per 1,000	190/–

* At King's Cross. For delivery in W.C. district add 4/3 per 1,000.

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000	85/–
Sand Limes, No. 2	per 1,000	70/–
* Phorpres rustic Flettons	per 1,000	66/3
Midhurst Whites	per 1,000	75/–
Hard stocks, firsts	per 1,000	98/–
Hard stocks, seconds	per 1,000	86/–
Sand-faced, hand-made reds	per 1,000 from	115/–
Sand-faced, machine-made reds	per 1,000 from	110/–
Red rubbers (9¾-in.)	per 1,000	300/–
Hunziker (white)	per 1,000	67/6
✱ Hunziker (creams, light greys etc.)	per 1,000 from	85/– to 100/–
Dunbricks (concrete), multi reds, ex works	per 1,000	72/–
Dunbricks (concrete), multi lavender, ex works	per 1,000	75/–
Southwater engineering No. 1 (first quality red pressed)	per 1,000	145/–
Southwater engineering No. 2 (second quality red pressed)	per 1,000	125/–
Blue pressed	per 1,000	180/–

* At King's Cross. For delivery in W.C. district add 4/3 per 1,000. Discount if accompanied by order for pressed 2/– per 1,000.

✱ Items marked thus have fallen since November 10th.

CURRENT PRICES

BY DAVIS AND BELFIELD

BRICKLAYER AND DRAINLAYER

BRICKLAYER—(*continued*)

White, Salt and Coloured Glazed Bricks (9″ × 4½″ × 2⅞″)

The following prices are subject to 2½ per cent. trade discount and 2½ per cent. cash discount, and include delivery to any railway station (minimum 4-ton loads). Add 10/– per 1,000 for delivery in London area.

Prices per 1,000	White, Ivory and Salt Glazed		Buff, Cream and Bronze	Other Colours	All Colours
	Best	Seconds	Best	Best	Seconds
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Stretcher, glazed one side ..	24 0 0	22 0 0	26 0 0	29 10 0	23 0 0
Header, glazed one end	23 10 0	21 10 0	25 10 0	29 0 0	22 10 0
Double stretcher, glazed two sides	32 10 0	30 10 0	34 10 0	38 0 0	31 10 0
Double header, glazed two ends	29 10 0	27 10 0	31 10 0	35 0 0	28 10 0
Quoin, glazed one side and one end	30 10 0	28 10 0	32 10 0	36 0 0	29 10 0

Limes and Sand

		1-ton lots	6-ton lots
Lime, greystone	per ton	43/–	37/6
Lime, chalk..	per ton	43/–	37/6
Lime, blue Lias (including paper bags)	per ton	47/–	42/6
Lime, hydrated (including paper bags)	per ton	47/–	42/6
* Washed pit sand	per yard cube		7/6

(For cements, *see* "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

Wall ties, self coloured	per cwt.	19/–
Wall ties, galvanized..	per cwt.	24/6
Hoop iron, black	per cwt.	25/–
D.P.C. slates, size 18″ × 9″	per 1,000	157/6
D.P.C. slates, size 14″ × 4½″	per 1,000	61/3
*Ledkore D.P.C. Grade A	per foot super	5d.
*Ledkore D.P.C. Grade B.	per foot super	6½d.
*Ledkore D.P.C. Grade C	per foot super	8d.

* Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £4 orders.

		9″×3″	9″×6″	9″×9″	12″×9″	14″×9″
Earthenware airbricks: red, blue, vitrified and buff terra cotta	each	–/8	1/4	2/4	4/–	6/8
		9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
Black cast iron, School Board pattern airbricks	per doz.	3/–	5/6	11/–	11/–	20/–
Galvanized ditto	per doz.	5/6	11/–	22/–	22/–	40/–
Black hit and miss cast iron ventilators	per doz.	12/–	15/–	21/–	21/–	36/–
Galvanized ditto	per doz.	24/–	30/–	42/–	42/–	72/–
		1′ 0″	1′ 6″	2′ 0″	2′ 6″	3′ 6″	5′ 0″
Buff terra cotta chimney pots	each	2/6	3/–	4/4	5/9	13/4	22/6
Fireclay ..	per cwt.	4/–					

Wall reinforcement supplied in standard rolls containing 25 yards lin.

2″ wide black japanned	per roll 2/1	Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.
2″ wide galvanized ..	per roll 3/2	
2½″ wide black japanned	per roll 2/7½	
2½″ wide galvanized ..	per roll 3/10½	

Partitions

		2″	2½″	3″	4″
Breeze ..	per yard super	1/3½	1/5½	1/8	2/3
Clay tiles ..	per yard super	2/3	2/6	2/9	3/1
Pumice ..	per yard super	2/8	3/–	3/6	4/–
Plaster ..	per yard super	2/3	2/9	3/3	4/–

BRICKLAYER—(*continued*)

Shepwood Partition Bricks size 9″ × 2⅞″ and 2½″ on bed. Terms, as for Glazed Bricks

Prices per 1,000 except where stated per brick	White, Ivory and Salt Glazed		Buff, Cream and Bronze	Other Colours	All Colours
	Best	Seconds	Best	Best	Seconds
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Double stretcher, glazed two sides	32 10 0	30 10 0	34 10 0	38 0 0	31 10 0
Single stretcher, glazed one side	24 0 0	22 0 0	26 0 0	29 10 0	23 0 0
	Each	Each	Each	Each	Each
Round end glazed two sides and one end ..	–/10½	–/10	1/0½	1/0½	–/10½

Gas Flue Blocks

		Single Flues	Double Flues
Straight blocks	each	1/1	1/11
Building in set	per set of 3	2/8	4/10
Cover blocks	each	1/5	3/–
Raking blocks 45°	each	2/9	3/11
Raking blocks 60°	each	1/11	2/10
Offset blocks	each	3/4	4/10
Closer blocks	each	1/1	1/11
Closer flashing blocks	each	1/–	1/8
Straight flashing blocks ..	each	1/–	1/8
Terminal and cap	per set	6/9	11/6
Middle terminal and cap ..	per set	6/3	10/9
End terminal and cap	per set	6/6	11/3
Corbel block	each	4/10	3/2
Gathering block	each	—	9/8

DRAINLAYER

Agricultural Pipes

		2″	3″	4″	6″
Pipes in 12″ lengths ..	per 1,000	67/6	92/6	120/–	210/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

		4″	6″	9″
Pipes (2′ lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junction, 2′ long	each	3/4	5/–	9/–
Yard Gulley, without grating ..	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	–/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6″, 9″ and 12″ drains, with iron grating, painted	each	20/–		
Ditto, with iron grating galvanized	each	21/10½		

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Less 20%	Plus 5%
Orders under 2 tons, 100 pieces upwards	Less 2½%	Plus 22½%
Orders under 2 tons, less than 100 pieces	Plus 7½%	Plus 32½%

	Best	Seconds
Orders for 2 tons and over	Less 27½%	Subject to 15% off the price of best quality for all sizes
Orders under 2 tons, 100 pieces upwards	Less 10%	
Orders under 2 tons, less than 100 pieces	Nett	

*** Items marked thus have fallen since November 10th.**

CURRENT PRICES

BY DAVIS AND BELFIELD

DRAINLAYER AND MASON

DRAINLAYER—(*continued*)

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size	9 fts.	6 fts.	4 fts. each	3 fts. each
1.1. 8	4″ per yard ..	6/6	7/3	11/7	8/9
1.1.20	4″ per yard ..	6/9	7/5	11/10	9/–
2.0. 6	6″ per yard ..	10/–	11/11	19/3	15/4
4.0. 2	9″ per yard ..	18/2	23/9	41/3	31/5

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size	2 fts.	18 ins.	12 ins.	9 ins.
1.1. 8	4″ each	7/3	6/6	5/8	5/2
1.1.20	4″ each	7/4	—	—	—
2.0. 6	6″ each	11/6	—	—	—
4.0. 2	9″ each	—	—	—	—

Tonnage Allowances :—
Orders up to 2 tons nett.
Orders 2 to 4 tons less 2½%
Orders 4 tons or over less 5%

		4″	6″	9″
Bends	each	6/3	12/10	40/7½
Single junctions	each	11/–	22/–	70/11
Intercepting traps	each	37/6	48/3	137/6
Gulleys ordinary trapped ..	each	15/–	—	—
Extra for inlet 4″	each	4/3	—	—
Grease Gulley trap	each	117/6	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet ..	each	23/9	42/9	—

Cast Iron Inspection Chambers

The larger figures below refer to the main pipes and the smaller figures to the branches

	4″×4″	6″×4″	6″×6″	9″×6″
Straight chambers with two branches one side .. each	56/3	66/10	78/9	153/9
Straight chambers with three branches in all .. each	66/3	76/10	91/3	166/3
Straight chambers with four branches in all .. each	76/3	87/10	103/9	178/9
Straight chambers with three branches one side .. each	71/3	88/9	101/3	—
Straight chambers with four branches in all .. each	81/3	98/9	113/9	—
Straight chambers with five branches in all .. each	91/3	108/9	126/3	—
Straight chambers with six branches in all .. each	101/3	118/9	138/9	—
Straight chambers with four branches one side .. each	93/9	111/3	133/9	—
Straight chambers with five branches in all .. each	103/9	108/9	146/3	—
Straight chambers with six branches in all .. each	113/9	131/3	158/9	—
Straight chambers with seven branches in all .. each	123/9	141/3	171/3	—
Straight chambers with eight branches in all .. each	133/9	151/3	183/9	—

The branches to the above are at 135°

		4″	6″
Extra for branches between 135° and 180°	each	7/6	7/6
Extra for branches between 90° and 135° other than standard angles	each	6/3	6/3

		4″×4″	6″×4″	6″×6″
Curved chambers, no branch 90°–112½°	each	26/10	—	38/2
Curved chambers, no branch 135°	each	26/10	—	38/2
Curved chambers, one branch 135°	each	33/9	48/9	55/–
Curved chambers, two branches 135°	each	40/8	65/8	76/3

Channels in White Glazed Ware (Unselected Quality)

		4″	6″	9″
Half round straight channels, 6″ long ..	each	2/4	3/2	5/3
Half round straight channels, 12″ long ..	each	3/3	4/5	6/11
Half round straight channels, 18″ long ..	each	4/–	5/3	8/5
Half round straight channels, 24″ long ..	each	4/8	6/4	10/6
Half round straight channels, 30″ long ..	each	5/10	7/11	13/2
Half round straight channels, 36″ long ..	each	7/–	9/6	15/9
Half round ordinary or long channel bends	each	8/5	12/11	21/–
Half round ordinary or short channel bends	each	6/–	8/5	—
Three-quarter round ordinary branch bends	each	8/1	11/8	—
Three-quarter round ordinary branch bends, midgets	each	7/3	—	—

		6″×4″	9″×6″
Half round taper channels 24″ long ..	each	7/10	11/3
Half round taper channel bends	each	10/3	17/9

These prices are subject to 20% discount.

DRAINLAYER—(*continued*)

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long ..	each	1/3	1/10½	3/4½
Half round straight channels 30″ long ..	each	—	—	4/2¾
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends ..	each	1/10½	2/9¾	5/0¾
Ditto, short	each	1/10½	2/9¾	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends ..	each	5/–	7/6	—

		6″×4″	9″×6″
Half round taper channels 24″ long ..	each	3/9	6/9
Half round taper channel bends ..	each	4/8½	8/5½

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

Manhole Covers

	Black	Galvanized
24″ × 18″ single seal for foot traffic. (Weight 0.3.0 in lots of 24) .. .. .. each	11/3	22/6
24″ × 18″ single seal for light car traffic. (Weight 2 cwt. in lots of 24) .. .. each	30/–	56/6
24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.) .. .. each	Coated 48/6	

	Fine Cast	Galv.
Cast step irons, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lbs. each per dozen	11/6	19/–

	4″	6″
Galvanized fresh air inlets with cast brass fronts (L.C.C. pattern) .. .. each	5/6	20/3

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes ..	per foot cube	4/6
Add for blocks to dimension sizes ..	per foot cube	6d. (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long)	per foot cube	5/–
Templates with sawn beds, sawn one edge	per foot cube	6/–
Templates with sawn beds, sawn two edges	per foot cube	7/–
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 6-ton loads.)		18/3

Ancaster Stone

Freestone, random blocks	per foot cube	3/6
Brown weather bed stone selected for polishing all brown blocks	per foot cube	8/–
Brown and blue weather bed stone selected for polishing	per foot cube	7/–

Prices f.o.r. Ancaster, railway rate to London Station approximately 11½d. per foot cube (minimum 6-ton loads).

White Mansfield Stone

Random blocks (yellow bed) for dressings	per foot cube	4/–
Random blocks (hard middle bed) for steps, pads, pavings and copings	per foot cube	3/6
Prices f.o.r. Mansfield, railway rate to London station, 6 ton lots	per foot cube	1/2

Bath Stone

Random blocks, delivered railway trucks, Paddington or South Lambeth	per foot cube	2/10¾

Portland Stone

Whitbed, in random blocks of 20 feet cube average, delivered railway trucks Nine Elms, South Lambeth or Paddington	per foot cube	4/5
Basebed—add to the above	per foot cube	–/8
For every foot over 20 ft. cube average—add	per foot cube	–/1
For every foot over 30 ft. cube average—add	per foot cube	–/0½

¾″ Thick Plain Marble Wall Linings

Roman Travertine	per foot super	5/–
Golden Travertine	per foot super	6/8
Roman stone	per foot super	4/6
Hopton-wood stone	per foot super	5/–
Second statuary	per foot super	4/6
Sicilian	per foot super	4/–

Artificial Stone

6″ × 3″	Copings and sills	per foot run	1/6
6″ × 6″	Copings and sills	per foot run	2/4
9″ × 3″	Copings and sills	per foot run	2/–
9″ × 6″	Copings and sills	per foot run	3/4
12″ × 3″	Copings and sills	per foot run	2/4
12″ × 6″	Copings and sills	per foot run	3/9
Cornices according to detail, per foot cube (from)			6/9

CURRENT PRICES

BY DAVIS AND BELFIELD

MASON, SLATER, TILER AND ROOFER, AND CARPENTER

MASON—(*continued*)

Reconstructed Stone to match Natural Stone

Sills, lintols, coping, cornices, ashlar, etc., average size	per foot cube	11/–
Window sills, 9″ × 3″ section	per foot run	2/1
„ „ 7″ × 3″ section	per foot run	2/–

Slate Slabs, cut to size and Planed

		1″	1¼″	1½″
Not exceeding 4′ 6″ long or 2′ 3″ wide	per foot super	3/1	3/4	3/11
„ „ 6′ 6″ long or 3′ 3″ wide	per foot super	3/9	4/1	4/10
Exceeding 6′ 6″ long or 3′ 3″ wide	per foot super	4/1	4/6	5/2
Rubbed faces	per foot super	–/5	–/5	–/6
„ edges	per foot run	–/4	–/4	–/5

Combined Slate Cills and Window Boards for Metal Windows

Window Width	Straight Cills Wall thickness 9″	11″	13½″	Circular Cills for C.O.P. Frames Radius	External reveals 2″	4½″
1′ 8″ ..	4/–	4/8	5/8	2′ 4½″ ..	21/–	24/–
3′ 3¼″ ..	7/4	8/7	10/4	2′ 7¼″ ..	25/6	28/6
4′ 10½″ ..	10/6	12/3	14/10	2′ 10½″ ..	30/–	33/3

SLATER, TILER AND ROOFER

Best Bangor Slates

		£	s.	d.
24″ × 12″	per 1,000 actual	33	6	6
22″ × 12″	per 1,000 actual	27	19	0
22″ × 11″	per 1,000 actual	25	4	9
20″ × 12″	per 1,000 actual	24	14	6
20″ × 10″	per 1,000 actual	21	15	5
18″ × 12″	per 1,000 actual	20	19	3
18″ × 10″	per 1,000 actual	17	4	0
18″ × 9″	per 1,000 actual	15	11	9
16″ × 12″	per 1,000 actual	17	14	9
16″ × 10″	per 1,000 actual	15	11	9
16″ × 9″	per 1,000 actual	13	19	6
16″ × 8″	per 1,000 actual	12	1	11

Prices include for delivery to site in lots of 1,000 and upwards.

Old Delabole Slates (f.o.r.)

Standard sizes.

Prices and computed weights per 1,200.

		20″ × 12″	16″ × 10″
Grey medium gradings	per 1,200	597/–	366/–
	cwts.	46½	30
Unselected greens (V.M.S.) ..	per 1,200	672/–	413/–
	cwts.	55½	36

Random sizes.

Prices per ton and computed covering capacities in squares per ton.

		No. 1 Grading 24″/22″ to 12″/10″
Ordinary grey greens	per ton	128/–
Covering cap. :	per ton (3″ lap)	2·37 squares
	per ton (4″ lap)	2·19 squares
		No. 2 Grading 24″/22″ to 12″/10″
Weathering grey greens (V.M.S.)	per ton	139/–
Covering cap. :	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares
		No. 2 Grading 24″/22″ to 12″/10″
Weathering greens (V.M.S.) ..	per ton	149/–
Covering cap. :	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares
		No. 2 Grading 24″/22″ to 12″/10″
Rustic reds (25%) and weathering greens (V.M.S.)	per ton	174/–
Covering cap. :	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares

Railway rate to Nine Elms, London, minimum 4 tons, 21/9, minimum 6 tons per truck, 18/1 per ton.

Tiles

		£	s.	d.
Hand-made sandfaced 10½″ × 6½″ red roofing tiles	per 1,000	4	15	0
Machine-made sandfaced 10½″ × 6½″ red roofing tiles	per 1,000	4	0	0
Berkshire rustic pantiles	per 1,000	18	10	0

SLATER, TILER AND ROOFER—(*continued*)

Westmorland Green Slates

	Price per ton	Bests, 24″ to 12″ long. Proportionate widths Computed cover in sq. yds. per ton
Random sizes.		
No. 1 Buttermere fine light green ..	240/–	30
No. 2 „ light green (coarse grained)	215/–	27–28
No. 5 „ olive green (coarse grained)	197/–	25–27
No. 5 Medium green	197/–	25–26
No. 7 Elterwater fine light green ..	216/–	27–28
No. 15 Tilberthwaite fine light green ..	214/–	26–28
No. 16 „ light green (coarse grained) ..	202/–	25–27

Prices include for delivery to any station, minimum 6-ton truck loads.

Asbestos-cement

6″ corrugated sheets, grey	per yard super	2/11
Standard 3″ corrugated sheets, grey	per yard super	2/7½
Slates :—		
15¾″ × 7⅞″ grey	per 1,000	£6 16 3
15¾″ × 15¾″ diagonal, grey	per 1,000	£12 18 6
15¾″ × 15¾″ diagonal, russet or brindled	per 1,000	£16 6 6
Pantiles.		
Large russet brown	per 1,000	£19 8 6

Prices are for minimum two-ton loads.

Cedar Wood Tiles

Canadian cedar wood shingles .. per square 32/– (normal quantity).

Prices include for delivery to nearest railway station in England but vary with quantity.

CARPENTER

Carcassing Timber

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

		Per standard £ s. d.	Per foot cube
4″ × 11″ Scantling		25 5 0	3/0¾
4″ × 9″ „		24 5 0	2/11½
3″ × 11″ „		23 0 0	2/9½
2″ × 11″ „		23 10 0	2/10¼
3″ × 9″ „		22 10 0	2/8¾
2″ × 9″ „		22 10 0	2/8¾
3″ × 8″ „		20 10 0	2/6
2″ × 8″ „		20 5 0	2/5½
3″ × 7″ „		20 5 0	2/5½
2″ × 7″ „		20 0 0	2/5¼
4″ × 6″ „		24 0 0	2/11
3″ × 6″ „		21 0 0	2/7½
2″ × 6″ „		20 0 0	2/5¼
*3″ × 5″ „		20 0 0	2/5¼
*3″ × 4″ „		20 0 0	2/5¼
2″ × 5″ „		19 0 0	2/3¾
2″ × 4″ „		19 0 0	2/3¾
1½″ × 11″ „	(20 ft. lengths and over)	per ft. run	–/4½
1½″ × 9″ „	(20 ft. lengths and over)	per ft. run	–/3¾
1½″ × 7″ „	(20 ft. lengths and over)	per ft. run	–/2¾

Yellow Deal Battens

*¾″ × 1″	per 100 feet run	1/4
¾″ × 1½″	per 100 feet run	2/3
¾″ × 2″	per 100 feet run	2/9
*1″ × 2″	per 100 feet run	4/3
*1½″ × 2″	per 100 feet run	5/3

Weather Boarding

Deal :—		
*¾″ × ¼″ × 6″ Feather edge	per square	10/6
*¾″ × ¼″ × 4″ Feather edge	per square	8/9
Western red cedar :—		
*1″ × 6″ Drop sidings	per square	32/–
*11/16″ × 3/16″ × 6″ Feather edge	per square	11/–
*¾″ × ¼″ × 4″ Feather edge	per square	12/6

Roof Boarding

Deal :—		
*¾″ × 6″	per square	16/–
*1″ × 6″	per square	20/–

* Items marked thus have fallen since November 10th.

TO BE CONTINUED IN NEXT ISSUE