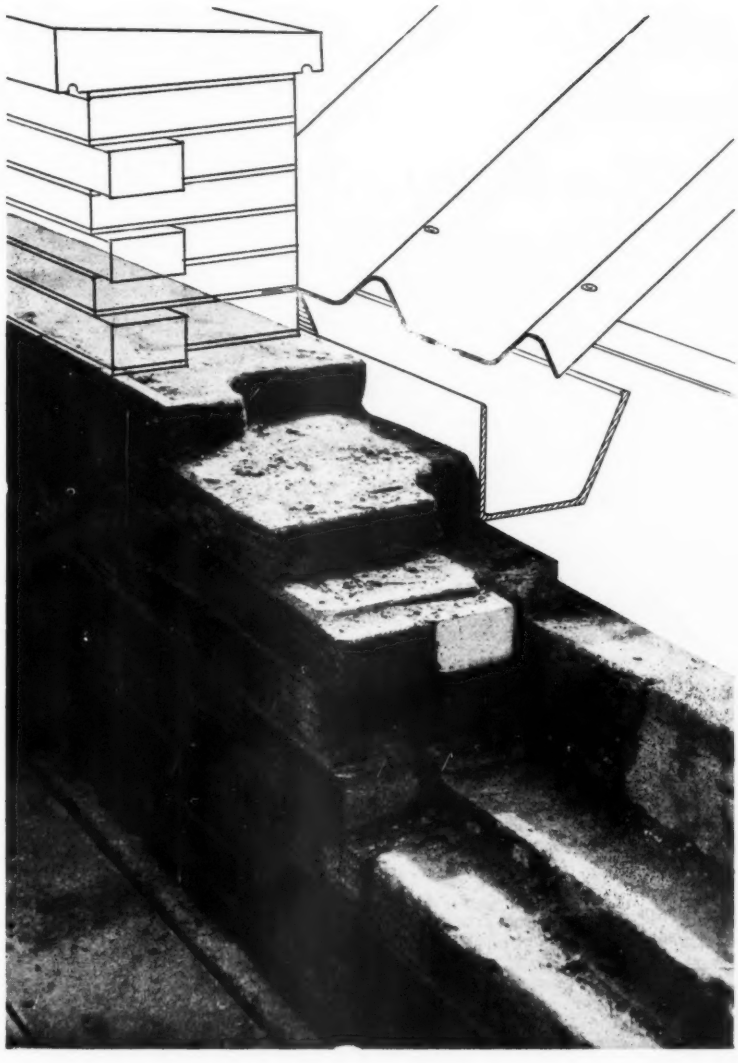

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THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER, IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S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

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

THURSDAY, DECEMBER 8, 1938. NUMBER 2290 : VOLUME 88

PRINCIPAL CONTENTS

WESTMINSTER HOSPITAL SITE: PROPOSED NEW OFFICES

ARCHITECTS: SIR JOHN BURNET, TAIT AND LORNE

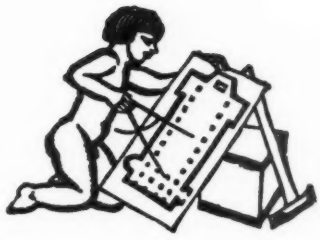
IN preparing the design of this building two important considerations had to be taken into account. One was the restriction as to the height of the building, and the other was the irregularity of the site.

The general building line to Broad Sanctuary is well set back above the second floor level and in the central portion to the extent of 18 ft. This central feature is carried up in the form of a low tower and is necessary to enclose the water tanks and lift machinery, etc. The latter are usually left as excrescences on the top of the roof which do not form part of the composition of the building, but the architects feel that the time has now come when all such constructional features should be treated architecturally. Moreover, the necessity to cover in these features helps in the composition of the building and gives the skyline that sculpturesque quality which is not obtainable with a horizontal, uninteresting roof line.

The building would be "Gothic" in character to harmonize with surrounding buildings. It would be carried out in Portland stone on simple lines, concentrating the enrichment on the doorway and central feature.

EARLY ULTRALUX

This illustration, taken from a facsimile reprint of the Swan United Electric Light Company's catalogue of 1883, shows an early electric light fitting (1881) in the library of Cragside, Northumberland, designed by Norman Shaw for Sir W. G. Armstrong. The frosted glass globe contained four lamps and was apparently a quite usual fitting in the days when the industry still did not know that electricity could be made to imitate candles. *For further information see Trade Notes on page 957.*



ARP OR HARP

ADVOCATES of decentralization of industry and its attendant population from large cities were in the past (should we say, the pre-crisis period ?) known as regional planners, well-meaning theorists or unpractical visionaries according to choice of adjective.

To-day they are almost consulted on national defence matters. So decentralization acquires a new and ominous significance and town planners may get the right solution to their chief problem for the wrong reason. Anyhow, the wrong reason is good enough ; it is now ARP or HARP. Pained awareness of the urgency of the decentralization problem must have possessed the National Housing and Town Planning Conference at Harrogate on November 25 when it passed a resolution of the greatest significance to town and regional planning. We congratulate the proposer, Mr. C. B. Purdom, of Welwyn Garden City U.D.C., and the seconder, Professor S. D. Adshead, on their initiative because definite action is needed. The resolution runs : " That this Conference of Local Authorities in Great Britain requests the National Housing and Town Planning Council to urge His Majesty's Government to pass the necessary legislation for the establishment of a Commission which shall have power to acquire land and provide for the future development of the outlying regions round London and other large cities on the principle of satellite towns."

This means decentralization through Government action, and it is evident that the local authorities need the co-operation and the leadership of the Government, for we are faced with a national problem. The schemes for evacuating families from London in the event of war are seen to be amateurish compared with proper plans for regulating London's expansion. Why the Government, knowing what it must have known, has not prohibited industrial growth in the Greater London region during the past two or three years remains a mystery. It is so commonsense an action. As Mr. C. B. Purdom stated in support of his Harrogate resolution, " Towns must be made functionally sound for peace or war. . . . People should be evacuated from the cities *now* in an orderly manner, with their social life and industries."

Public opinion, whether expressed by individuals or the Press or through local authority representatives, is evidently prepared to support the Government in a planned decentralization policy. Such a policy must have as its main feature the development of satellite towns and there are certain fundamentals that need considering.

Industry is the dominant force of economic life and determines the concentration of population, so that positive town planning must be based on industrial activity, since commerce and housing follow. This means that satellite towns must be active economic units : the term satellite is a little unfortunate in some of its implications and should not be interpreted as meaning industrial-economic dependence upon a large town.

New industrial development has been freed to a great extent from special location through the developments of transport and electricity. Modern production processes are predominantly electric power-driven. This means a wide choice of sites for new satellite towns based on industry and that new factories are functionally designed and smoke-free, creating a different industrial order from the past, making the addition of an industrial centre to an existing town free from many of the objections of the past.

Many problems arise in connection with a policy of planned decentralization based on the development of satellite towns, but they must be faced and answered. Among these problems we should like to emphasize the following points :

1. Should new satellite towns be of Welwyn and Letchworth type, or should existing towns be chosen, such as Woking, Hitchin, etc., as the basis of development, or should both these types of centre be used ?

2. Should not the siting of trading estates be controlled to build up satellite towns with a balanced economic life instead of isolated industrial estates ?

3. Should not a plan for the internal reconstruction of London be carried out at the same time as a plan of decentralization ? If so, is existing machinery adequate for these purposes ? If not, is it not desirable to have —considering the large and unique character of London's problems—a new body, a London Regional Authority to be created to deal with the problem of conflicting authorities, a body which would co-ordinate industrial siting, transport and housing ?

4. If planned reconstruction of this kind is to be undertaken, what measures are needed to replace the gap made by removing industries and their working people from a congested centre in view of the position of the local authorities and the landowners affected by such transfers of economic activity and population ?

5. A major difficulty in zoning and site planning is the land speculator. Are measures desirable in the interests of planned decentralization to restrict land speculation which may be anti-social in effect ?

The wording of the Harrogate resolution suggests that the local authorities are well aware of this danger and that they would call in the aid of the Government in safeguarding the community against land racketeering. For the land is the central point of the problem.

There is evidence that the Government are ready to press forward national defence measures on a big scale. Will they see that in the Harrogate resolution lies the key to one of their greatest problems, and act with courage ?

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NOTES & TOPICS

TWO IFS . . .

IF the Government means business over A.R.P. and if the National Housing and Town Planning Council does not become frightened at its own audacity, then history was made on November 25.

*

On that day, at its Conference at Harrogate, the National Housing and Town Planning Conference passed this resolution :—

That this Conference of Local Authorities in Great Britain requests the National Housing and Town Planning Council to urge His Majesty's Government to pass the necessary legislation for the establishment of a Commission which shall have power to acquire land and provide for the future development of the outlying regions round London and other large cities on the principle of satellite towns.

*

Now a mere progressive resolution by a society is not, even in these days, front page news. But the more you think about this one, the more interesting it gets.

*

It has been passed by delegates of local authorities—sober-minded men, for the most part professionally engaged on clearing up past mistakes in human surroundings and trying to prevent future mistakes. It was proposed and seconded by Mr. C. B. Purdom and Professor Adshead, authorities of exceptional experience and good sense. It was addressed direct to the Government. And it tackles A.R.P. right at the bottom.

. . AND THREE BIRDS WITH ONE STONE

Nor is this all. Let us, for a giddy moment, suppose that the Government—or Sir John Anderson—go so far as to wonder whether there is anything in it. What can be said in its favour ?

*

Three things. Defence from aerial attack of the " knock out blow " type would be increasingly assured with each stage of decentralization. The redistribution of industry and population—now generally considered necessary for a well-balanced peace-time economy—would be carried out. And the reconstruction of large urban groupings—equally essential *sometime*—would become possible.

*

We hear a lot nowadays about the need for democracy to demonstrate its powers of service and impressive action. Here is the opportunity for the Government to make a demonstration far more impressive, and effective for war and peace, than ten million enthusiastic Air Raid Volunteers.

FOLLOWING IT UP

And hard on the first's heels is another resolution, to be moved at a meeting of the Garden Cities and Town Planning Association at Grosvenor House on December 14. This is it :—

That this Conference draws the attention of the Government, the local authorities in and around London, and the public of London to the urgent necessity of the planned control of the growth of London, in the interests of Londoners themselves and of the whole nation ; asks the Government to consider setting up an executive planning authority, charged with duty of preparing a master plan for the London region as a whole based on a policy of decentralization of industry, business, and population into well-designed towns and existing towns of moderate size, coupled with the preservation of the open country still within reach of Londoners, and the progressive redevelopment of Central London with lower density and more gardens and open spaces ; the administration of local planning schemes to remain with the existing authorities ; requests Local Authorities and other public bodies in the Region to give their support to this broad line of policy, and to offer their co-operation to the Government in giving effect to it.

*

The resolution is backed by an impressive list of men and women who hope that " as a result of the initiative now taken, local authorities and other public and voluntary bodies in London will unite to offer co-operation with the Government in carrying out a policy broadly on the lines proposed."

ZERO HOUR IN PARLIAMENT SQUARE

Zero hour is approaching in the Parliament Square question about which I wrote some months ago. The Middlesex County Council purchased a nineteenth-century block of offices with the object of demolishing it and adding the site to Parliament Square. There is no doubt that this opening-up would be a vast improvement, but the Council's enterprise has not yet been financially supported by the Government as had been hoped.

*

The L.C.C. and the Westminster City Council have both made generous contributions, but about £250,000 is still required, and the Middlesex County Council have made one last appeal. I understand that an official decision will be made this month. It is to be hoped that this last opportunity will not be lost, and the site will be saved from development.

*

Parliament Square is small in scale, and Westminster Hospital is to be replaced by the office block, illustrated on p. 929, and designed by Sir John Burnet, Tait and Lorne. We may rely on this firm to do all they can to reconcile necessary cubic capacity with the wider aspects of Parliament Square. But it is certain that if Westminster House is to give way to a second office block the inconsequent charm which is all we have left now will go as well.

THE NEXT TWENTY YEARS

I was disappointed at the R.I.B.A. last Monday. This can only be explained by my expecting so much from Professor Holford.

In the first few minutes we had proved to us with irresistible force how much the architectural outlook depends on the social outlook. We were taken *back* twenty years: to 1918, when war seemed over and architects could look forward to a slow but continuing social reconstruction.

*

It was no doubt the change between 1918 and 1938 that made other summaries of the architectural outlook in the past seem beside the point. They all considered architecture against a secure social background. The architecture of the next ten years cannot rely on a stage setting so dependably neutral.

*

Towards the end Professor Holford touched on this, and the B.B.C. emphasized it in their report the same night. He said that metropolitan culture had received a heavy blow: the new basis for planning industry, housing, transport would be a *regional* one.

*

The speech provoked plenty of full-blooded support, but only timid criticism. Youngest speech of the evening was by Erich Mendelsohn, who demolished a previous speaker by telling him that modern architecture was not a mere style to take up, but something (I have no shorthand) that you passionately feel within yourself.

HORROR OF THE VACUUM

Last week I quoted a newspaper on the deplorable working conditions of employees in Cardiff's new City Hall. In case the description appeared derogatory to the architects—Mr. Lanchester and the late Mr. Rickards, whose design won in open competition — I must explain that the trouble appears to have been caused by recent additions carried out directly by the Council.

*

These additions, it seems, have taken the form of filling in a large part of the open areas that were left in the original building—a form of extension which is not generally to be recommended.

NOT BIG ENOUGH

From Scotland comes another terrible warning. The £500,000 Government building now nearing completion on Calton Hill, "Scotland's Whitehall," will not be capable of housing more than 1,000 of the 1,500 civil servants who were originally intended to occupy it. The "highly placed official" who makes the complaint says that it is definitely not the fault of Mr. Thomas Tait, the architect, who prepared his plans according to instructions and information given him. Cf. plight of Cardiff City Hall, above.

LORD DERWENT AND MODERN ARCHITECTURE

On a later page the Chairman of the Georgian Group of the S.P.A.B. says something of his attitude towards modern buildings.

*

In the space at his disposal, Lord Derwent can only outline a general attitude by good or bad marks given to a few topical examples. But even so, he shows clearly how difficult would be the job of a Vigilance Committee for modern buildings.

*

And so difficult have I found a reply based on the examples cited by Lord Derwent that I am going to think it over until next week.

FIVE-YEAR PLAN FOR BIRMINGHAM

Birmingham is apparently determined to make Leeds look silly. 25,000 municipal houses, maisonettes and flats are to be built during the five years at an approximate cost of £12,500,000, and the Council are to purchase, *for housing at some future time*, 1,122 acres of land outside the city. Progressive element of the scheme is a system of rent pooling, by which rents will be raised by sums of from 1s. to 2s. 6d. a week, and rebates allowed to tenants whose means justify them. The system is based on the assumption that a family can afford rent at about one-sixth of its net income.

PRESENTS

There are only however-many-it-is days left till Christmas. And if you can combine a good blow for your profession with seasonal goodwill, it is your plain moral duty to do so.

*

Here are two chances.* *The Architecture of England*, by Frederick Gibberd, is a picture book which nicely disposes of the idea that architecture consists of a dozen interchangeable dust covers for buildings, from Early English to Spanish Mission.

*

Social surroundings and events are on the left-hand page, the architecture arising from them on the right. Entirely painless and just the thing for the young idea.

*

The other is *High Street*, a 7s. 6d. book about shops, written for children by J. M. Richards, and illustrated by Eric Ravilious. The text is simple, beautifully printed, and full of the oddest bits of information—did you know, for instance, that rectangular coffins are more popular today than the tapered kind?—and the coloured pictures are quite enchanting.

NOTHING PERSONAL

is the title of the A.A. students' panto this year. By going to it on December 21, 22 or 23 you will have the added pleasure of supporting A. B. S. And if you want to help your fellow architects with a whole-hearted spirit-of-Christmas gesture, why not use the form below?

ASTRAGAL

* *The Architecture of England.* By Frederick Gibberd. The Architectural Press. Price 5s.
High Street. By J. M. Richards. Illustrated by Eric Ravilious. Country Life. Price 7s. 6d.

NEWS

POINTS FROM THIS ISSUE

"NOTHING PERSONAL"

This is the title of the A.A. Pantomime this year, and performances will be given at 36 Bedford Square, W.C.1, on Tuesday, December 13, at 2.30 and 8.30 p.m., and Wednesday, Thursday and Friday, December 14, 15 and 16, at 8.30 p.m. All seats for the final performance have been sold, but tickets, price 2s. 6d., 3s. 6d. and 5s., may be obtained for the other performances on application to the Box Office, A.A. Pantomime, 34 Bedford Square. Applications by post must include a remittance for the tickets; cheques and postal orders should be made payable to the "A.A. Pantomime." As in previous years the profits of the pantomime will be devoted to the Architects' Benevolent Fund.

WOMEN AND HOUSE PROPERTY MANAGEMENT

The importance of house property management in the modern community was emphasized by the Minister of Health, Mr. Walter Elliot, at the dinner of the Society of Women's Housing Estate Managers in London last week.

Ever since modern local government began to get under way 100 years ago, he said, thousands of acres had come under municipal ownership for all sorts of purposes, and local authorities in England and Wales today owned over a million houses on such land. A population of over 4 million, equivalent to that of the whole of the County of London, now lived in houses under a municipal landlord. Private enterprise for its part had built something like 2¾ million new houses since the War, and a large proportion of these were let to weekly tenants. With these enormous developments going forward great and growing importance attached to the function of house property manager in the sphere both of business and social welfare. It was the ideal of the great pioneer, Octavia Hill, whose centenary they celebrated on December 1, that the manager should be not only an active agent for the maintenance of sound property, but a force for good in the lives of the tenants. Octavia Hill, herself, when she died in 1912 in her seventy-fourth year, directly controlled over 2,000 tenancies. The total number of women members of the society now employed on house property management was 168, covering 54,400 tenancies. Four out of every five of these tenancies were municipal, and local authorities had doubled the number of women managers employed by them since 1934.

This subject was much in their minds just now in view of the recent report upon it made by Lord Balfour's Sub-Committee of the Central Advisory Housing Committee. Mr. Elliot agreed in principle with the sub-committee that, while it was unnecessary for the whole of the functions which bring the local authority and the tenants into association to be concentrated in the hands of one person, yet the greatest concentration consistent with practical efficiency would be likely to prove most successful. He added that, while he would not be so unwary as to say that either men or women as such should be excluded from house property management, he would say that there were no functions involved in good house property management which could not be adequately performed by women of the right training and character.

DICKENS' BUILDINGS TO BE SAVED?

The Rochester Council has taken steps to preserve some of the City's most valuable historical and architectural treasures. It has issued an order under the Town and Country Planning Act prohibiting the demolition of certain buildings without permission. Among the buildings affected are Watts' Charity House—described by Dickens in the tale of the "Seven Poor Travellers"—the Deanery, the gates to the ancient Benedictine Monastery of St. Andrew and several ancient houses in the Cathedral precincts.

LIVERPOOL SCHOOL ARCHITECTURE SOCIETY

A supper was held by the above Society on Friday, December 2, at the Bay Malton

THE ARCHITECTS' DIARY

Thursday, December 8

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

BLUE-CIRCLE PLAYERS. *Production of "Call it a Day" at the Cambridge Theatre. Also December 9 and 10.*

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.*

INSTITUTION OF STRUCTURAL ENGINEERS, 10 *Upper Belgrave Street, S.W.1. "Effect of Concrete Encasement on the Behaviour of Beam and Stanchion Connections." By Professor C. Batho. 6.30 p.m. Yorkshire Branch. At Hotel Metropole, Leeds. "The Storstrom Bridge, Denmark." By J. Pain. 7 p.m.*

SOCIETY OF ANTIQUARIES. *Burlington House, W.1. "Excavations at the Cave of Batchokiro near Drenovo, Bulgaria." By D. A. Garrod. 8.30 p.m.*

WEST YORKSHIRE SOCIETY OF ARCHITECTS. *Lecture Theatre, Leeds College of Art. Lecture by Raymond Walker. 6.15 p.m.*

Friday, December 9

TOWN PLANNING INSTITUTE. *At Caxton Hall, S.W.1. "Town Planning in Relation to Defence." By Sir Alexander Rouse. 6 p.m.*

REIMANN SCHOOL, 4–10 *Regency Street, S.W.1. "What Happens to Your Drawing." By J. B. Nicholas. 6.15 p.m.*

Saturday, December 10

LONDON SOCIETY. *Visit to Worcester Park House and Grounds. 2.30 p.m.*

Monday, December 12

R.I.B.A. SOCIAL COMMITTEE. *Camera Club Exhibition, 8.30 p.m.–1 a.m.; Dramatic Society will play "Still Life," by Noel Coward, 9 p.m.–10 p.m.; dance in the Henry Florence Hall, 10 p.m.–1 a.m.; games room, 9 p.m.–1 a.m.*

HUDDERSFIELD ARCHITECTURAL SOCIETY. *George Hotel, Huddersfield. Lecture by Raymond Walker. 7.30 p.m.*

Tuesday, December 13

LONDON MASTER BUILDERS' ASSOCIATION. *Annual Dinner. Connaught Rooms, W.C.2. 7.30 p.m.*

ARCHITECTURE CLUB. *Savoy Hotel, W.C. Supper discussion on "The Bressey Report."*

AIR RAID PROTECTION INSTITUTE, 18 *John Street, W.C.2. "A.R.P. in Industry." By Frank Cox. 8 p.m.*

INSTITUTION OF HEATING AND VENTILATING ENGINEERS (LONDON AND DISTRICT BRANCH). *39 Victoria Street, S.W.1. "Some Notes on Institutional Engineering Services." By Walter Ferne. 6.45 p.m.*

ILLUMINATING ENGINEERING SOCIETY. 32 *Victoria Street, S.W.1. "The Response of the Eye to Light in Relation to the Measurement of Subjective Brightness and Contrast." By W. D. Wright, 7 p.m.*

Wednesday, December 14

CHARTERED SURVEYORS' INSTITUTION (QUANTITY SURVEYORS' COMMITTEE). *Annual Dinner. Savoy Hotel, W.C.2. 7.30 p.m.*

LONDON SOCIETY. *Visit to the New Westminster Hospital Medical School and Nurses' Home. 2.15 p.m.*

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. *"Theatres, Tombs, Town Planning and Public Buildings." By Sir Banister Fletcher. 6 p.m.*

ST. PAUL'S ECCLESIOLOGICAL SOCIETY, 6 *Queen Square, W.1. "Medieval Churches of Cyprus." By Robert Francis. 8 p.m.*

Photographs taken at the annual supper dance of the Trussed Concrete Steel Co. at The Wharnecliffe Rooms, London, on Friday last. 1: A. E. Henson, F.R.I.B.A. 2: Joseph Emberton, F.R.I.B.A. 3: C. H. Aslin, F.R.I.B.A. 4: Mrs. Aslin. 5: Douglas H. Green (Managing Director, Trussed Concrete Steel Co.). 6: Cecil Kahn (Adamite Co.).

Hotel. Afterwards a documentary film was shown by Mr. R. A. Manthei, on the construction of the new factory at Welwyn Garden City for Messrs. Roche Products, Ltd. The architects are Professor Salvisberg of Zurich and Mr. M. C. Stanley Browne of London.

A visit has been arranged for members to the factory on Saturday, December 10, and particulars may be obtained from the Secretary, P. J. Marshall, 7 South Hill Mansions, South Hill Park, Hampstead, N.W.3.

ARCHITECTURAL SCHOLARSHIPS

The Trustees of the William Hoffman Wood Estate at their meeting held in the Civic Hall, Leeds, on November 23, under the chairmanship of the Lord Mayor, made Architectural Scholarship awards for 1938 of £200 to Mr. Frank M. Widdup, of Leeds, and £150 to Mr. Herbert Padgett of Wakefield. Both are students at the Leeds School of Architecture.

NEWCASTLE-UPON-TYNE COMPETITION

The closing date for sending in designs for the competition for the new town hall and civic centre at Newcastle-upon-Tyne has been postponed until December 31. This extension has been, granted at the request of several competitors who were delayed in their work by A.R.P. undertakings during the crisis.

SHEFFIELD JUNIOR ARCHITECTURAL SOCIETY

The Sheffield Junior Architectural Society is to hold its annual informal dinner on December 14, the charge being 3s. 6d. In view of the recent proposal of the formation of a Past Students' Association, it is hoped that old students in the Sheffield district will re-unite at this function. Any person requiring further information or intending to be present, should inform the Hon. Secretary, Mr. P. H. Liversidge, The University, Western Bank, Sheffield, not later than December 9.

CHRISTMAS HOLIDAY LECTURES TO BOYS AND GIRLS

The twelfth series of informal talks on architecture to boys and girls will be given at the R.I.B.A. during the forthcoming Christmas holidays. Mr. R. A. Duncan, A.R.I.B.A., is to give the talks this year. They will be illustrated by lantern slides, and Mr. Duncan has chosen as his subject : " Building Buildings : Materials and Craftsmen, Machines and Tools, Design and Designers." 1 : In Roman times (A.D. 1 to 400). 2 : In the Middle Ages (A.D. 400 to 1600). 3 : In Modern Times (A.D. 1600 to 1938). The lectures will be given in the Henry Jarvis Memorial Room, in the R.I.B.A. Building at 66 Portland Place, W.1, on the following dates : Wednesday, December 28, at 3.30 p.m. Friday, December 30, at 3.30 p.m. Monday, January 2, at 3.30 p.m.

CORRIGENDA

On page 891 of our last issue, the name of the firm of architects for the Port Tewfil Memorial was incorrectly given ; Messrs. Sir John Burnet, Tait, and Lorne were responsible for the design and the sculptured tiger was carved by the late C. S. Jagger.

On page 919 of last week's issue we inadvertently omitted the name of the architect responsible for the design of the house at Dunsfold. He is Mr. L. David Harris.

We have begged Professor Reilly not to write political articles, since THE ARCHITECTS' JOURNAL *is not a suitable vehicle for political controversy. This is his answer, which we hasten to disown.*

Professor Reilly Speaking

FOREIGN politics since Munich permeate everything, including architecture. It is no good editors saying I must not write political articles. I cannot write, and can hardly think, about anything else, nor can anyone who is not asleep. Are we going to be a little tail to the Berlin-Rome axis and be wagged by it ? If so, that is going to affect British architecture very considerably. Or are we going to stand out and stand up at last ? If so, that is going to affect it even more. It seems to me the future must hold one or the other of these alternatives. Let us see what we as architects may expect from each of them.

First, let us take the present friendly sympathetic attitude to the Fascist Powers and the gradual approach to their way of thinking. Clearly, we can no longer expect the old free expression of opinion to which we have been accustomed. Certain of our politicians have already been rebuked by the new All-Highest. We must mind our manners and learn to think and speak to pattern. For this education, as it proceeds, we know great stadia and auditoria are needed. Mass hypnotism is part of the art of government in a totalitarian state. We may hope when hypnotized we shall not be asked to commit arson, looting, assault and battery against the more defenceless members of the community. May we wake up before that happens ! But for the display of supposed national unity, for learning to shout together our new slogans, for the marching and countermarching before our Leader, we shall need these enormous buildings. Probably in our climate they will have to be roofed in. So much the better for our architects and engineers.

On the other hand, these buildings will all have to be alike in style to express the idea of the State behind them. A simple form of classical architecture such as has been adopted for them in Germany and Italy would probably be imposed. The majesty of Rome of the Emperors and all that sort of thing has an obvious appeal.

It does not look, then, as if there will be much scope for individuality and character in our buildings. Probably, too, as in Germany, one man—an eminent R.A. with us one may be pretty sure—will gather in all these Government buildings. As the unification of the State grows, and as converts are always more rabid than their preceptors, official ideas in architecture will grow too. We may have flat roofs denied to us as in Germany, or columns and pilasters made compulsory as in Russia. Gropius told me before he left for America Hitler had insisted on a steeply pitched roof being added to his famous Bauhaus building. I am told now that that fine modern building for the Shell Company in Berlin,which steps back time after time so gracefully, has been pulled down, although it faced the lake, to make way for a new street of massive official soulless classic. Architects in the unified totalitarian State will feel the heavy official hand as soon as anyone, pointing the only way in which the work is to be done if there is to be any work at all. Even in the so-called Free State of Danzig a painter friend of mine who does not belong to the party has to get his mural decorations signed by a painter who does. No doubt, however, there will be lots of big imposing work for certain members of the party, for such a regime must express itself publicly in big buildings. They are part of its propaganda. The Egyptian pyramids are generally supposed to have been built by slaves. Anyhow, they look like it, though an archæologist tells me there is a record of the workers on the Great Pyramid, whether slaves or not, striking for more honey or garlic. It is very significant in this respect that Germany has just passed not only laws for the conscription of labour but for maximum rates of wages. Long before the state of bodily slavery arrives, however, that of the mind will have been reached. Poor architects, perhaps rich in commissions but dead already in their souls !

Now for the other side. What has the future for the profession if we can imagine our Government taking an independent line ? Obviously, we have then not only to be prepared for attack, but to be so strong as to make it an uninviting task. Slave states cannot exist comfortably alongside free ones. Even if we double and redouble our defences in the way of fighting aeroplanes, balloon barrages and anti-aircraft guns, it is stupid to go on adding to our present over-grown towns and so increasing the size of the targets for the enemy. We must build new ones. Fortunately, we have now the electricity grid so that we are not tied by old geographical and physical limitations to the same extent. We have, too, by now cultivated the planning mind, or the

younger ones among us have. This will be then our great chance, the new open towns with widely spaced units and underground connections. My old friend and student's great scheme for a hundred new towns will at last become practical politics. Trystan Edwards will be a national hero, and rightly. For years he has been bravely fighting for his idea and spending his substance upon it. Now, suddenly, it may be the saving of the country and the making of hundreds of young architects. With their minds still free, and with no "Leader" to take their jobs away or put them into concentration camps if he does not like their detail, they will be able to do their best and on a scale never before dreamt of.

All this presupposes in each case that there will be any money left over from night and day rearmament and the excavation of catacombs. If there is, and money ultimately is but brain and muscle and the things already in the earth awaiting us, and we still have plenty of all these, I know very well which direction as an architect I want to see our foreign policy take.

P.S.—Have I been "fouling our own nest," I wonder? One does it so easily and innocently these days.

LETTERS FROM READERS

LORD DERWENT (Chairman, Georgian Group, S.P.A.B.)

"*X.Y.*"

SIX DEVELOPMENT ASSOCIATIONS.

Modern Buildings

SIR,—My attention has been called to a page in your number for November 17 in which, after speaking most amiably and encouragingly of our uphill work for Georgian architecture, you express some doubts as to whether we desire the existence of any modern architecture at all. I hasten to assure you that this is far from being the case; indeed, at our last meeting, I remember we commented with admiration on some of the Air Ministry's new assemblages of aerodromes and buildings that are beginning to dot the country.

But surely our attitude is and should be quite logical and simple. (I will be quite brief, for you will admit that it is an argument which could occupy pages and hours.) If we try as we do to encourage the preservation of eighteenth-century buildings, it is for a few definite reasons: (1) earlier buildings are much easier to protect, since the Englishman sentimentalizes about them, and in addition, for reasons of which you are doubtless aware and which would take too long to set down, they actually do receive more attention; (2) we consider eighteenth and early nineteenth century architecture to be the finest in England; (3) in nine cases out of ten, if it is a question of removing a building of this period, the modern building that replaces it is not only inferior to it as a piece of architecture, but (what is much graver, and what is gradually ruining London, for instance) is totally unsuited to the site it occupies.

As an example, I need only quote the new building in Berkeley Square. What justification can be found for it? It is far too high, so that even if it were a good building, you could not ever look at it properly, since you cannot see it from a proper distance; it is built in a style eminently suited to a factory, but certainly not to what is still largely a residential quarter of the town; the brick is of a monstrous, positively perverse tinge; and as for the inhabitants of Bruton Street, at any rate those of the lower floors, the small amount of daylight they were already receiving must be entirely curtailed. And it was for this that those pleasant eighteenth century houses with their Chinese balconies and their discretion were swept away—to make what is already an ugly town even uglier.

No, sir, when we can be certain that the building that replaces what we like will be satisfactory and suitable—even say, up to the standard of the Battersea Power Station or Broadcasting House or Radio City, New York, or (*si parva licet*) a certain new hospital in my own neighbourhood of Scarborough, or even the St. James' Park Tube Station, or the Imperial Airways' new terminus (I have given you a good hotch-potch to choose from!), then we can safely take up the cudgels for modern architecture. As for the functionalist's argument, surely that is, as you suggest, very much out of date, by this time.

One matter, in any case, I wish you would concentrate on, if ever you succeed in having an advisory panel formed for modern works of architecture, and that is the question of *elevation*. London, in any case, and the central parts of all our big cities are not meant for skyscrapers (which after all were only invented for purely practical reasons in New York), and Mr. H. G. Wells has somewhere outlined in the most horrific, but probably accurate manner, the electric-light and ant-like existence that awaits the populations of cities that commit such errors.

DERWENT (CHAIRMAN—GEORGIAN GROUP, S.P.A.B.)

Mr. Spragg

SIR,—Many of the thousand (rather than 200) members of the R.I.B.A. who have known Mr. C. D. Spragg during his 25 years' efficient and unobtrusive work in a position of great responsibility in the Institute will wish to see something better in your pages as a tribute to his work than the curiously expressed, if well meant, "Astragal" paragraph which was published in your last issue.

The fact that Mr. Spragg has survived for a quarter of a century in the profession's service without ever before attracting the limelight of newspaper paragraphs is a tribute no less to the quality of his work than to his modesty, because, just as the limelight comes easily enough to those who look for it, so it comes unasked to people who make blunders.

The fault of your paragraph and its deficiency as an expression of the profession's admiration and affection is, perhaps, merely a matter of phrasing, but phrases count for something in journalism. Your, certainly unintentional, treatment of so fine a servant of architects, and therefore of architecture, as Mr. Spragg, as an exhibit brought out for the day by the superior patronage of "Astragal" and then returned to the obscurity from which "Astragal" seems to think he lifted him, scarcely does justice to the extent to which Mr. Spragg is known to a very large number of members of the profession and will continue to be known to them for, we hope, many years in the future.

"X.Y."

Astragal replies: "'X.Y.' exaggerates, I fear, the importance of my remarks. Mr. Spragg will survive my patronage."

Development Associations

SIR,—In your leader of December 1, entitled "Mr. Roskill takes the lid off," there appears the following sentence: "He (Mr. Roskill) pointed out some of the shifts by which architects now attempt to maintain an impossible position: the designs prepared by sub-contractors, prices asked for from sub-contractors on the basis of a rival's drawings, and reliance on the advice of a naturally biased development association for a particular product."

While the writer may have had no intention of deprecating the Development Associations, his summary of that part of Mr. Roskill's paper is at least unfortunate and at best a careless piece of journalism. What Mr. Roskill actually said was fair comment upon the Associations and the architect's relationship to them, but in no way warranted your leader's implication that the architect's approach to them is in the same category of such misdemeanours as obtaining designs from sub-contractors and asking for prices from sub-contractors on the basis of a rival's drawings. To the majority such acts lie on the shady side of the line of professional good behaviour, and to bracket with them the obtaining of advice from a Development Association

is both unfair and prejudicial to the good name of the associations.

While technical advice from a Development Association may be thought to be biased to the extent that the association will not go out of its way to suggest alternative materials if those which it represents will serve the purpose in question, "No one would deny (to quote Mr. Roskill's words as reported in your synopsis of his paper) that the co-operative sales development organizations which have sprung up in such numbers in the post-war years are doing very fine work. Many employ scientific and technical men who hold strongly to the belief that the best form of sales promotion in the long run is to see that their material is used for the right purpose rather than for every possible purpose." This is an opportunity for stating that the *bona fide* Development Associations and Councils are as jealous of their reputations for giving correct technical information without suspicion of direct commercial propaganda, as architects are anxious to obtain it. For information concerning a particular product an architect cannot do better than obtain it from the appropriate association, because nowhere else can he find collected together and quickly available facts of past experience and up-to-date practice, the accumulation of which is part of the association's work. If there is a choice of materials and he fails to consult more than one association, as Mr. Roskill suggested as probable, the fault does not lie with the associations.

In the short time before your issue for December 8 goes to press, we have not attempted to obtain the signatures of representatives of all the associations and councils, but we feel sure that, without exception, they will endorse our protest against what appears to be an unjust statement.

Signed :

MAJOR R. A. B. SMITH, M.I.STRUCT.E., A.M.INST.C.E., Director of the Cement and Concrete Association, 52 Grosvenor Gardens, S.W.1.

G. GODDARD WATTS, Clay Products Technical Bureau of Great Britain.

A. L. MCMULLEN, M.A., A.R.I.B.A., Architectural Adviser to The Copper Development Association, Thames House, Millbank, S.W.1.

W. R. S. HODGSON, Lead Industries Development Council.

JOHN GLOAG, Public Relations Director, Timber Development Association, Ltd., Equitable House, 47 King William Street, E.C.4.

R. LEWIS STUBBS, A.R.I.B.A., Architect to The Zinc Development Association, 27 Horseferry Road, S.W.1.

R.I.B.A.

Following are extracts from the paper entitled "The Next Twenty Years," read by Professor W. G. Holford at the R.I.B.A. on Monday last.

I AM the type of young man who walks the pavements of Portland Place, without the Homburg of respectability on his head, and without the coat of a long-established practice to give him greater girth. Head in air, and with a total disregard of signs and signals, he forgets the present in dreaming of the future. Suddenly his progress is arrested as he cannons into a solid body emerging from No. 66. A senior member of the Institute, half indignant, half curious, turns round and says : "Where do you think you are going ?"

It is a sobering question.

I have often thought that the profession might be symbolized by one of those endless elevators such as one finds in the Market Hall at Frankfurt.

The point of my simile—and it will not do to carry it too far—is that in the progression from stage to stage there are common landings, on which friends can stop to talk, and where all can congregate to discuss a common problem. The views that I shall put forward are my own, though they are probably shared by many of my contemporaries. And should you find them drawn in rather sharp perspective, it is because they are seen through a short focus lens. Our state of being might be described, in fact, with apologies to our school training, by the second line of Frances Cornford's famous epigram on Rupert Brooke : " . . . *magnificently unprepared for the long littleness of life.*"

If the first half of my remarks, concerning the profession and ourselves, tends to be subjective, I hope that the latter part, dealing with architecture generally within the next twenty years, will be a more objective survey.

As a measure of the differences that a score of years may bring to our outlook, it is useful, therefore, to lay the yardstick down in the other direction and measure off twenty years of the past. It brings us to 1918, to that crucial period at the end of the Great War when the whole nation turned its eyes towards a future glowing with the opportunities of peace and reconstruction, and in doing so saw, and for the first time appreciated, the serious nature of its own wounds. It is interesting to note that in the last months of the Great War, the R.I.B.A. concerned itself particularly about this matter. The Presidential address and a whole series of conferences had for their subject the unity of the profession, the relation of architecture to engineering, specialization and co-operation, architects and national policy, the war and its aftermath ; and they included an important address by Mr. Sidney Webb on "The Function of an Architectural Society." Mr. Webb discussed, with amazing clarity and vision, the general problem of professional relationships, and he said several things very substantially which even today are only part of the cloudy substance of our ideals. He commended the efforts of the Institute to raise the standard of the profession, and pointed out the anomalies in its system of remuneration, whereby, he remarked, a hard day's work might result in knocking at least £20 off an architect's fees. He commented on the exclusiveness of all professional associations, drawing their members from only 10 per cent. of the population. Every profession, he noted, tended to be governed by the people aged 58—(*he* was 58 at the time)—and that there was bound to be a tendency to ignore, honestly to ignore, the new technique and new methods in education and practice. "I do not know," he said, "what the buildings will be made of in the next generation of the new England after the war ; it may be that they will be built of aluminium or of basic slag. But I very much suspect that the new material . . . will have to overcome a certain amount of prejudice before it is cordially accepted."

Mr. Webb then became very frank indeed. He thought that Registration was legitimate and necessary, but that a professional association, while playing a large part in prescribing the conditions of training and practice, should not be given complete power. "You cannot," he said, "allow older people to settle the conditions of entry, because they are not up to date ; nor can you give it to the young, because you cannot trust them. An ethical code is all very well, but it might take on a form which is inimical to the public interest." (Society, in other words, ought to participate in the government of the profession ; and that, I think, is an idea that we have not yet digested.)

On the other hand, Mr. Webb contended that it was not only the right but the duty of a professional association to criticise what was done by the Government in its own particular line and to keep it informed of professional opinion. In part this anticipates the point made by the President in his Inaugural Address this year, in asking for a body of architectural advisers to express their views on architectural matters, to act as a vigilance committee and to publicise building and planning proposals *before* they are put into effect.

Twenty years ago, even in the circumstances of the time, these proposals of Sidney Webb's were radical ones. But as Ivor Brown said recently in a review of an old play by Bernard Shaw, "it is the price of victory on the Left that yesterday's audacities become the platitudes of today." There lies the danger. "The Architect at the Service of the Community" has become a publicist's platitude but the machinery behind the idea has not yet been assembled. Bits of it lie about, unheeded by the State except in moments of emergency ; and, by municipal and Government departments, improperly understood. Within the profession itself the real difficulty seems to reside in this : that whereas the older members, by reason of their upbringing and experience, realise to the full the difficulties of the situation, the younger men see its significance and its importance before everything else, and quite rightly will not allow that the difficulties are insuperable. As far as the public is concerned, it is important to realise that it is inconsistent to attempt to train it in architectural appreciation while maintaining an intensely vocational attitude towards architecture as an art and a mystery beyond anything that the average layman can hope to appreciate. In saying this I am well aware that there is a vast difference between architectural propaganda and architectural ethics. Nevertheless, there is a danger that the public may grasp the commercial significance of the one and fail to grasp the social significance of the other. In the late nineteenth century the popular conception of the architect was of an artist and man of taste—something of a genius, in fact. Successful practitioners of the day immediately capitalized this by saying, "Very well, you want genius ; we have it." Not only that, but they offered it in assorted sizes and assorted styles.

But in the core of the profession it was emphasized that architecture is a folk art, a common tradition of honest building ; and Philip Webb went so far as to say that the ability to make picturesque and imaginative sketches was a fatal gift to an architect. "There is a great danger," he said, "that students will look on art as a trick to be found out."

Today the position is being gradually reversed. The public is coming round to the belief that the architect is also lawyer, town planner, A.R.P. expert, engineer and sociologist. And it is within the Institute that the other side of the medal is held up to view. "Tell people by all means," said the President in his address to students early this year, "that you can plan not only their cities but their industries and their

welfare. Tell them you can do it on your heads because you are architects, but do not imply that to do so is your most important function. The power of orderly manipulation that you claim is only one of architecture's powers, the greatest of which is a mystery of the mind."

I have commented on these opposing tendencies only to illustrate that, although a balance is usually struck by compensating differences, the philosophy of architecture changes from age to age. Twenty years hence it seems likely that architects will be nearer their public than they are today, if propaganda and the widening scope of architectural service are anything to go by. And if standards become once again mutually accepted as they were in certain aspects of eighteenth-century culture, then will be the time for individual variations on the established theme.

We cannot wait hopefully for this period to arrive ; we have to work actively to introduce it. Moreover, there are other professional bodies in the field. A senior partner in a famous engineering firm said not long ago : " There is nothing in layout or construction too small or too large for our firm to undertake. If called upon to do so, we will design a dog kennel." Nor are there many architects today of whom it may be said, as Lethaby said of Webb, that " his relation to his clients is that of the man who is going to give more than he can receive, and he will only give on his own terms."

There are only a few individuals who can achieve a position in which, since it is unnecessary to compete for commissions, clients compete for their services.

It follows, therefore, that the principal matters claiming the interest and enthusiasm of the younger members are connected with public relations, and public service. They feel that the profession as a whole is not organized to meet the social changes which are taking place, and does not sufficiently realize their importance. Coupled with these general grievances, and partly arising from them, are the worries of insecurity, inadequate salaries, and unrecognized responsibility. Most of you know something of the early nightmares incidental to a private practice unsupported by capital and influence, and it has more than once been suggested that a loan fund should be established to help the struggling practitioner over the frantic time lag that occurs between paying out and being paid. But little was done for the architectural assistant, particularly those employed in public offices, until an organization called the Association of Architects, Surveyors and Technical Assistants came into being. I am well aware of the impatience with which the A.A.S.T.A. is regarded in some quarters, but I wish seriously to recommend to your notice their charter, their technical reports (such as the excellent one on A.R.P.) and their organization as a whole, if only for the fact that they have identified their interests with those of the profession as a whole. The R.I.B.A. has given their representative a seat on its Council. It would be a sad day for architecture in this country if the activities of the centenarian Institute and the young Association ceased to be complementary, one to the other. It is quite clear that within the next twenty years both will have to play their part in establishing a wider basis for architectural practice.

The ideals of the younger architects are best illustrated by the scope and intention of their activities, rather than by their results. These include the problem of modern architectural research, the application of new scientific and technical resources to the problems of building, and their experimental integration in contemporary architecture. All modern work is experimental to some extent ; and the man who makes a contribution to our architectural powers, who fuses method, materials, and building needs into a creative design, is making architectural history. In the face of constant efforts at depreciation, sometimes from the uninformed and sometimes from the oversophisticated, it is necessary to state that there *is* such a thing as " the New Architecture." It is often contended that nothing in architecture is really new ; but even if this applies to individual methods, materials, or needs, it cannot apply to the combination of all three in a particular moment of time. There are no permanent architectural values save those founded on the elementary requirements of living, the laws of gravity, and the human eye. So whatever reservations may be made, a salute is due to adventurers in every age—our own included.

There is a natural time factor militating against the young architect. Every work of art is compounded of pioneering imagination, idealism and daring, on the one hand, and of experience and respect for tradition (combined with caution) on the other. As a rule, the first element predominates in a young man's work ; the second increases with age. Now it is the exception rather than the rule for an elderly client with a strongly traditional outlook to believe in a young architect who may be out of sympathy with his point of view ; and even when a working agreement is reached, there is likely to be tension between them. But it is equally exceptional for a young client, who might be expected to see eye to eye with an architectural contemporary, to have either the means or the opportunity to employ him. The age that is witnessing a startling decrease in the private patron, has seen the almost complete disappearance of the young patron.

One solution to the difficulty may be found in a new type of partnership between a group of younger men and an established senior. The next twenty years are bound to see some such development as this (if it has not already started), but the number of such firms will always be limited, since there must be a fundamental agreement on principle, and it is notoriously difficult actually to design in collaboration. Failing that, working partnerships may be formed, the note of consistency being provided by the nature of the work, as in the case of the Miners' Welfare Committee.

Meanwhile, what of the students ? The last war left a gap of nearly half a generation in the ranks of the profession—a gap that is keenly felt to this day. But the war also had its effect on the present students, inasmuch as all those who were born between 1915 and 1919 reached the schools during the last five years. I am not enough of a psychologist to be able to say whether this was a contributory reason or not, but I do know that the last five years have seen a great change in the student outlook. Fashions rage through a school like wildfire, and curiously enough they sometimes follow and sometimes anticipate those in the world at large. It has lately been the fashion to philosophize a great deal ; " sketching " buildings has given way to talking about buildings, and a subjective and even introspective attitude to general architectural movements and affairs has tended to take the place of the picturesque and detailed enthusiasms of a decade ago. It is now only the " realistic " programmes that evoke an enthusiastic response. The student almost unconsciously applies a criterion of social significance to his work, and is impenitent when told to leave politics alone and get on with his design for a temple of international justice on a plateau near a capital city.

Here again are two entirely different ways of regarding the teaching problem. One way is to maintain that no student is of any use to anyone, let alone the community, if he is not a competent draughtsman and designer and superintendent of building works ; and therefore his training should follow the strict lines already successfully established by academies and ateliers for that purpose.

The other approach is a more philosophical one which puts the aim before the means. After demonstrating the social and structural history of building and the position of the architect, both historically and in contemporary society, the significant problems are gradually introduced, and the student is told what he must study and where he must gain experience, in order to qualify himself for his life's work. In other words, the student is exhorted to help himself by somewhat different methods. In practice there would not be so very much difference between the two systems were it not for the extreme sensitivity of atmosphere in large architectural schools devoted almost entirely to theoretical training. The main cause of disharmony seems to me to arise from a confusion between method and inspiration, or —if you prefer a more sober word—background. Both are necessary in a school ; for it is a fact that the best of educational systems lose their efficacy after a while unless they are in accord with the spirit of the times. It was Professor Reilly's special virtue that he had only to walk through a studio at Liverpool to communicate his enthusiasm for whatever subject was in hand, together with a sense of the enormous importance and " jolliness " of architecture generally. This feeling was imparted by gesture and personality as much as anything else, but it had a tonic quality, and helped to launch scores of young architects, including the speaker, on their careers.

When a design subject is studied without enthusiasm and without a sense of its importance, it becomes a dull academic exercise. Such exercises may be good discipline occasionally, but in the main they produce tired, unenterprising architects.

The alternative, of course, is a new kind of method altogether ; or rather one so old that it is practically *dernier cri*. Let me quote you an extract from an article entitled " True and False Ideals in the Education of an Architect," which the chairman of the Junior Members' Committee brought to my notice. Though it reads somewhat like the first chapter of Genesis it is, in a minor key, almost equally inspiring :

" . . . Imagine, for instance, some National School of Architecture, to which anyone connected with building could have access, whether he intended to be an architect, or a builder, or a craftsman in one of the arts connected with building. Let there be no conventional distinction of profession, no barriers of etiquette to divide the students. Furnish the school with competent teachers and appliances for study in every branch of the art. Let it be possible to learn all the mystery of good construction, but let construction never be taught except in connection with design, nor design except in connection with the proper and natural use of material. Let the school be regularly visited by those who are recognized as masters of the art, to whom the paid teachers should be subordinated, and to whom the students could look for direction, advice and correction of their taste. . . . Let there be attached to the school workshops where the process of every handicraft could be demonstrated, where masonry, carpentry, joinery could be practically taught, and a forge where iron could be wrought. Drawing of a practical kind should, of course, be taught, so that every student might be able to set out and explain his ideas to the workmen or himself. Here those who mean to be ordinary builders might, if they pleased, stop. . . . The great thing would be that up to this point all should have been trained alike without distinction, and that the builders should have associated with those who aimed at higher flights, and should have shared the same training under the best masters of the art. . . . In this way we might hope to introduce into the building craft good taste, knowledge of design, restraint and appreciation of simplicity ; and with these qualifications, which would in time become traditional, we might hope for better things in the ordinary class of buildings, for which no great architectural effort is needed. . . . Above all, let there be no folly of certificating or labelling the student as proficient at any period of his career. Let him remain a humble learner all his life ; and let the school be open to him at any future part of his history whenever he wants instruction or advice, or desires to freshen his interest by contact with younger aspirants."

This quotation is from T. G. Jackson's *Architecture : A Profession or an Art*, and it was written in 1892. Allowing for differences of period, the essential ideas behind this proposal are startlingly similar to those of Walther Gropius and the *Bauhaus*. In nearly fifty years few of these suggestions have been realized, and now the proposal is further than ever from being carried out. Yet it is a logical one, and it is likely that during the next two decades the cry may again arise for something like it to be put into operation.

Trust is an important element in teaching, and purely negative distrust may have positive results, when it spreads widely enough. One of

my colleagues at Liverpool said the other day that what caused such wholehearted championing of the doctrines of Le Corbusier was not so much a discriminating confidence in the works and dictums of the master, as a vague distrust of the large numbers of older men who never had a good word to say for him.

I have dealt at some length with internal and professional matters because, in considering the prospects for the next twenty years, the outlook of the younger members must be taken largely into account. Theirs will be the responsibility for an increasing amount of the actual work done; and their ideals, even allowing for the modifications that age will bring, are at least a more hopeful basis for speculation than the crazy state of affairs in Europe. In September last I thought the entire substance of my subject could be dealt with in two lines by saying that architecture in the next twenty years would have to get out or get under, until such time as the world rated creative force above destructive force, and civilization above power. This is, unfortunately, still a possibility, and I believe that the most potent weapon an architect can wield is his capacity to plan, and his capacity to co-ordinate the skill of others in shaping our physical environment. To plan the fabric of civilian health and civilian protection, to plan for education and housing, to plan for large-scale evacuation (not only as regards camp accommodation, but for the whole altered pattern of daily life which an emergency might create), to plan new towns and old regions instead of overgrown, overbuilt cities—in a word to plan the militant peace which today is the only alternative to a barbarous war.

But in saying even this much, I shall be accused of talking politics instead of architecture (although I should flatly deny such an accusation); so let us assume that the architect is not called on to vacate his traditional attic for a bomb-proof basement, and that architecture is allowed to pursue its customary wayward course.

Once again, before risking a graph of the future, I turn to the past and present for an indication of the length and direction of the curve. But it may interest and amuse you to hear the architectural voice of the *Encyclopædia Britannica* presenting the seekers after knowledge in these different periods, with the architectural views of the day. The pictures thus presented will not be completely true ones; but they will be conveniently comparative, and typical enough to enable us to plot our curve.

The article on "The Present Position of Architecture" in the ninth edition was contributed by George Edmund Street and Hayter Lewis. Speaking about places of business, they wrote:—

"We can at least say that the new work is an improvement upon the old. In no instance perhaps is the advance more to be noted than in the clubhouses and the great warehouses for storing the lighter class of goods."

"Our plan, too," they proceed, "of letting each owner build to a considerable extent according to his own design results in a more picturesque arrangement of our streets than those of a Continental town which usually present lines of uninteresting houses, all of much the same design. . . . In civic buildings, if we have not rivalled Ypres or Louvain, we have at least improved on the wretched civic buildings of the last century. . . . Our railway stations are in the main mere great vaults of glass on iron ribs. . . . The hotels which in most cases form the frontage of our stations, are, for the most part, worthy of the striking positions which they occupy; but they are chiefly by living architects, and so beyond the scope of our criticism."

There you have, in Street's period prose, a glimpse of the architectural outlook of sixty years ago—the end of the Gothic revival and the beginning of eclectism, pointed forms for churches and monuments, individualism in the streets, disparagement of the work of the immediately preceding period, the effects of photographs, and the seemly reticence about the work of living architects.

Our next step brings us to H. H. Statham in the eleventh and twelfth editions of the *Encyclopædia*, published a few years before and a few years after the war. The article is concluded in these words:

"The separate development of a national style has become almost an impossibility. . . . The civilized countries have almost with one consent returned, in the main, to the adoption of a school of architecture based on classic types. The taste for mediævalism is dying out even in Great Britain, which has been its chief stronghold. . . . What course the future of modern architecture will take it is not easy to prophesy. What is quite certain is that it is now an individual art, each important building being the production . . . of a personal designer. . . . Two influences may have a definite effect on the architecture of the near future. One of these is the possible greater *rapprochement* between architecture and engineering of which there are already some signs to be seen. . . . The other lies in the closer connection between architecture and the allied arts, so that an important building will be regarded and treated as a field for the application of decorative sculpture and painting of the highest class."

You will notice the change of emphasis and the use of the words "modern architecture." The unfortunate gap between the architectural and engineering professions is being bridged, industrial and commercial buildings have thrown their weight on the side of the revival of the classic style, personality and a hint of *art nouveau* are introduced, and cosmopolitan architecture reigns supreme.

The most recent edition of the *Encyclopædia* (the fourteenth) changes all that. The article is written in a brisk American style and is copiously illustrated by views of skyscrapers and visions of the city of the future. "The problem that architecture sets itself," says Mr. Harvey W. Corbett, "is how best to enclose space for human occupancy. For early attempts at a solution see *Archæology*."

He then goes on to deal with construction and design:

"The transition of steel from merely strengthening stone to carrying the masonry load at each floor was the most momentous step in the history of architecture since the days of Rome. . . . It is now the accepted method of construction. Artistically, architecture is the result of a search and struggle for beauty . . . the architect is a sculptor in building masses. . . . With the concentration of population in cities, city architecture became the art's most important phase, and the architect is now called on to help to solve many problems not properly his own (see *Town Planning*)."

The architect of Bush House goes even farther than his predecessors in the matter of a national style. "Science," he says, "has knit all parts of the world so closely together, and so reduced time and distance, that for any nation to develop a purely indigenous architecture would mean that the material and spiritual status of its people has been untouched by modern inventions."

It is curious, is it not, with what assurance each generation treads on the neck of the previous one to justify itself and climb to its place in the sun. Already one can watch the revolt from many of the tendencies that are pointed out with such pride in this article—specialization, the neat pigeon-holing of function and beauty in separate compartments, the universal applicability of steel construction, the wholly beneficent nature of all inventions, especially mechanical ones, and the business man's faith in bigger and more congested cities.

Well, steel is certainly the business man's favourite material, it builds our factories and commercial houses; but brick and timber and the plastic possibilites of reinforced concrete appeal just as much, if not more, to the architect and artist of today. You will notice the last two particularly wherever they are at work, bridges and Underground stations, in flats and country houses, in recreation buildings and seaside pavilions, in the airport and in the Zoo.

Twenty years hence we shall know more about reinforced concrete, its construction, its behaviour, and particularly its surface treatment; and it is easy to foretell that there will then be refinements and expressive variations on an established standard, quite as remarkable as any that accompanied the growth of the great timber roofs in this country, or of the Gothic masonry of France.

As for specialization, the present trend is away from that too; we cannot afford it. It is a great problem how to acquire a bird's-eye view of a great many sciences whilst retaining a comprehensive vision of an architect's main function, the creation of an environment to meet the physical and spiritual needs of mankind. But it is clear that the emphasis will be more and more on the co-ordinating and less on the specializing faculties of the planner.

The President once remarked that one of the bad legacies of functionalism is a disregard of what is emotionally appropriate; he also pointed out that it had left one or two good legacies as well. Now, before functionalism is packed off to bed for good, let us remember that it is not a naughty child, personified for the first time by Le Corbusier, but a hardy veteran who appears in history whenever a great architectural movement has passed its climax. There is such an interval today. Interest is moving from the stage setting to the drama, and the functionalist scene-shifter helps to move the scenery of the last act off the stage. Twenty years hence we may be enacting a more popular kind of architectural drama, with a large cast participating, and an even vaster audience. More energy will then be liberated for the cultivation of the expressive arts, and we shall be busy putting up a new stage setting.

The emotional symbolism of much modern architecture is bare to the point of poverty, and utilitarian and simple, and sometimes a little uncertain. But it is often sincere, and occasionally moving. Stark reaction from it leads in two directions: the one an escape into satire, sophistication or revivalism, the other a worship of bigness, of clumsy force, and of mechanical ugliness such as is typified by the Air Ministry building in Berlin.

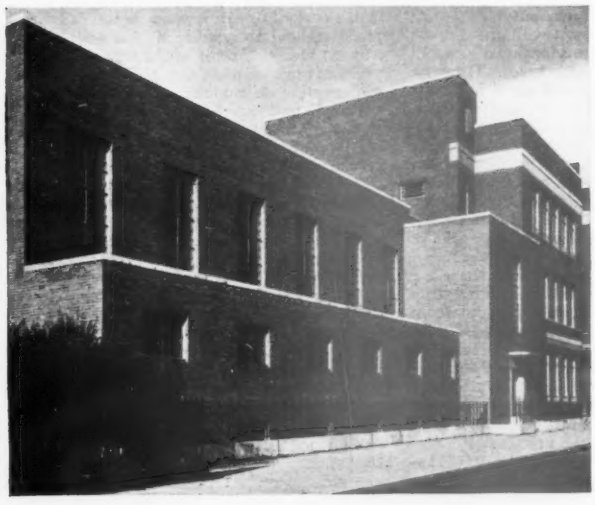
As for *types* of building in the near future, I should say that the key buildings of social reconstruction are the house, the school, and the small factory. Municipal buildings, which have been so much in the forefront in recent years, are likely to retain their importance; but a large part of the creative interest of architecture will be centred in buildings for recreation, health and transport. Health and community centres have already become significant, and to these I should add physical training and sports centres, and roadside and seaside architecture generally, including new forms of our old friend the public house. Much money will no doubt continue to be sunk in large commercial and office buildings in the centres of our large towns, but on the other hand business firms may become wary of overspending on fixed assets based on a theory of continually increasing land values. Paper capitalization in concentrated city buildings is not compatible with a policy of decentralization and defence.

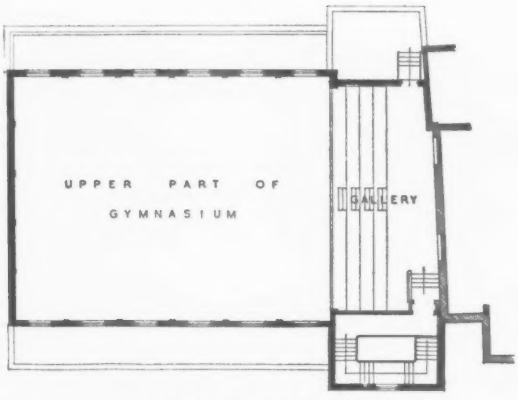
I am convinced that the architect of the near future will be called upon to assist in the handling of even more complex social relationships than he handles now. For one thing metropolitan culture has received a heavy blow; and the new basis for planning recreation, transport, industry and housing is likely to be a regional one. People in villages and in the country did not envy the Londoner one little bit during the recent crisis, and even provincial centres began to realize the benefits of decentralization. Many things that architects and planners had urged as desirable suddenly grew urgent; and there is no doubt of the direction in which peaceful reorganization ought to move. I can foresee a re-flowering of local cultures, a revival of interest in local architecture and, I hope, in local architects. It may even be that we shall soon see architecture once again becoming established as the commanding art, the essential physical component of our social life, with all that that means for the allied arts of painting, sculpture, drama and decoration.

* * *

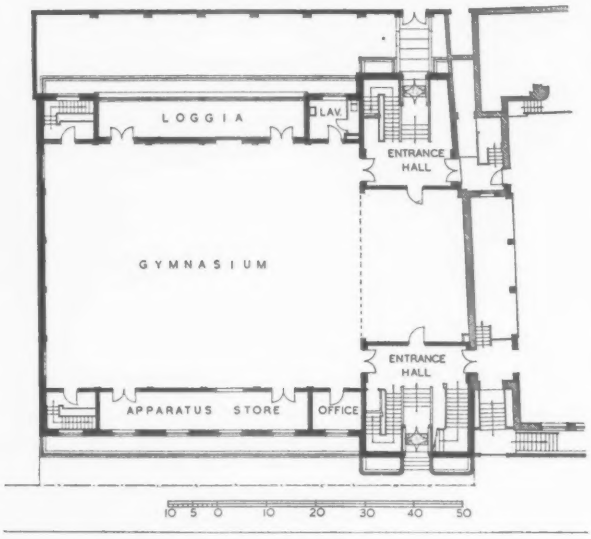
"And that," said the young man to the senior member, "is the direction in which I hope I am going during the next twenty years."

GYMNASIUM, UNIVERSITY OF LIVERPOOL: BY

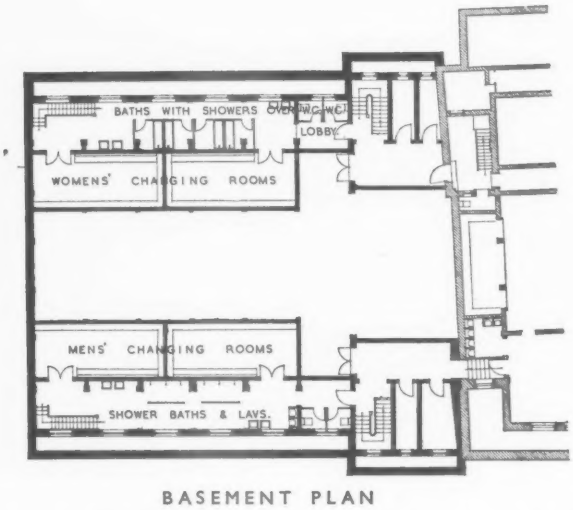




FIRST FLOOR PLAN



GROUND FLOOR PLAN



BASEMENT PLAN

PROBLEM—*The gymnasium is an extension of the accommodation of the Students' Union of the University of Liverpool. Requirements : (a) to provide for the voluntary systematic physical training of students in the University ; (b) to provide facilities for physical recreation for students and members of the staff.*
Left, a general view of the main front and a detail of the entrance.

LIONEL B. BUDDEN AND J. ERNEST MARSHALL

SITE — *The site lies between the Students' Union on the north side and domestic property on the left.*

PLAN—*The main entrance is from Bedford Street. This entrance gives access to the gymnasium hall on the ground floor, to the changing accommodation in the basement and to a spectators' gallery. A secondary entrance gives access from the Back Bedford Street side. The proportion and dimensions of the gymnasium proper were influenced by the need to provide two badminton courts and financial considerations alone prevented a still greater height being provided. In the basement the changing and lavatory accommodation for men and women is arranged on the east and west sides of the building respectively. For financial reasons this accommodation was originally limited to the area below the apparatus store on one side, and below the loggia on the other. Subsequently the University decided to increase the changing accommodation by utilising portions of the space provided under the gymnasium for storage purposes in connection with the Students' Union.*

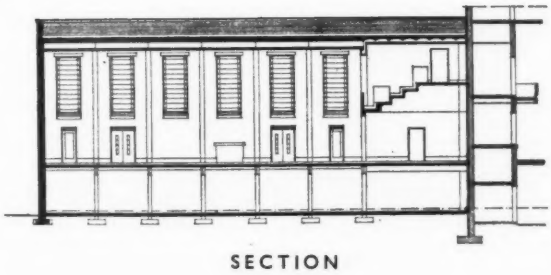
CONSTRUCTION—*Steel frame structure. External cavity walls 15½-in. thick, faced externally with multi-coloured straight-cut Ravenhead bricks and internally with Burwell White bricks. Flat roof consists of small infilling steel joists spaced at 2-ft. centres, these joists in turn carrying arched steel centring supporting re-inforced concrete infilling. The whole is supported on 26-in. by 12-in. rolled steel joists spaced at approximately 10-ft. centres. Floor structure : reinforced concrete.*

EXTERIOR TREATMENT — *In the treatment of the elevations some consideration has been given to maintaining the architectural character of the adjacent façade of the Students' Union. Metal window frames have been used and the metal railing protecting the area on the Bedford Street side harmonises with the railing in front of the Students' Union.*

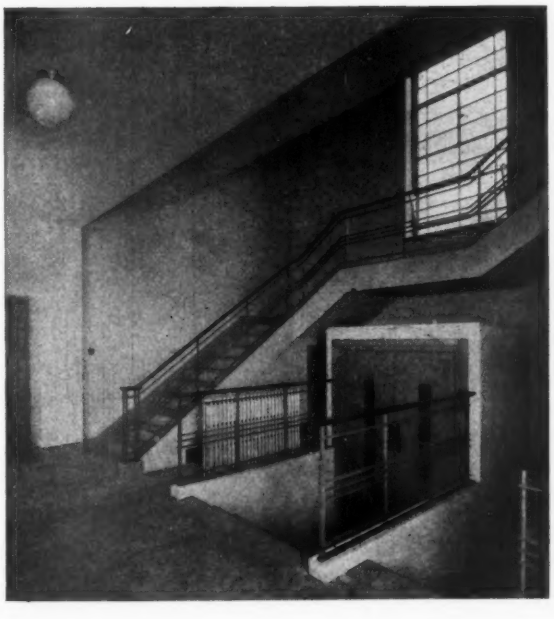
Above, the interior, looking towards the gallery ; right, the entrance hall and stairway to gallery.

COST—*£11,987.*

The general contractors were W. Moss and Sons, Ltd. ; for list of sub-contractors, see page 958.

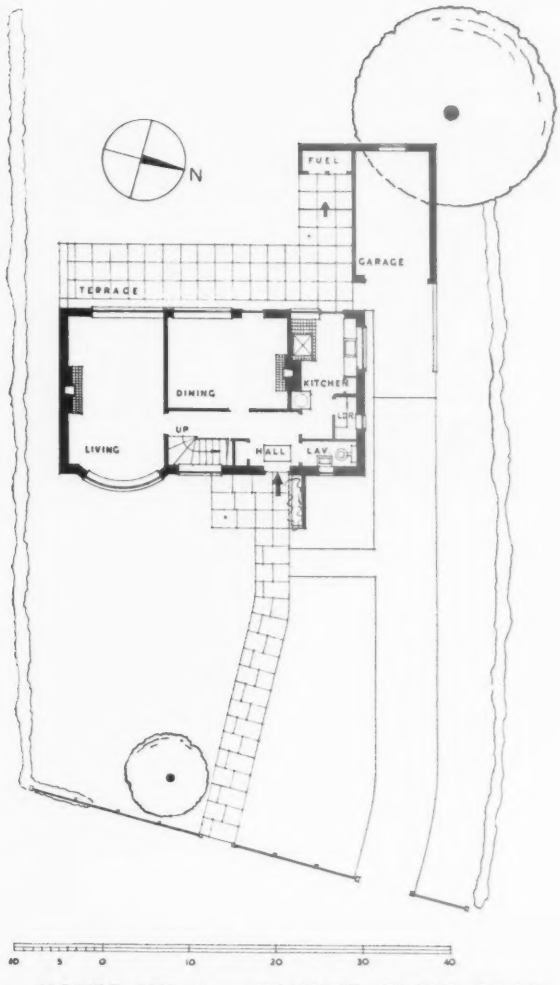


SECTION



TWO HOUSES AT CUFFLEY, HERTS:

IN ASSOCIATION WITH G. BRIAN HERBERT



HOUSE NO I. GROUND FLOOR PLAN

FIRST FLOOR PLAN

PROBLEM — *Two small houses about 200 yards apart flanking a by-road in Hertfordshire. Some good trees have been retained along the road: otherwise the area is being developed with small detached houses of normal type.*

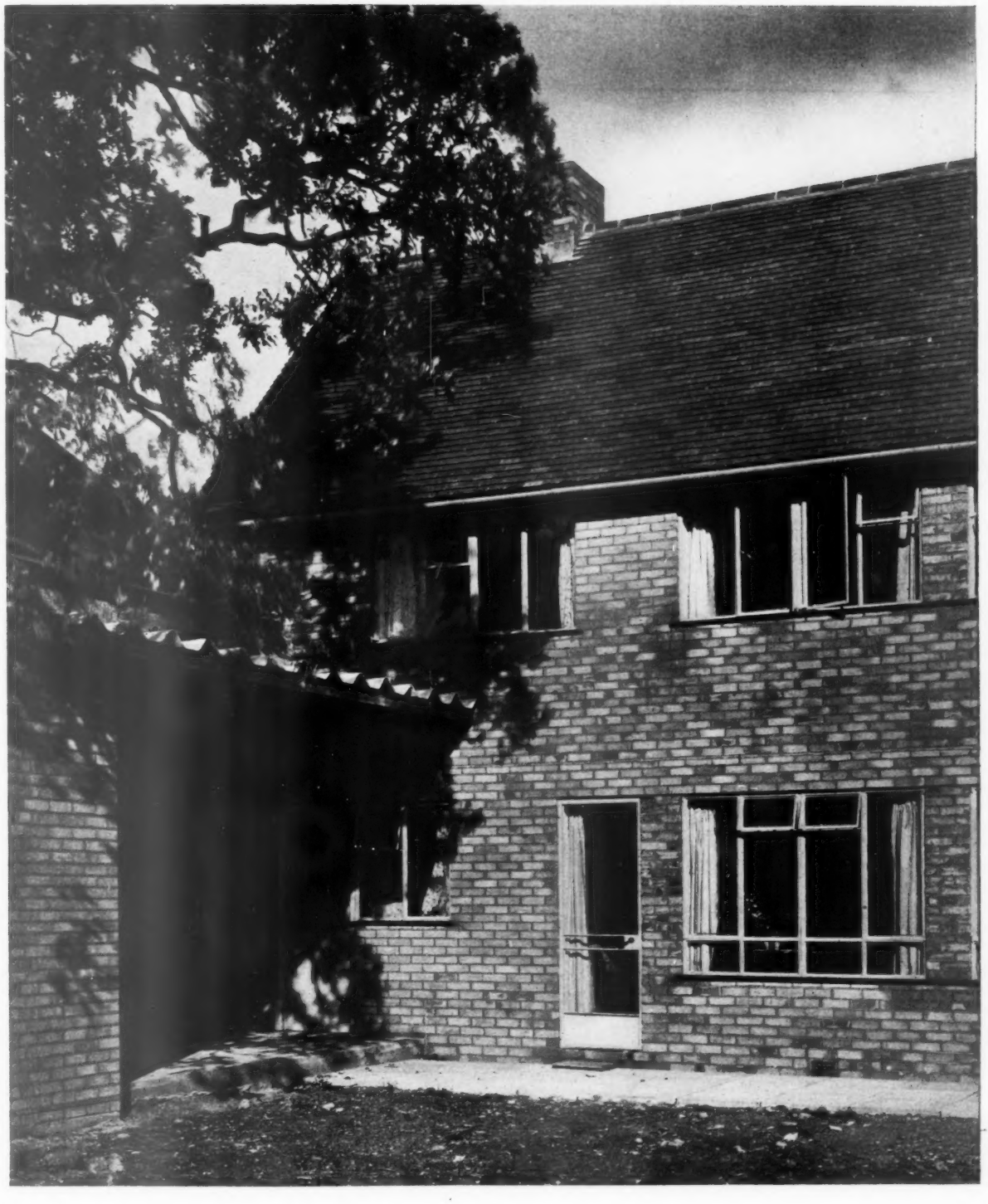
RESTRICTIONS — *Pitched roofs of slate or plain tile, and walls of stone, brick or roughcast were obligatory. Pantiles were disallowed despite a proposed guarantee that they would cost twice as much as the roofing materials on two adjoining buildings.*

REQUIREMENTS — *Large living rooms, separate dining rooms, downstairs lavatories, three bedrooms.*

PLAN — *Plan shape kept simple in order not to alarm tendering firms. Detached fuel stores, reached under cover, provided greater storage capacity and avoided handling coal in a small kitchen.*

Above, general view of House No. 1.

DESIGNED BY H. MYLES WRIGHT



CONSTRUCTION—*Roman flettons with local stocks for porches, flower-boxes and piers between windows. 11-in. hollow walls. Pitched roofs boarded, felted and finished in machine-made hand-finished brown plain tiles. Flat roofs : patent bituminous sheeting. Loggia roofs : large-corrugated asbestos-cement. "One-piece" slate cills and window boards. Paths and terraces in 2-in. artificial stone. Outer-leaf brick coursing over large windows carried on 4×3 R.S. angles. Windows : standard steel casements.*

Above, detail of garden front of house No. 1.

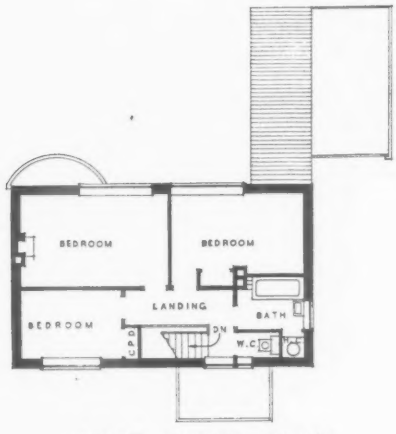
TWO HOUSES AT CUFFLEY, HERTS

DESIGNED BY

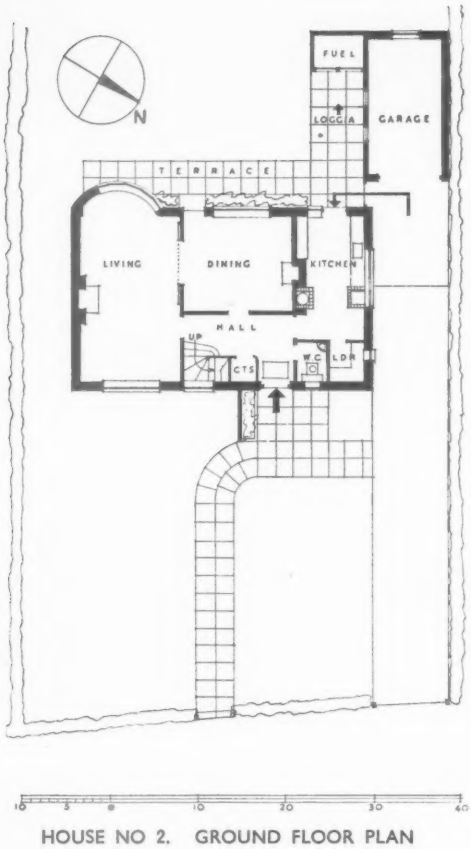
H. MYLES WRIGHT

In association with

G. BRIAN HERBERT



FIRST FLOOR PLAN



HOUSE NO 2. GROUND FLOOR PLAN

FINISHES—*Both houses, plastered walls, papered and buff distempered, tiles in bathrooms and kitchens. Flush doors, polished birch downstairs. Tile and hardwood fireplaces designed by architects. Lino floors in kitchen and bathrooms. House No. 1—oak strip floor in hall. House No. 2—wood blocks floor throughout ground floor.*

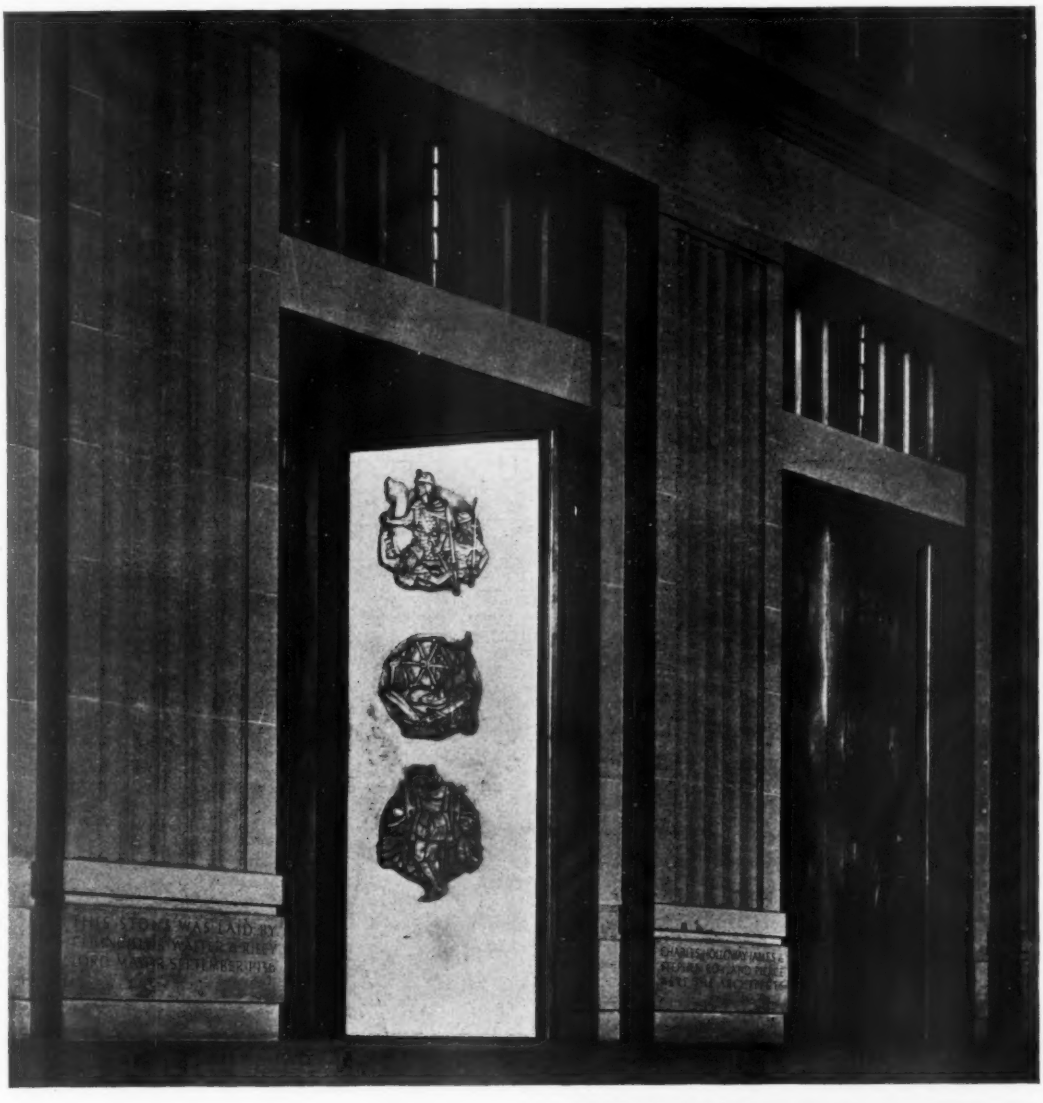
EQUIPMENT—*Solid fuel boilers and one radiator. Electric cookers, water softener in House No. 1, power and light plugs in each room, loudspeaker extensions. Good quality sanitary fittings and door furniture.*

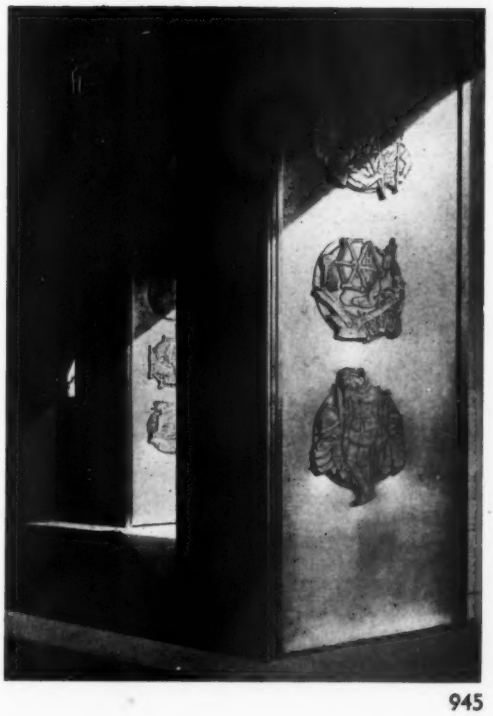
COST—*Excluding site costs and architects' fees: House No. 1, £1,050. House No. 2, £1,150. Cost per cubic foot: 1s. 1½d.*

Above, the entrance doorway of House No. 2.

WORKING DETAILS : 705

ENTRANCE DOORS • NORWICH CITY HALL • C. H. JAMES AND S. ROWLAND PIERCE





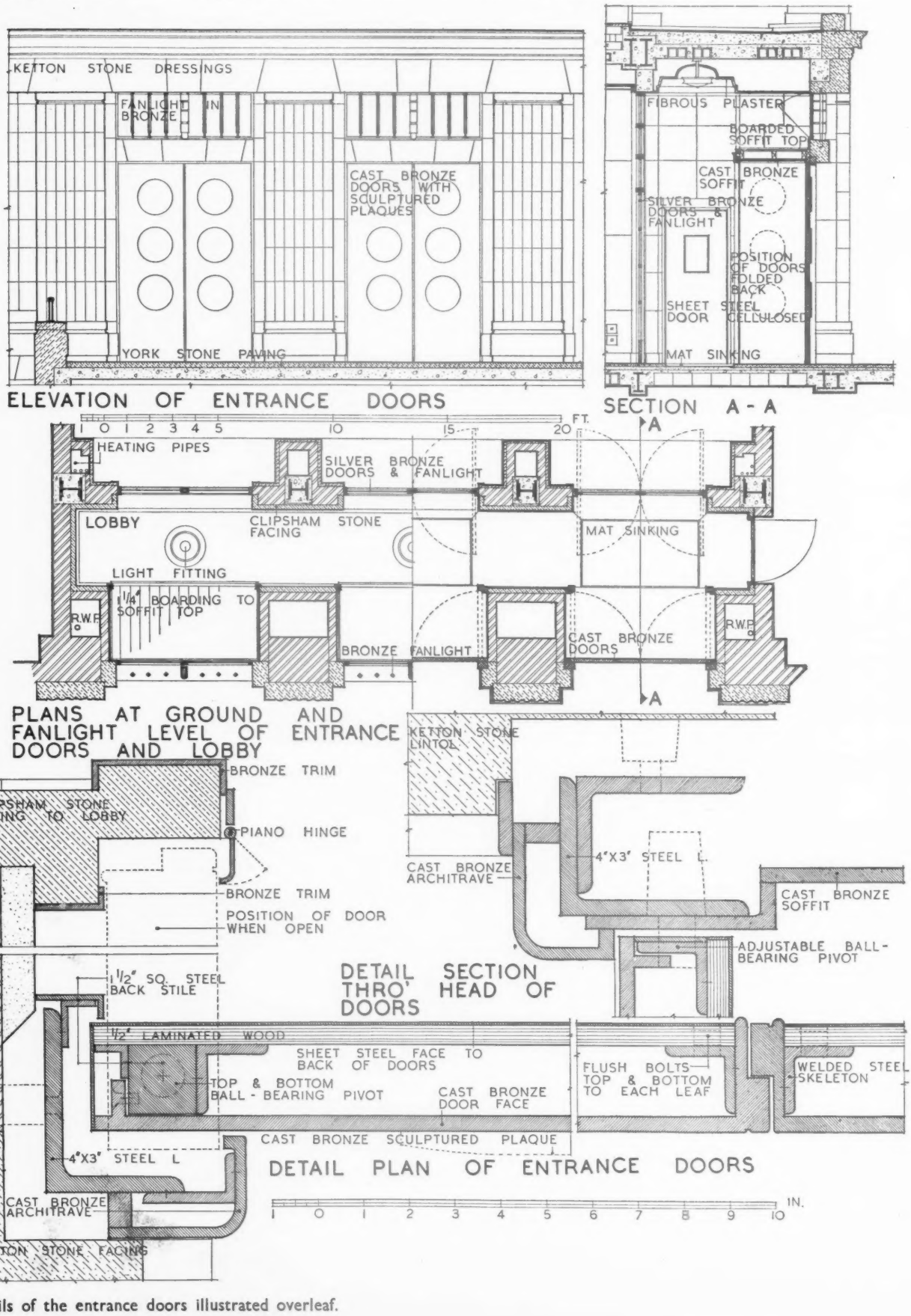
The main entrance consists of three pairs of bronze doors opening on to a lobby. Each pair of doors has six bronze plaques in relief, illustrating the trades of the district and certain historical incidents connected with the town. When open the doors fold back against the piers to form panels, their edges being concealed by hinged bronze fillets.

The pilasters and surround of the main entrance are faced in Ketton stone and over the entrance doors are three fanlights in bronze. The lobby is faced with Clipsham stone, and the inner lobby doors are glazed, with silver bronze frames and fanlight.

Details are shown overleaf.

WORKING DETAILS : 706

ENTRANCE DOORS • NORWICH CITY HALL • C. H. JAMES AND S. ROWLAND PIERCE

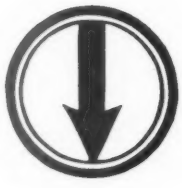


Details of the entrance doors illustrated overleaf.

The Architects' Journal Library of Planned Information

INFORMATION SHEET

SUPPLEMENT



SHEETS IN THIS ISSUE

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Sheets issued since index :

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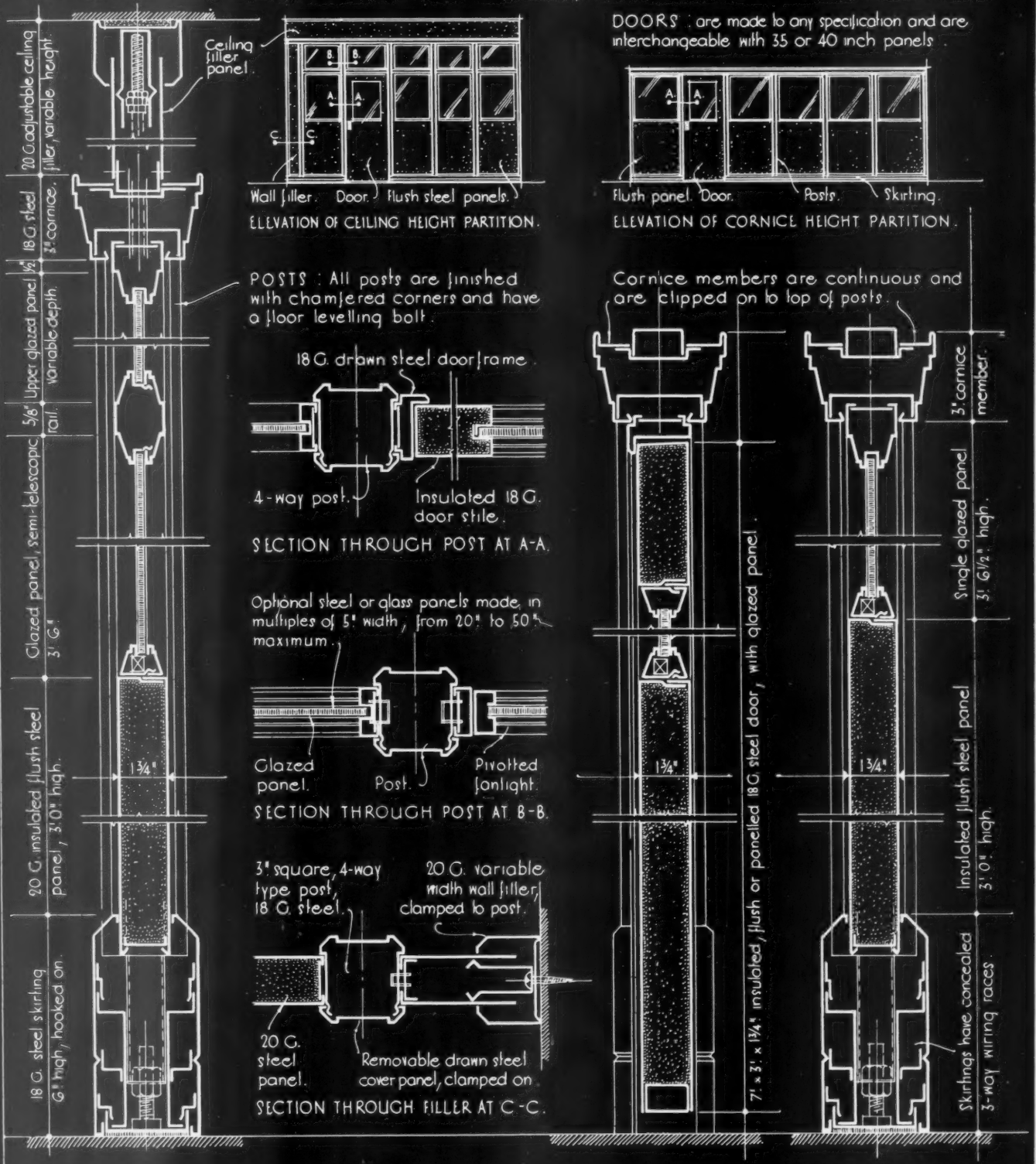
679 : Plumbing
680 : Aluminium
681 : Corded Curtain Rails
682 : Sound Insulation
683 : Roofing Tiles
684 : Sheet Metals

839. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

ART METAL TYPE D-1½ SOUND & FIRE RESISTING, SECTIONAL WELDED STEEL PARTITIONS.



TYPICAL SECTION THROUGH PANELLING OF CEILING HEIGHT PARTITION.

BASE: A rubber strip forms a watertight joint between the floor & the 11 G. channel.

TYPICAL SECTION THROUGH DOOR OF CORNICE HEIGHT PARTITION.

TYPICAL SECTION THROUGH PANELLING OF CORNICE HEIGHT PARTITION.

Information from The Art Metal Construction Company.

INFORMATION SHEET: DRAWN STEEL SECTIONAL PARTITIONS.

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

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 685 •

PARTITIONS

Product : Art Metal Sectional Steel Partitions

General :

The partitions shown on this Sheet are formed of standard drawn steel sections, and are suitable for sub-dividing offices, schools, stores and other such buildings, and for the formation of telephone booths, ward and lavatory cubicles, etc.

The D-1½ type partition shown consists of vertical posts with an infilling of glazing and of plain flush metal panels 1¾ ins. thick, the space within the metal faces of each panel being filled with sound-insulating material.

The vertical posts project slightly in front of the face of the panels and the general appearance is of flush panelled work divided by verticals.

All parts required in the assembly of a partition interlock and are retained in position by means of keys and friction devices. Cover moulds are snapped into position.

All connections are concealed, and wall and ceiling filler panels are provided to permit adjustments of height and width to be made to suit the site conditions.

Interchangeability :

The partition, being built up of standardized units designed to work with one another, the parts are interchangeable, removable and renewable if required ; panels and glazing may be readily interchanged at any time ; partitions may be dismantled, re-erected, rearranged or added to without waste or damage to existing work.

Finish :

Partitions may be finished in any plain colour, in duotone or two-tone colours, or in imitation wood graining.

Construction :

(a) *Sizes of Panels.* The heights of partition members are given on this Sheet ; the standard widths of panels are 20″, 25″, 30″, 35″, 40″, 45″ and 50″.

(b) *Standard Heights.* The standard height for cornice-height partitions is 7′ 3½″ and for ceiling height 8′ 9″. Ceiling fillers are provided to suit.

(c) *Panels* are 1¾″ thick, faced on both sides with 20-gauge steel sheet and filled with solid sound-insulating material. Panels are clamped into position and keyed between the posts.

(d) *Posts* are 3″ square on plan, formed in 18-gauge steel with chamfered corners. Each post is provided with a floor-levelling bolt, and a ceiling pressure bolt if the partition is to be carried up to the ceiling.

(e) *Doors* are 1¾″ thick, of 18-gauge steel filled solid with sound-insulating material, and are made with either flush or panelled faces. Doors of special design can be produced as required, and all doors are interchangeable with standard 35″ or 40″ panels.

(f) *Frames.* Door or transom frames are formed of cold-rolled drawn steel, 18-gauge (see section A-A).

(g) *Skirtings* are 6″ high, of 18-gauge steel, and conceal a three-way channel to take electric wiring, etc. Skirting is retained by friction device, simplifying inspection of wiring.

(h) *Fillers.* Wall fillers are made 5″, 6″, 7″, 8″, 9″ and 10″ wide of 20-gauge steel (see section C-C). Ceiling fillers are of double 20-gauge steel or of ¼″ thick mineral board.

(i) *Mouldings.* Mouldings for doors, panels and cornices are formed of 20-gauge steel.

(j) *Glazing.* Glazing throughout is single and any suitable glass can be supplied, retained by friction glazing beads.

(k) *Transoms.* Opening fanlights are fitted with operating mechanism concealed in the adjoining posts.

(l) *Floor Fittings.* An 11-gauge steel floor channel provides a firm foundation for the partition and permits the interchanging of fittings and panels. A rubber strip is provided between the floor and the floor channel to make the joint water- and draught-tight.

Other Types :

Three other standard types of partition are produced for particular purposes as follows :

Type K. An entirely flush surface partition, 3″ thick, with double insulation and glazing, and made up in standard sections giving the same flexibility of arrangement and ease of erection as type D-1½.

Type M. A flush-panelled partition but with posts visible on both sides, 3″ thick and insulated. Single or double glazing as specified.

Type R. A partition fitted with panels of one thickness of sheet steel for factory purposes.

Manufacturers : Art Metal Construction Company

Address : 201 Buckingham Palace Road, London, S.W.1

Telephone : Sloane 5201

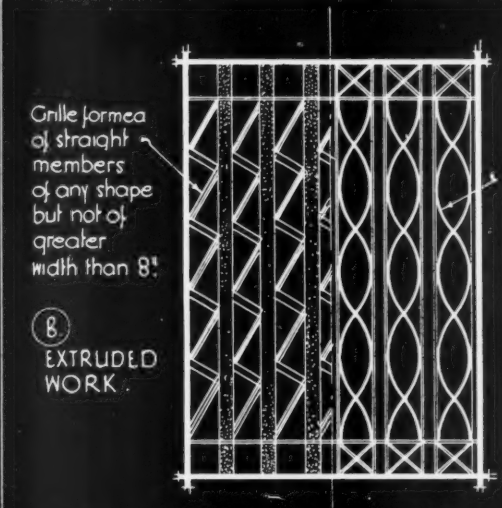
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

THE FABRICATION AND ASSEMBLY OF CAST AND EXTRUDED ALUMINIUM GRILLES, GATES, ETC.

(A) CAST WORK.

SAND CAST • Molten aluminium is poured into a sand mould which has been made to a wooden pattern. Suitable for small quantities. Maximum size of casting depends upon intricacy, type of alloy, foundry facilities, etc.

GRAVITY DIE CAST • Molten aluminium is poured into a cast iron mould. Suitable for work of intricate nature, or for standard parts that are required in large quantities. Owing to the cost of the die, this method is usually confined to smaller work, where a high degree of finish and close dimensional tolerances are required.



(B) EXTRUDED WORK.

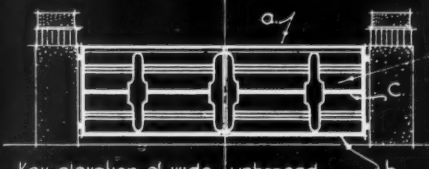
EXTRUDED SECTIONS • A billet of aluminium is heated to a semi-plastic state, and forced through a die by hydraulic pressure. Extruded sections are constant in profile, smooth, and require little if any supplementary machining. Economical for work where lengths of special profile are required.

SPECIAL SHAPES • Dies other than of stock pattern may be made for particular work at little extra cost.

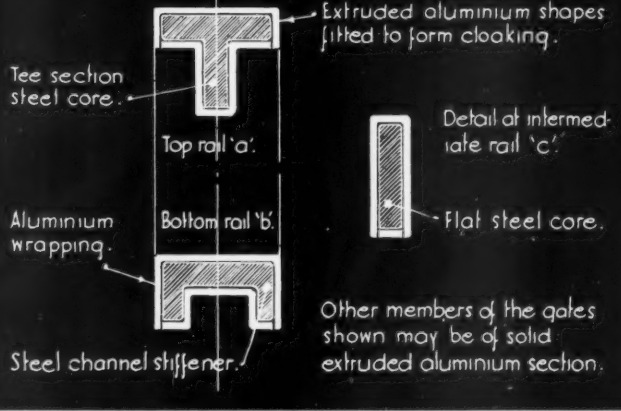
(C) EXTRUDED with cast detail.

COMBINED CAST & EXTRUDED work may be used when a superimposed or infilled effect is desired. Extruded parts of chosen profile are assembled in the normal way, and the cast parts attached by any of the standard fixing methods. Economical for plainer work in which some decorative motif or margin is desired.

STEEL CORE STIFFENING TO LARGE ALUMINIUM GATES, REMOVABLE GRILLES, AND DOORS



Key elevation of wide, unbraced type entrance gates.



Information from the Northern Aluminium Company Limited.

INFORMATION SHEET : ALUMINIUM Nº 10 : CAST & EXTRUDED GRILLES, ETC.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Ola. A. Bayne.

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 686 •

ALUMINIUM

General :

This is the tenth of a series of Sheets dealing with the architectural uses of aluminium, and sets out the main differences between cast, extruded, and combined cast and extruded work, and the factors which should be taken into account when designing grille work in any of these forms.

These factors apply not only to small grilles, but to gates, doors, panels and large grilles built up in sections.

Fabrication :

While it is possible to prepare a design for grille work and, after it is complete, to determine the most suitable method of manufacture, greater economy and better results are obtained if the design is originally based upon the characteristics of the method of manufacture to be used.

The characteristics of aluminium and the variations which can be obtained by alloying allow a somewhat greater range of working technique than most other metals used in architectural work. For this reason the alloy, the working technique and the finish must be considered together in relation to each particular piece of work. The following notes, however, are a guide to the difference between cast and extruded work.

Cast Aluminium :

Aluminium may be cast in sand moulds or die-cast in metal moulds : which of these types to be used for any given work is determined by the design, the cost and time factors and the number of repetitions required.

Individual members : For assembling in a grille may be, if they are cast, of much more intricate shape than if they are extruded.

Owing to the method of manufacture, extruded members must be straight and of the same section throughout their length, varied only by the amount of working or bending which can be carried out after extrusion. Cast members can be moulded to any section and shape throughout their length. Cast members are usually solid in section unless they are built-up in two or more pieces, though they may be cast hollow by suitable coring.

Grilles or panels if built up entirely in extruded sections can be very complete in pattern, but must be geometrical in form and of reasonable scale if the high cost of fitting and assembling great numbers of very small members is to be avoided. Cast grilles and panels are not subject to such limitations, the pattern being controlled only by the ingenuity of the modeller.

In addition to the freedom of pattern permissible, greater variety may be used in the section shape, modelling and surface finish of each member forming the pattern.

Casting technique therefore allows greater variety and complexity than the all-extruded built-up method, particularly in work of small scale. Angles and arrises can be obtained sharp and true, and surfaces smooth or rough as required.

Cast Solid Panels.—Small decorated solid panels are sometimes used in grille work. Although almost invariably cast, they may be " worked " from a flat plate, though the cost of this is higher.

Extruded Aluminium :

All-extruded Built-up Grille Work.—Grilles and panels built up from extruded aluminium sections are necessarily of the pierced type. They are more economical than cast work, but in general designs are simpler and composed of straight or almost straight members of not greater cross sectional diameter than 8 ins. Adequate strength to suit any architectural use can be developed by using suitable alloys or by concealed steel bracing.

Extruded aluminium comes from the die with a smooth finish and fine structure, generally not requiring further machining. A typical range of sections available by the extrusion process is given on previous Sheets Nos. 504, 505 and 510, but in all alloys of aluminium, the thickness limitation varies in accordance with the size and design of the extruded shape.

Sections thinner than certain practical limits are difficult to extrude, and enquiries should be made before specially shaped or drawn sections are designed.

Combined Cast and Extruded work :

The two methods of manufacture are frequently used to make the parts of a large built-up grille—the framework and main bars being extruded, and the finer grillework, specially shaped or modelled bars and solid panels being cast.

This combination allows greater freedom in design and is economical. There may sometimes be a very slight difference in colour between the finish of the extruded work and that of the cast work, when the casting is intricate, involving the use of special alloys.

Assembly :

All normal methods of metal assembly may be used in aluminium work, including welding, but welding must be carried out before the surface finishing has been done.

Contact with other Metals :

The building-in or fixing lugs of aluminium grilles, panels, gates, etc.—or other parts in contact with wet concrete, mortar or other alkaline building materials—require protection with a coat of bituminous paint. Drainage of water from copper, bronze or nickel should not be allowed to reach aluminium work, or galvanic action may take place.

In external work if lugs, anchors and other supports and fixings are of other metals, they should be painted with bitumen where they are in contact with aluminium.

Finishes :

Finishes for aluminium work include sand-blasting, polishing, plating, painting and anodizing, which may be natural or dyed. For a full explanation of some of the standard finishes, see Sheet No. 505.

Previous Sheets :

Previous Sheets in this series dealing with the architectural uses of aluminium are 492, 501, 504, 505, 510, 661, 669, 673, and 680.

Issued by : The Northern Aluminium Co., Ltd.

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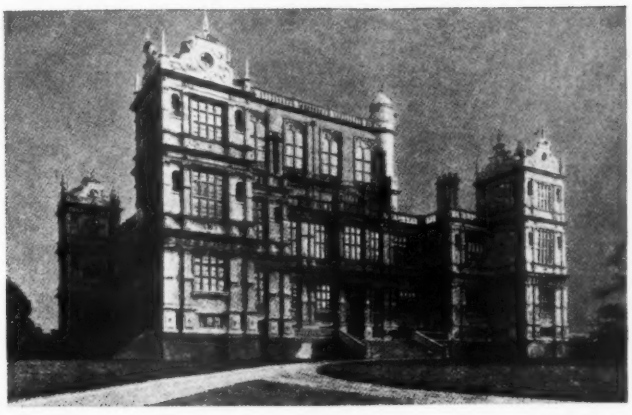


Wollaton Hall, Notts, c. 1580. The north front and the ground floor plan. From "A Miniature History of the English House."

L I T E R A T U R E

THE ENGLISH HOUSE

[By J. A. GOTCH]

A Miniature History of the English House. By J. M. Richards. London: The Architectural Press. Price 3s. 6d.

THIS little book is, as its author says, a kind of epitome of Nathaniel Lloyd's "History of the English House," and a very useful epitome it is. There are some sixty pages, each with an illustration and a concise description of the house illustrated, so that, in turning them over, a complete panorama is obtained of the changes in appearance and construction that English houses underwent during the eight centuries between 1130 and 1937. The descriptions, although concise, give the reader a good idea of the development of house design, and help to induce him to consult some of the larger works dealing with particular periods and aspects of the subject, which the author tabulates in the bibliography at the end of the book.

But the reader whose aim is less ambitious than that of mastering the intricacies of architectural development, will find here, in description after description, the reasons, shortly but lucidly given, that underlay the various changes which the illustrations display. He will see how, in early times, safety was a compelling motive, and how it resulted in dwellings that were strongly fortified. How, as public safety increased, houses ceased to be strongholds and gradually became comfortable homes amid pleasant gardens; and how, through succeeding periods, the houses of the present day can trace their descent from those of the past. Further, he will see how the use of local materials affected design and appearance, how even the smaller houses were occupied by persons in fairly good circumstances, while the peasants had to be content with dwellings of such flimsy construction that hardly any examples of them survive. Incidentally, he will realize that, when the Gothic style prevailed, it was applied equally to houses and churches, the latter being, however, more elaborately treated.

The idea about architecture that generally prevails is that a building is, or ought to be, designed in a particular style. The real essentials of good architecture seldom receive that consideration which they deserve. Briefly, and perhaps inadequately, they may be summed up thus, it being always taken for granted that the building is designed, first of all, to answer its purpose; good proportion, rhythm, grace of outline, attractive detail, which should be adequate in amount, but not over-done. These qualities can be bestowed upon a building no matter what its style may be, and the competent architect can bestow them. Practically all the old buildings here illustrated possess them, but, from this point of view, what can be said of the most modern example, or indeed of the bulk of those which the present fashion produces? Until the necessity of observing such essentials is generally recognized, we shall never get architecture that can vie in attraction with that of the past. It is not the style that counts, but the inherent qualities of good architectural design.

The story is helped by the inclusion of a number of illuminating plans, and the whole book, small though it is, gives excellent guidance to the general public, and provides an admirable summary well worthy of close attention by trained architects.

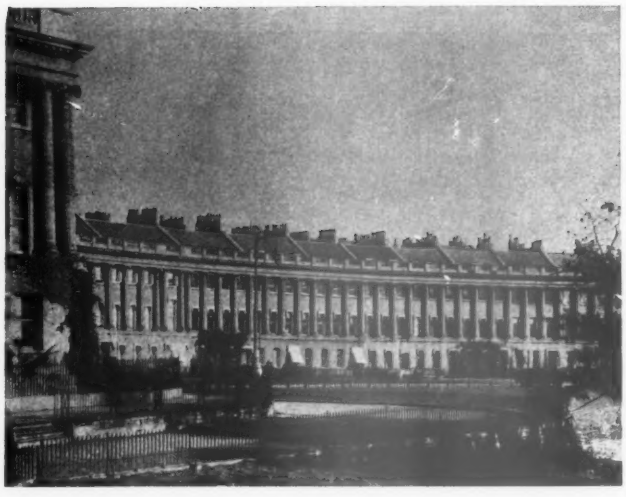
GUIDE TO YOUTH

[By J. E. BARTON]

The Architecture of England. By Frederick Gibberd. London: The Architectural Press. Price 5s.

IN matter, outlook, arrangement and illustration this is a book which has long been wanted by all who are concerned with the introduction of young people to an intelligent study of English buildings, as an obvious—though hitherto deplorably neglected—necessity for general culture. Every school library should buy at least half a dozen copies, and if its contents were mastered by sixth-form boys and girls all over the country, it would go far to lay a foundation for the better type of æsthetic instruction which is now being called for

1925–1930. A typical new housing estate. From "A Miniature History of the English House."



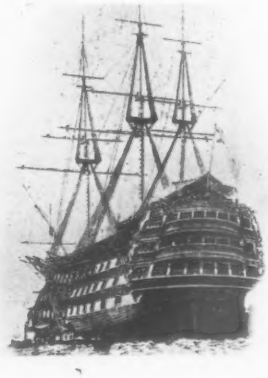
Royal Crescent, Bath, 1767. Architect: Wood, the younger. From "The Architecture of England."

throughout the teaching profession. The prevailing abysmal ignorance of architecture and sculpture, even in our so-called educated class, is largely due to the nineteenth-century habit of isolating "art" from the common sense of everyday life. Only by patient and persistent propagandism can we restore the normal and healthy attitude of mind which Mr. Gibberd hits off so well when he remarks that in Georgian times a town hall and a teapot had the same cultural background. Somebody has said that the English public hates knowledge for its own sake. Beyond question it suspects, and avoids instinctively, anything in the way of "artistic" education. Our children, however, are growing up in a more enlightened atmosphere, and are learning to appreciate all admirable works of man without regard to the false distinctions between old and new, "fine" and useful, hand-made and mass produced, which have confused the minds of three generations.

This book, very wisely, does not set out to tell you what is good and what is bad. It brings home to every reader the fact that English buildings in every age are the inevitable product of the kind of people, living the kind of life and having the sort of environment, to which each successive age gave birth. Continuous evolution is, of course, made clear, but for illustrative purposes the student of any one phase, from Norman times to 1937, has two pages before him: on the left, a concrete but never dull summary of social, economic, and material conditions, interspersed with excellent small drawings and blocks; on the right, a relevant group of unhackneyed, well chosen and reproduced photographs. By this method he is encouraged to see architecture constructively and biologically. The author is sparing of generalizations, but those he does offer are useful and sound—e.g. the distinction he draws between the classic building, in which a preconceived design is paramount, and the Gothic building, which follows the nature of its materials.

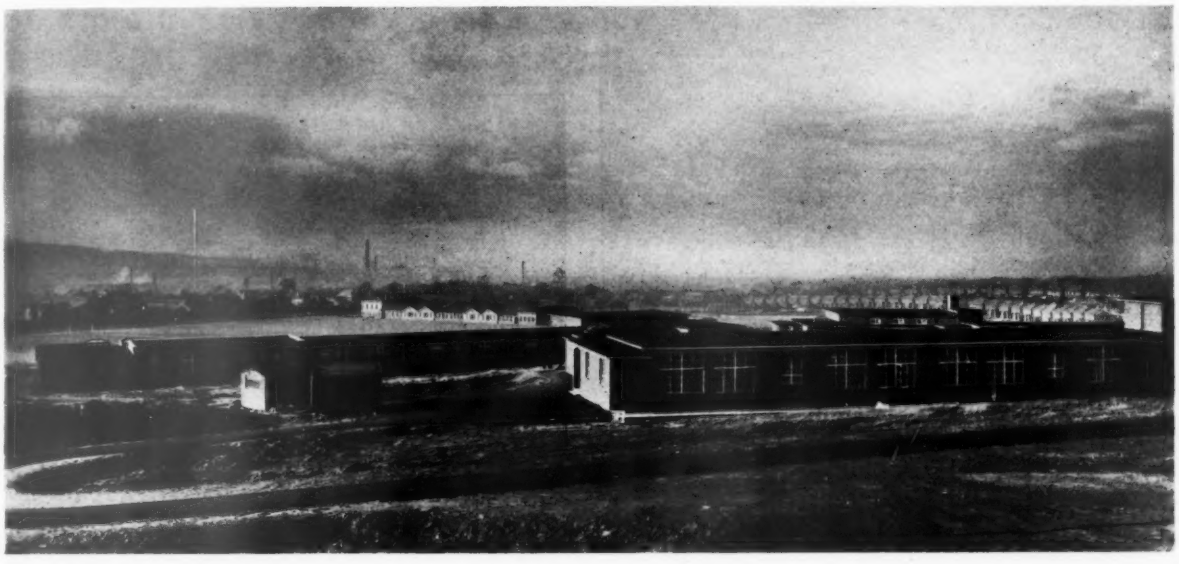
Most of the short handbooks to architecture have four defects. They are antiquarian in sentiment. They exalt decoration. They tail off very weakly when they have got past the middle ages. They ignore the existence of architectural art in the machine age. From all these faults Mr. Gibberd's book is free. His Georgian, Victorian, and modern pages are particularly good. The young reader who goes attentively through the whole volume will acquire something of that all-important virtue, unity of outlook. It will dawn upon him that not only is all architecture a continuity, but in buildings, more clearly and decisively than in any other human works, we perceive the quality of civilization to which man has risen or fallen. The aims and principles of present-day effort are stated with admirable clearness and a reasonable optimism. The modern development, says Mr. Gibberd, "attempts to unite science and art." In other words, once more to unify life. In dealing with the nineteenth century he creates a specially happy phrase for the "architect engineers"—the men who anticipated what we call modernity by treating new materials with a sense of form. One of the illustrations is an exceptionally good detail photograph of the Crystal Palace.

If a genuine appreciation of all the arts, old and new, is to become a recognized essential in the upbringing of a civilized democracy, the fundamentals of architecture as set forth in such a book as this must always come first. Only from an architectural beginning can we learn to see the arts in a true relation to their human origins and social function. Far too much of the æsthetics now miscellaneously picked up by our more intelligent young people is confined to the pictorial and plastic "fine" arts, as viewed from some theoretic or temperamental standpoint. This is one reason why so deep a gulf now divides the minority, which finds in art both inspiration and nurture, from the general public, which is unconscious of exercising the æsthetic faculty every time it looks at a motor-car. Widespread education in the elements of architecture is the means by which this gulf can be bridged. Even literature, so long established as the basis of culture in our schools and colleges, is now in the melting-pot. Architectural principles, which teach the simpler truths about matter and form, structure and ornament, proportion and beauty, can offer a sheet-anchor to youthful minds in our age of perplexing transition. And if this age excels, as some of us believe, in the public spirit which seeks the welfare of whole communities, what study could be more suggestive than that of the mistress art, evolved from the very nature of society, as Mr. Gibberd's pages prove, and ever greatest when its motives are least selfish?



Left, the Promenade in St. James's Park, 1790. Right, a unit of the fleet used to prevent England becoming part of the Napoleonic Empire. From "The Architecture of England."

JUNIOR AND INFANTS' SCHOOL, OLDBURY



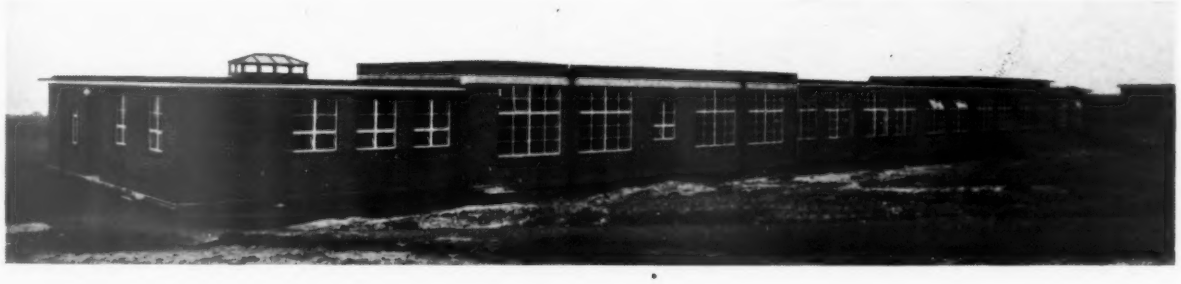
DESIGNED BY GEORGE RANDLE AND SON

PROBLEM—*Infants' and Junior School in the Warley area of Oldbury. The infants' department includes a nursery class-room and reception class-room, leading from which are a toy store and lavatory accommodation. The Education Committee desired that cloak-rooms should adjoin every class-room. A serving hatch was required between the milk kitchen and the assembly hall in each department.*

SITE—*An area of 13 acres, adjoining the County High School grounds. The site falls sharply from Bristnall Hall Road, and levelling was necessary to avoid steps in the buildings. The schools were planned to follow the contours. From the corridor side of each department a view is obtained over the surrounding country. The building occupies a very exposed position. For this reason the verandahs are enclosed with windows, large portions of which are made to open.*

CONSTRUCTION—*Brick walls with 2-in. cavities; wood-framed flat roofs with overhanging eaves. External walls finished with Oldbury rustic facing bricks and artificial stone dressings. Internally the rooms are finished with hard plaster. Cloak-rooms and lavatories have glazed brick dadoes, and the latrines white glazed bricks to ceiling height. Floors generally are concrete, laid with beech wood blocks; assembly hall in Infants' school, joists and beech strip flooring; corridors, cloak-rooms, etc., red granolithic. Large steel windows, all sections of which open. The windows on the corridor side are of wood, and clerestory windows give cross ventilation.*

Top, general view from south-east; centre, Infants' school, corridor side; below, Junior boys' school, south-east front.



JUNIOR AND INFANTS' SCHOOL, OLDBURY

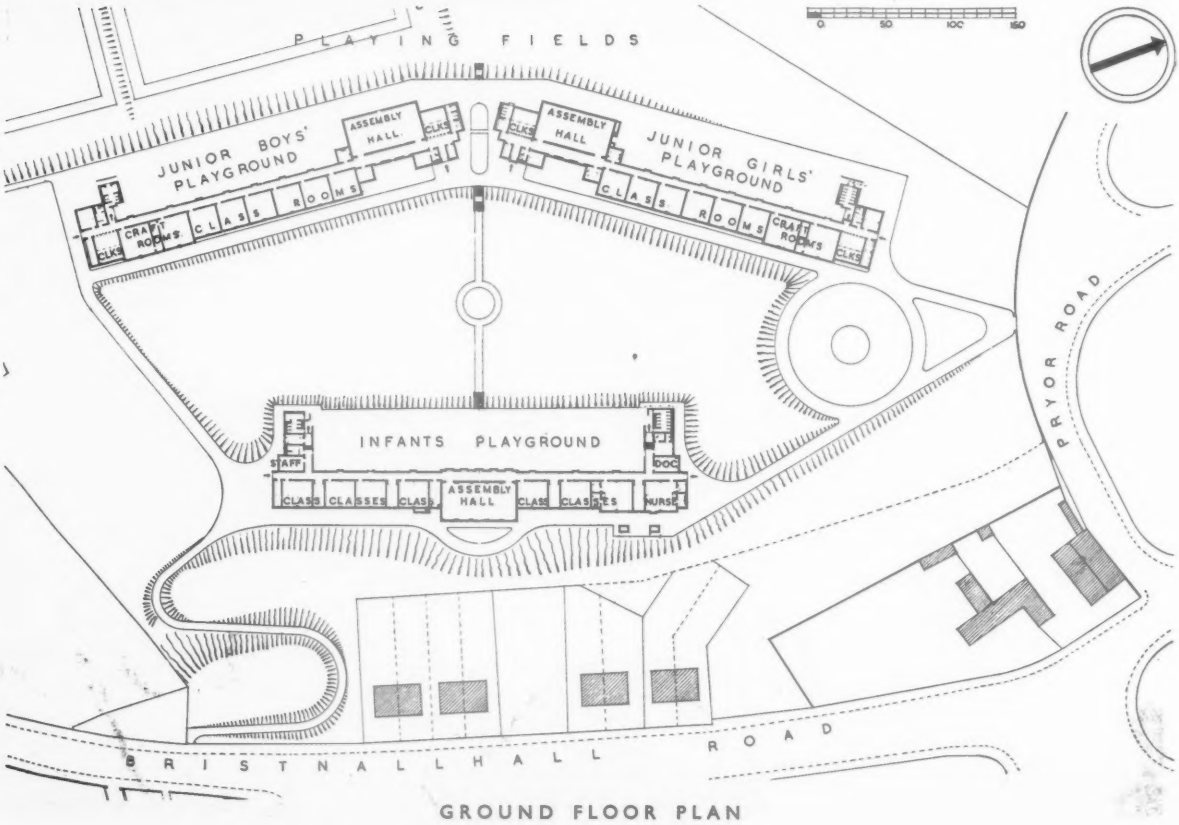
DESIGNED BY GEORGE RANDLE AND SON

INTERNAL FINISH—*Flat oil painted walls with enamelled dadoes; woodwork and metalwork in enamel finish paint. Each room has its own colour scheme. There are fibrous plaster cornices and beams in all three assembly halls. In the Junior school built-in cupboards are fitted in all the rooms.*

SERVICES—*Heating is by means of low-pressure hot water, the boilers being fitted with automatic stokers and electric thermostats. Warm water is supplied to all lavatory basins and washing troughs, the water temperature being controlled by mixing valves.*

The general contractors were William Jackson (Langley Green) Ltd. For list of sub-contractors, see page 958.

Top, left, junior boys' assembly hall; left, Junior boys' craft room; above, Infants' reception classroom.



GROUND FLOOR PLAN

TRADE NOTES

[*By PHILIP SCHOLBERG*]

Early Lighting Efforts

EDISWANS are at the moment holding a very jolly little exhibition at their Charing Cross Road showrooms, for they have been collecting, over a long period of years, examples of early electric lamps dating back to the first electric lamp which was shown by Joseph Swan before the Newcastle-upon-Tyne Chemical Society in 1878. To anyone seriously interested in electric lighting the exhibition is really important, for there are examples of lamps which can be seen nowhere else in the world, and many of them should doubtless be in the Science Museum rather than in a semi-private collection of this kind. To the casual visitor, however, the early lamps are most interesting, particularly when one discovers that the present bayonet cap fitting was evolved at a comparatively early date. Before this, the platinum wires were brought out through the base of the lamp, and made into small loops which hooked over spring fittings in the holder, a clumsy but apparently quite effective arrangement.

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Electric lighting, of course, started long before the filament lamp, for the carbon arc had been known for many years. The light given by it, however, was too expensive and also too intense, while the carbon pencils burnt away and arrangements had to be made for feeding in the rods so that the gap at the arc remained constant, a job which was simple enough at a place like the Gaiety Theatre, but no good for the private house. It had long been realised that a thin strip or filament of carbon could be heated to incandescence by the passage of an electric current, but the problem was to prevent the filament from burning away, to make it fine enough to glow brightly and at the same time strong enough to withstand rough treatment. In 1860, Joseph Swan had "established the fact that thin carbon conductors of almost any form and size, and of a character suitable for producing light by incandescence" could be made from paper buried in charcoal and carbonised by prolonged heating at high temperature. Placed in a glass bulb exhausted of air such strips might become electric lamps, though this could not be done until a better vacuum could be obtained with improvements in the methods of extracting the air. This led to the lamp of 1878. Meanwhile, Edison had been investigating the same problem in America, and had arrived at roughly the same solution. As one would expect, there was a certain amount of nittering about patents, but the two rival firms finally merged in the Ediswan Company. As the technique of glass blowing developed, more and more fantastic designs were produced, bulbs in peculiar shapes, bulbs made striped in glasses of different colours, the climax possibly being reached in an effort at the time of the Diamond Jubilee with a lamp blown to represent the Queen. There is a photograph of it at the head of these notes, slightly touched up, but it gives a not unfair impression of the actual thing, the pip at the top of her Majesty's head giving a slightly Oriental look which is doubtless no more than an expression of her recently acquired title of Empress of India.

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The other illustration which ought to have appeared on this page has unfortunately been snatched away and used as the frontispiece of this issue. I would beg you to turn back and look at it once more. It is taken from a facsimile reprint of the 1883 catalogue of the Swan United Electric Light Company, and shows Sir W. G. Armstrong sitting in the library at Cragside, an essay in Scotch Baronial built for him by Norman Shaw. The frosted glass globe contained four lamps of 20 candle power each, and it is interesting to see how simple fittings were kept in the early days before manufacturers started thinking about art. After years of bogus chandeliers we are now at last getting back to this sort of thing. Sir William's library measured 33 ft. by 22 ft., had four other lamps of the same size, placed upon "vases which were previously used as stands for duplex kerosene lamps. These vases, being enamel on copper, are themselves conductors, and serve for carrying the return current from the incandescent carbon to a metallic base in connection with the main return wire. The entering current is brought by a branch wire to a small insulated mercury cup in the centre of the base, and is carried forward to the lamp by a piece of insulated wire which passes through a hole in the bottom of the vase, and thence through the interior to the lamp on the top. The protruding of this wire is naked, and dips into the mercury cup when the vase is set down. Thus, the lamp may be extinguished and relighted at pleasure merely by removing the vase from its seat or setting it down again." Thus, Sir William, in a letter to the *Engineer* in 1881. This method of controlling the light seems extraordinarily dangerous by modern standards, but presumably the voltage was fairly low in those days, or maybe the enamel skin on the vases was a good enough insulator to prevent people getting shocks when they were moving the lamps from place to place. Sir William was, one gathers, very pleased with his installation, and preferred Mr. Swan's lamps to the electric arc, for they "cast no ghastly hue on the countenance, and show everything in its true colours." I do not know what Sir William would have thought of the present mercury vapour lamps.

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The cost of electric lighting seems to have been rather high. Sir William, since he used water power for his light, gives no figures, but Mr. Octavius E. Coope, writing to the *Times*, discusses the relative costs of electricity and gas, and quotes figures for Berechurch Hall, a large residence about three miles from Colchester. "Estimate for gas plant, buildings and erection, £740; gas main to house, £75; laying pipes in house, £200; cutting and making good again, £50; chandeliers and brackets, etc., £268 18s.—total £1,333 18s. Cost of electric light: Four dynamo machines £405; 220 Swan lamps, £55; 200 sockets

for same, £10 ; cable, wire, switches and cut outs, £66 4s. ; cutting and making good, walls and floors and incidental work, £60 ; engine and boiler, extra flywheel and belting, £300 6s. ; counter shafting, £25 ; foundations to engine and flooring, £40 ; erection, laying wires, etc., and carriage, £90 ; buildings, £150 ; chandeliers and brackets, etc., £268 18s.—total, £1,470 8s." Mr. Coope then went on to analyse the annual cost of running his plant, which came to £232 15s. 1d., including £78 for "engine driver at 30s. per week." Gas, he assumed, would have cost "at least £400 a year to produce, so this would show an annual saving of £167 4s. 11d. to me by using electricity." The costs are somewhat high by present day standards, but lamps cost anything from 5s. to 7s. 6d., the estimate for an installation of 50 lamps coming out at £159 5s., including £105 for a dynamo electric machine, but not including the cost of any prime mover to drive it.

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The catalogue concludes with the usual snob appeal list of users. Mr. Peter Jones, Draper, King's Road, Chelsea, is presumably the one we still know to-day, and Mr. Maggs may be the bookbuyer, but who are Mr. E. Wizzell and Dr. Lemon? Brief biographies might be included for the benefit of the present generation.

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It may be thought that an unreasonable amount of space has been devoted to a somewhat academic subject, but one seldom discovers such a perfect period specimen as this catalogue, nor does every firm take the trouble to preserve early examples of its work. Messrs. Ediswan start with the advantage that they were in at the beginning, and that it is therefore comparatively easy for them to make a collection such as this, but they have treated the subject with the seriousness it deserves, and it is worth taking quite a lot of pains to go and see their show. If you speak politely to someone in authority it should not be impossible to get a copy of this early catalogue as well. There are several other amusing illustrations in it as well as the ones reproduced in this JOURNAL.—(*The Edison Swan Electric Co., Ltd., 155 Charing Cross Road, London, W.C.2.*)

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BUILDING INDUSTRIES NATIONAL COUNCIL

The half-yearly meeting of the Building Industries National Council was held recently at the R.I.B.A. Mr. John M. Theobald, PP.S.I., presided.

In opening the proceedings the president formally notified the Council that it was now in occupation of its new and greatly improved offices at 85 Gloucester Place, W.1.

The report of the General Purposes Committee, which dealt in detail with the administration of the Council, was presented by the chairman, Mr. Sydney Tatchell. The report also dealt with such matters of importance as the effect on the industry of risks of war damage to property, and the effective dissemination throughout the industry of up-to-date technical information, and the findings of current technical research. A report was submitted to the Council by Mr. A. Strachan Bennion, the honorary treasurer, setting out the decisions to date of the committee appointed by the Council to examine the position with regard to all aspects of research and information.

In dealing with the report of the Special Committee for Public Relations, the chairman, Mr. Sydney Tatchell, dealt fully with the work of that committee and particularly of the effect on the industry of the trend of Government expenditure both on rearmament and on air raid precautions, and the general concern of the industry as to the structural aspect of air raid precautions proposals. It hoped to produce in the near future a brief but comprehensive report on the part the industry can play on this important subject.

The chairman in this respect emphasized the importance to the industry of a balance as between public and private expenditure being maintained. At the present juncture the committee hoped to concentrate public opinion to an increasing extent on the importance of maintaining total investment expenditure generally and of regarding public expenditure as complementary to private expenditure, and not in any way as a substitute. Only by such an economically balanced expenditure could the activity of the industry be maintained.

Mr. E. C. Harris, vice-chairman, presenting the report of the Advisory Committee on Building Acts and Byelaws, outlined the action the Council proposed to take in conjunction with the London County Council on the matter of the administration of its building byelaws, particularly in the matter of protection from fire. Mr. C. Roland Woods, in referring to this matter, emphasized the importance of keeping the administration of the byelaws in consonance with the improving technique of the industry, and of minimizing delays in obtaining consents. Mr. C. H. Bedells, PP.S.I., and Mr. John Dower, A.R.I.B.A., also referred to the practical importance to the industry of the detailed administration of its planning by the London County Council, and to the increasing need for public authorities generally to regard their administration as complementary to the operation of the building industry, and not as a restrictive influence.

THE BUILDINGS ILLUSTRATED

NEW GYMNASIUM, LIVERPOOL UNIVERSITY (pages 940-941). Architects: Professor L. B. Budden and J. Ernest Marshall. The general contractors were W. Moss and Sons, Ltd., who were also responsible for the demolition, excavation, foundations, dampcourses, reinforced concrete, stone and joinery. Subcontractors and suppliers included: Penmaenmawr and Trinidad Lake Asphalte Co., Ltd., asphalt; Ravenhead Brick Co., Ltd., bricks; Craig-Lelo Quarry Co., Ltd., artificial stone; Frank White, Ltd., structural steel; Rea Metal Casements (1932), Ltd., glass and metal windows; Bartle-Simmonds & Co., oak flooring; D. Peters, central heating and ventilation; C. E. Price, electric wiring; R. W. Haughton & Co., Ltd., plumbing; Rowe Bros. & Co., Ltd., sanitary fittings; Quiggin Bros., Ltd., door furniture; T. Southworth and Sons, Ltd., plaster; George Lowe and Sons, Ltd., metalwork; Niels Larsen and Son, Ltd., gymnastic equipment.

MOAT FARM JUNIOR AND INFANTS' SCHOOL, OLDBURY (pages 955-956). Architects: George Randall and Son. The general contractors were William Jackson (Langley Green), Ltd., and the sub-contractors and suppliers included: Blue Brick (Oldbury), Ltd., fletton common bricks and rustic facings; Gloucester Stone Co., Ltd., artificial stone; D Anderson, Macasfelt special roofings; Hollis Bros & Co., Ltd., woodblock flooring; Lyne and Sons, Ltd, granolithic patent flooring; W White, Hygeian rock; Jones and Attwood, Ltd, central heating; Griffin Foundry Co., Ltd., grates; Oldbury Gas Dept., gas fixtures and gas fitting; Beeston Boiler Co., Ltd., boilers; Etna Lighting and Heating Co., Ltd., electric wiring and bells; Best and Lloyd, Ltd., and General Electric Co., Ltd., electric light fixtures; Stourbridge Glazed Brick Co., Ltd., sanitary fittings; Lockerbie and Wilkinson (Birmingham), Ltd., door furniture, window furniture and cloakroom fittings; Standard Metal Window Co., casements; Allied Guild, Ltd., decorative plaster; Hill and Smith, Ltd., fencing and metalwork; Thomas Howse, Ltd., paint; Kingfisher, Ltd., furniture; Smith and Dodds, Ltd., playing fields.

THE WEEK'S BUILDING NEWS

LONDON

BATTERSEA. *Dwellings.* The L.C.C. is to erect blocks of dwellings on the Hibbert Street area, Battersea, at a cost of £160,861, to plans prepared by Sir John Burnet, Tait and Lorne.

CROYDON. *Maisonettes.* The Croydon Corporation is to purchase a site in Lower Addiscombe Road for the erection of 40 two-bedroom maisonettes.

ENFIELD. *Flats, etc.* Plans passed by the Enfield U.D.C.: 40 flats, off Myddelton Avenue, Mr. Geo. Newman; 55 houses, Oatlands Road, etc., Swannell and Sly.

SOUTHGATE. *Flats, etc.* Plans passed by the Southgate Corporation: 25 houses, Oakwood Crescent, Mr. G. Turner; 32 flats and two houses, Bramley Road, Mr. H. A. Nash; 32 flats, rear of Orchid Road, Mr. C. S. Brown.

STEPNEY. *Redevelopment.* The L.C.C. is to clear and redevelop the Salander Street area, Stepney, at a cost of £105,000.

TOLLINGTON PARK. *Rebuilding.* The L.C.C. has approved plans for rebuilding the Tollington Park Central School, at a cost of £39,160.

WOOLWICH. *Baths.* The Woolwich B.C. is to erect baths at Eltham at a cost of £74,032.

PROVINCES

BASINGSTOKE. *Schools.* The Hampshire Education Committee is to convert Fairfields Senior Boys' School, Basingstoke, into a senior girls' school, at a cost of £8,625.

BLACKPOOL. *Gasworks.* The Blackpool Corporation has obtained sanction to borrow £369,660 for the construction of new gasworks at Manton.

CHATHAM. *School.* The Chatham Education Committee is to erect a senior school in Ordnance Street at a cost of £30,266.

CHESTERFIELD. *Houses.* The Chesterfield R.D.C. is to erect 85 houses at Gnosborough at a cost of £33,700.

EAST RETFORD. *Houses.* The East Retford R.D.C. is to erect 67 houses in various parishes at a cost of £25,854.

ECCLES. *Houses.* Plans passed by the Eccles Corporation: 10 houses, Woodford Avenue, for Messrs. J. Chapman and Son, Ltd.; 84 houses, Guildford Road, for Mr. S. Crompton.

ESTON. *Houses.* The Eston U.D.C. is to erect further houses on the Grangetown estate at a cost of £14,000.

ETON. *Houses.* The Eton R.D.C. is to erect 72 houses at Denham at a cost of £24,264.

HAVANT. *School.* The Hampshire Education Committee has approved plans for the erection of a senior school at Havant.

HYDE. *School.* The Hyde Education Committee is to erect a senior school and enlarge the Greenfield school, at a cost of £33,536.

MIDDLESEX. *Hospital Extensions.* The Middlesex C.C. is to equip extensions at Central Middlesex County Hospital, at a cost of £7,750.

PETERSFIELD. *School.* The Hampshire Education Committee is to provide a senior school for 480 at the Causeway, Petersfield.

WARMINSTER. *Houses.* The Warminster U.D.C. is to erect 80 houses on various sites at a cost of £28,900.

PRICES

On the following pages appear *(a)* Prices for Measured Work, Part II; *(b)* Prices for Approximate Estimates.

★ *ANSWERS TO QUESTIONS*

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

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

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

   B.—Prices for Approximate Estimates.

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

PART 4

CURRENT PRICES FOR MEASURED WORK—II

BY DAVIS AND BELFIELD

JOINER

Deal Flooring

		1″	1¼″
Plain edge flooring in batten widths ..	per square	38/–	46/5
Ditto tongued and grooved ditto ..	per square	41/9	50/6
T. & G. B.C. Pine rift flooring in narrow widths	per square	50/–	—

Wood Block Flooring, laid herringbone, 100 yards and up

D.G. and T.G. kiln dried, 2 block border, laid in hot mastic composition on cement screed, including 2 feet run of straight cutting per yard super, and wax polishing at time of laying.

		1″ nominal	1¼″ nominal
✱Burma teak	per yard super	12/4	16/10
✱Canadian Maple	per yard super	10/6	12/1
✱25–30 per cent. quart Austrian Oak	per yard super	12/1	14/11
✱Plain American Oak (no selection made for sap) ..	per yard super	11/6	—
✱Gurjun	per yard super	12/2	14/9
Pitch Pine (50% rift sawn)	per yard super	11/10	13/8
Ditto (100% ditto)	per yard super	13/1½	15/6
✱British Columbian Pine ..	per yard super	8/5	9/2
✱Deal, 100 per cent. rift sawn	per yard super	9/5	10/9
✱Jarrah	per yard super	11/–	15/9
Additional straight cutting..	5½d. per foot run		

JOINER—(*continued*)

Secret Nailed Tongued and Grooved Strip Flooring, fully Desiccated, including Polishing

		1″ nominal £ s. d.	1¼″ nominal £ s. d.
Austrian Wainscot Oak ..	per square	8 18 6	10 12 7
Plain Japanese Oak ..	per square	7 10 8	9 2 2
Plain American Oak ..	per square	7 7 0	9 3 9
Pitch Pine..	per square	7 0 6	8 15 7
British Columbian Pine ..	per square	4 14 6	5 7 7
Canadian Maple	per square	6 19 1	8 10 7
Burma Teak	per square	8 18 6	10 17 4
English Oak	per square	10 4 9	12 15 11
Gurjun	per square	6 19 1	8 10 7
Jarrah	per square	6 13 10	8 6 5

Wall Linings

✱⅜″ Deal tongued and grooved V-jointed Matching in narrow widths	per square	31/6
¼″ (6 mm.) Birch (B) Plywood and fixing to walls	per square	35/7
3/16″ Asbestos cement sheets butt jointed	per foot super	–/3¾
½″ Fibre board and fixing to walls ..	per yard super	2/11
Deal battens as ground plugged to brickwork	per foot super	–/1½
1½″ × ⅜″ wrot and chamfered fillets ..	.. per foot run	–/1½
2″ × ½″ wrot and moulded ditto	per foot run	–/1¾

✱ **Items marked thus have fallen since November 3.**

CURRENT PRICES

BY DAVIS AND BELFIELD

JOINER, IRONMONGER AND STEEL AND IRONWORKER

JOINER—(*continued*)

Skirtings

	Deal	Austrian Oak
1″ chamfered or moulded 4″ high, fixed to and including grounds and backings planted on per foot run	–/3½	–/7¾
Add for plugging to brickwork .. per foot run	–/0½	–/0¾

Fitted ends on hardwood price as 4″ of skirtings, mitres as 6″.
Fitted ends, etc., on deal skirting included in price per foot run.

Casements and Fanlights

	1½″	2″
Deal moulded sashes divided into squares with glazing bars .. .. ..per foot super	1/4½	1/5½
Add for hanging casements (butts measured separately) .. .. each	1/9	2/–

Cased Frames and Sashes

Deal cased sashed frame, including 2″ double hung sashes, with 6″×3″ Oak cill and brass axle pulleys, sash line and weights, average 15 feet super .. per foot super 3/9

Doors in Deal

	¾″	1″	1¼″
Matchboarded, ledged and braced door per foot super	1/–	1/2	1/4
	1½″	1¾″	2″
Framed, ledged and braced door, filled in with matchboarding .. per foot super	1/5	1/9	1/10
Ditto garage doors .. .. per foot super			1/7
			4-panel
1⅛″ square framed, both sides .. .. per foot super			1/7
2″ ditto .. .. per foot super			1/9
1¼″ ditto bead butt panels one side, but square the other per foot super			1/9
2″ ditto, ditto .. .. per foot super			1/11
1¼″ moulded both sides .. .. .. per foot super			1/10
2″ ditto .. .. per foot super			2/–
For fixing only p.c. doors allow .. .. per foot super			–/2½

Hardwood doors two-and-a-half times as much as deal.

Deal glazing beads, mitred and bradded per foot run	–/1½
Ditto and fixed with brass cups and screws per foot run	–/3

Window and Door Linings

	1″	1¼″	1½″
Deal linings, 6″ wide, tongued at angles and planted on including backings per foot run	–/6½	–/7	–/8
Add for plugging to wall .. per foot run	–/0½	–/0½	–/0½
Add for rebating .. .. .. per foot run	–/0½	–/0½	–/0½
Add for ½″ × 2″ Deal stop planted on per foot run	–/1½	–/1½	–/1½
Deal window board 9″ wide, with rounded nosing, tongued at back and on and including bearers plugged to brickwork .. per foot run	–/10	–/11	1/1
¾″ Deal scotia mould .. .. per foot run		–/1½	
Oak linings 6″ wide tongued at angles and planted on including backings per foot run	1/2½	1/4½	1/7½
Add for plugging to brickwork .. per foot run	–/1	–/1	–/1
Add for rebating .. .. .. per foot run	–/1	–/1	–/1
Add for ½″ × 2″ Oak stop planted on per foot run	–/3½	–/3½	–/3½
Oak window board 9″ wide, with rounded nosing tongued at back and on and including bearers plugged to brickwork .. per foot run	1/10	2/1	
¾″ Oak scotia mould .. .. per foot run		–/3½	

Window and Door Frames

	Deal	Austrian Oak
4″ × 3″ door frames .. .. per foot run	–/10	2/0½
4″ × 3″ window frames .. .. per foot run	1/–	2/4½
4″ × 3″ transomes and mullions .. per foot run	1/3½	2/11½
6″ × 3″ door cill, sunk weathered twice throated and grooved for water bar (measured separately) per foot run	—	3/9
6″ × 3″ window ditto .. .. per foot run	—	3/1
Add or deduct for variation in sectional area per square inch .. .. .. per foot run	–/0½	–/1½
Add for each labour, for chamfer, bead or rebate, etc. .. .. per foot run	–/0½	–/1
Add for each moulding .. .. per foot run	–/0¾	–/1½

Architraves

	Deal	Oak
1″ × 3″ chamfered or moulded architraves, including mitres on softwood, planted on per foot run	–/3	–/7¼

Mitred angles on oak price as 6″ of architrave.

Add for plugging to brickwork .. per foot run	–/0½	–/0¾
Add for narrow splayed grounds .. per foot run	–/1½	–/1½

JOINER—(*continued*)

Shelving

	Deal	Oak
Slat shelving of 1″ × 2″ spaced ¾″ apart per foot super	–/9	—
1″ shelving .. .. .. per foot super	–/10	2/2
1¼″ ditto .. .. per foot super	–/11½	2/6
1″ cross-tongued shelving .. per foot super	1/–	2/6
1¼″ ditto .. .. per foot super	1/1½	2/10
1″ × 2″ chamfered bearers planted on per foot run	–/2½	–/5½
Add if bearers plugged to brickwork per foot run	–/0½	–/0¾

Teak Draining Boards and Twice Oiling

1¼″ Moulmein cross-tongued fluted draining board fixed to slight falls .. .. per foot super	3/9
½″ × 2″ rounded rim bedded in white lead and screwed to edge of draining board .. .. .. per foot run	–/5
½″ × 4″ rounded skirting fillet ditto .. per foot run	–/9

Staircases

	Deal	Oak
1¼″ treads and 1″ risers .. .. per foot super	2/–	5/–
2″ strings, fixed .. .. .. per foot run	1/10	4/7
Housing treads and risers to strings .. each	–/9	1/6
3″ × 2½″ French polished moulded handrail per foot run	—	2/6
1½″ × 1½″ square balusters 2′ 6″ long .. each	–/10	2/–
4″ × 4″ Newels with chamfered edges and fixing per foot run	1/4	3/4

IRONMONGER

Fixing only

4″ Butt hinges to softwood .. .. .. per pair	1/–
4″ ditto to hardwood .. .. per pair	1/4
16″ T. hinges to softwood .. .. .. per pair	1/6
48″ Collinges patent gate hinges to softwood .. per pair	7/6

	Softwood	Hardwood
6″ Cabin hooks .. .. .. each	–/7½	–/10
Hat and coat hooks .. .. .. each	–/3	–/4
Cupboard knobs .. .. .. each	–/3	–/4
Night latches .. .. .. each	1/6	2/–
Thumb latches .. .. .. each	1/6	2/–
Letter plate and knocker, including perforation in door.. .. .. each	2/6	3/4
Barrel or tower bolts.. .. .. each	–/10	1/1
Flush bolts .. .. each	1/6	2/–
Rim locks and furniture .. .. each	2/–	2/8
Mortice ditto .. .. each	3/–	4/–
Rebated ditto.. .. .. .. each	3/6	4/8
Grip handles .. .. each	–/6	–/8
Cupboard locks .. .. .. each	1/–	1/4
Spring catches .. .. .. each	–/10½	1/1½
Casement fastener .. .. .. each	1/–	1/4
Ditto stays .. .. each	–/10	1/1
Sash fastener .. .. each	–/8	–/11

STEEL AND IRONWORKER

(For Rainwater Goods—*see* "Plumber.")

Steelwork

	£	s.	d.
Basis for plain rolled steel joists .. .. per ton	16	6	6

Fabricated Steelwork

	£	s.	d.
Joists cut and fitted .. .. per ton	20	10	6
Stanchions, ordinary sections with riveted caps and bases .. .. per ton	23	10	6
Stanchions, compound .. .. .. per ton	25	11	6
Plate girders .. .. per ton	28	9	6
Framed roof trusses, 25′ 0″ span .. .. per ton	30	4	6
Ditto ditto 60′ 0″ span .. .. per ton	28	5	0

The above prices are ex mills ordered well in advance of delivery.
Prices ex London stocks are considerably higher, and definite quotations should be obtained.

Wrot Iron Work

Simple balusters and handrail fixed (excluding mortices, etc.) .. .. per cwt.	56/–
Bolts and nuts fitted .. .. per cwt.	45/–

Galvanized Corrugated Sheeting

	20 B.G.	22 B.G
Sheeting in 3″ corrugations and fixing on wood framing with screws and galvanized embossed curved washers including laps .. per square	56/–	49/–
Ditto fixed to steel framing .. per square	63/4	56/8

CURRENT PRICES

BY DAVIS AND BELFIELD

PLASTERER, EXTERNAL AND INTERNAL PLUMBER

PLASTERER

Lime and Sirapite Plastering

	Per yard super	In narrow widths per foot super
Expanded metal lathing	1/8	–/3
1″ × $\frac{3}{16}$″ sawn laths	–/9	–/1½
Render and set in lime and hair	1/8	–/3¼
Render, float and set in lime and hair	2/–	–/3¾
Plaster, float and set ditto on lathing (measured separately)	2/1½	–/4
Render and set with Sirapite	1/9½	–/3½
Plaster, float and set ditto on lathing (measured separately)	2/3	–/4
Skimming coat Sirapite	1/5½	
⅜″ thick plaster board fixed including covering joints with scrim cloth	2/–	

Keenes

	Per yard super	In narrow widths per foot super
Cement plain face on and including a backing of Portland cement and sand	2/6	–/5

Mouldings and Labours

		Lime and Sirapite	Keenes
Plain cornices and mouldings 6″ girth	per foot run	–/9½	–/11
Labour arris, quirk or throat	per foot run	–/1½	–/1½
Ditto rounded angle	per foot run	–/2	–/2
Ditto staff bead	per foot run	—	–/7½

Mitres price as 12″ of moulding, stopped ends as 6″, and rounded angles as 18″.

Portland Cement and Sand (1 : 3)

		½″	¾″
Screeds to floors for wood or tiles	per yard super	1/2½	1/4
Screeds for tiling, etc., on walls	per yard super	1/4	1/6
Renderings to walls—one coat float finish	per yard super	1/6	1/8
Plainface	per yard super	1/10	2/–

Coloured Cement Plainface

Cullamix No. 2 or 3 cream, on and including water repellent cement and sand backing	per yard super	3/10
Snowcrete mixture on and including ditto	per yard super	3/10
Snowcrete and white silica sand on and including ditto	per yard super	3/6

For raking out joints of brickwork, keyed bricks or hacking face of concrete, to form key for plastering, see "Bricklayer."

Wall Tiles, Commercial Quality

6″ × 6″ × ⅜″ ivory or white	per yard super	16/–
Extra for rounded edge tiles	per yard run	1/5
6″ × 6″ × ⅜″ coloured enamel bright glazed	per yard super	21/3
Extra for rounded edge tiles	per yard run	–/7¾
6″ × 6″ × ⅜″ eggshell gloss enamelled	per yard super	22/1
Extra for rounded edge tiles	per yard run	–/6¾

EXTERNAL PLUMBER

Lead

		Flats	Gutters, Flashings, etc.	Stepped Flashings	Soakers cut to size
● Milled sheet lead and labour	per cwt.	41/2	42/3	43/4½	36/–
Bedding edges in white lead	per foot run				–/2
Lead wedgings to flashings	per foot run				–/1½
Ditto to stepped flashings	per foot run				–/2
Dressing 6-lb. lead over glass and glazing bars	per foot run				–/3½
Copper nailing	per foot run				–/1½
Close ditto	per foot run				–/2
Bossed ends to rolls	each				–/7½
Extra labour dressing through shoots and into rainwater heads	each				3/–
Ditto to cesspools, including extra solder	each				5/3

Cast Iron Rainwater Goods

Rainwater Pipes fixed to brickwork.

		3″	4″
Round pipes	per foot run	1/5½	1/9
Extra for bends	each	2/2	2/10
Ditto 6″ offset	each	2/4	2/10
Ditto single branches	each	2/7	3/1
Ditto shoes	each	1/7	2/2
		3½″ × 3½″	4″ × 3″
Square and rectangular pipes	per foot run	3/2	2/10
Extra for elbows	each	4/11	3/6
Ditto single branches	each	5/9	5/4
Ditto shoes	each	4/8	4/3

EXTERNAL PLUMBER—(*continued*)

Gutters fixed to fascia.

		4″	5″	6″
Half-round gutters	per foot run	1/–	1/2½	1/8½
Extra for angles	each	1/9	2/–	2/3
Ditto nozzles	each	1/7	1/10	2/5
Ditto stop ends	each	1/–	1/3	1/4½
Ogee gutters	per foot run	1/1½	1/4	1/9½
Extra for angles	each	1/9½	2/3	2/4
Ditto nozzles	each	1/8	2/3	2/8
Ditto stop ends	each	1/1½	1/4½	1/7½

INTERNAL PLUMBER

Lead Pipes

Service.

		½″	¾″	1″	1¼″
● Pipes laid in trenches	per foot run	–/11	1/3	1/9¾	2/5¾
Add if fixed on walls	per foot run	–/2	–/3	–/4	–/5
Ditto if in short lengths	per foot run	–/1	–/1	–/1½	–/2
		1½″	2″	2½″	3″
● Pipes laid in trenches	per foot run	3/1½	4/2½	—	—
Add if fixed on walls	per foot run	–/6	–/8	—	—
Ditto if in short lengths	per foot run	–/3	–/4	—	—

Distributing.

		½″	¾″	1″	1¼″
● Cold water pipes fixed to walls	per foot run	–/11	1/3½	1/8¾	2/3¾
Add if in short lengths	per foot run	–/1	–/1	–/1½	–/2
		1½″	2″	2½″	3″
● Cold water pipes fixed to walls	per foot run	2/10½	3/8¾	—	—
Add if in short lengths	per foot run	–/3	–/4	—	—

Flushing and Warning.

		½″	¾″	1″	1¼″
● Waste and overflow pipes fixed in short lengths	per foot run	–/9	–/11¼	1/2½	1/5½
		1½″	2″	2½″	3″
● Waste and overflow pipes fixed in short lengths	per foot run	1/10¾	2/6½	—	—

Soil and Ventilating

		3½″	4″	4½″
● Pipes fixed, including lead tacks	per foot run	5/4½	5/11½	6/10½

	1½″	2″	2½″	3″	3½″	4″	4½″
Bends each	1/6	2/–	2/9	3/9	4/3	4/6	5/6
Soldered joints to fittings each	2/1½	½″ 2/4	¾″ 2/7	1″ 2/9	1¼″ 3/–	1½″ 3/5	2″
Soldered branch joints (price as largest branch) each	2/3½	½″ 2/6	¾″ 2/9	1″ 3/–	1¼″ 3/3	1½″	
Soldered branch joints (price as largest branch) each	3/8	2″ 4/–	2½″ 4/6	3″ 5/–	4″ 6/6	4½″	

Wrap small pipes with hair felt per foot run –/6

Drawn Lead Traps

	1¼″	1¼″ 3″ deep seal	1½″	1½″ 3″ deep seal	2″	2″ 3″ deep seal
P. Traps 6 lb. with cleaning eye and two soldered joints each	7/1	7/7½	8/3	8/9½	9/8	10/2½
S. ditto each	7/6	8/0½	8/8	9/2½	10/4	10/10½

Brasswork (*Best Quality*)

	½″	¾″	1″
● Brass screwdown stop cocks including two soldered joints each	7/10	10/4	13/11
● Ditto, including two red lead joints for iron each	6/–	8/5	11/10
● Ditto, including one soldered and one red lead joint each	6/4	8/7	11/11
● High pressure Portsmouth pattern ball valve with flynut and union and one soldered joint each	8/7	11/2	19/5
● Ditto, including red lead joint for iron each	6/6	9/1	16/7

	2″	4″
Brass thimble and soldered and cement joints each	5/–	● 9/6
Ditto, with solder and caulked lead joints each	6/–	● 11/3

Fixing Only (*Connections to Pipes measured separately*)

24″ × 18″ × 6″ sinks including taps, etc., and pair of brackets cut and pinned to brickwork each	6/–
24″ × 18″ lavatory basins ditto each	6/6
W.C. suite comprising pan and trap, seat, W.W.P. and brackets each	10/6
Baths, including taps, etc., and setting in position each	10/6

● **Items marked thus have risen since November 3rd.**

CURRENT PRICES

BY DAVIS AND BELFIELD

INTERNAL PLUMBER, GLAZIER AND PAINTER

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Galvanized Steam Quality Steel Tubes and Fittings

Pipes up to and including 1¼″ include short running lengths, sockets, connectors, elbows, bends, fire bends; Tees and Diminishing Pieces enumerated.

Distributing.

	½″	¾″	1″	1¼″	1½″	2″
Pipes fixed to walls per foot run	–/10	1/–	1/4	1/10	2/4	3/–
Ditto in short lengths, fittings, etc., measured separately per foot run	–/10	1/–	1/4	1/10	2/4	3/–
Extra for						
Firebends .. .. each	–/4	–/6	–/9	1/3	1/6	2/–
Bends .. .. each	1/2	1/5	1/9	2/6	3/1	4/9
Round elbows .. each	1/5	1/8	2/–	2/4	2/10	4/4
Square ditto .. each	1/5	1/8	1/11	2/3	2/8	4/1
Tees .. .. each	1/6	1/10	2/1	2/9	3/1	4/8
Crosses .. .. each	2/9	3/2	3/10	5/–	6/–	9/1
Diminishing pieces each	–/10	–/11	1/2	1/6	1/11	2/8
Caps .. .. each	–/7	–/8	–/10	1/–	1/5	1/9
Plugs .. .. each	–/6	–/6	–/8	–/11	1/4	1/8

Cast Iron Waste, Soil and Vent Pipes

	2″	3″	4″	5″	6″
L.C.C. pipes in 6′ 0″ lengths fixed to brickwork .. .. per foot run	1/10	2/–	2/5	4/5	5/4
Extra for bends .. .. each	5/3	6/1	7/10	11/–	14/9
Ditto single branches .. each	6/5	8/2	11/–	17/6	23/6
Ditto swannecks 6″ projection each	6/1	8/9	11/1	16/1	22/–
Extra for access door or any fitting .. .. .. each	6/9	6/9	7/3	8/6	8/6

Zincworker

	13 G.	14 G.	15 G.	16 G.
Rolled sheet zinc on flats per foot super..	–/7¾	–/8½	–/9½	–/10
Ditto in gutters, cover flashings, etc. per foot super	–/8½	–/9	–/10	–/10½
Ditto in stepped flashings per foot super	–/10½	–/11	1/–	1/0½
Labour and risk dressing over glass per foot run	–/4¼	–/4½	–/4½	–/4½
Capped ends to rolls .. .. each	–/2¼	–/2¾	–/2¼	–/2¼
Extra labour to cesspools .. each	2/7½	2/7½	3/2	3/2

Copperworker

Distributing.

	½″	¾″	1″	1¼″	1½″	2″
Solid drawn copper tube fixed to walls per foot run	–/9	1/–	1/5½	1/10	2/3	3/3
Add if in short lengths per foot run	–/0¾	–/0¾	–/1	–/1½	–/2	–/2¼

Fittings for copper tubes

		½″	¾″	1″	1¼″	1½″	2″
Compression type							
Straight couplings ..	each	1/10	2/2	3/–	3/9	5/1	7/3
Obtuse elbows ..	,,	2/8	3/2	4/5	5/6	8/10	12/7
Tees	,,	3/1	3/6½	5/4	7/4½	11/3	15/7
Crosses	,,	4/1½	4/8	5/8½	8/–	13/2	18/–
Reducing coupling ..	,,	—	2/2	3/–	3/9	5/1	7/3
Bends	,,	2/5	2/10½	3/1	5/–	8/3	11/11
Brass stopcocks ..	,,	5/6	7/10	11/–	19/3	26/6	43/6
Capillary type							
Straight coupling ..	each	1/6	1/11	2/7	3/3	4/1	5/4½
45° Elbow	,,	2/4	2/11½	3/10½	4/11	6/10	9/7
Tees	,,	2/7	3/–	4/3	5/10	7/10	11/–
Crosses	,,	3/1	3/6	5/1½	6/10	9/8	13/5
Reducing coupling ..	,,	—	1/7	2/–	2/6	3/3	4/8
Bends	,,	2/8	3/2	4/3	5/7	8/1	10/11
Pillar tap connections	,,	1/11	2/6				

	24 G.	23 G.
Rolled sheet copper on flats .. per foot super	1/5½	1/7½
Ditto in gutters, cover flashings, etc. per foot super	1/6½	1/8½
Ditto in stepped flashings .. per foot super	2/1½	2/4½
Labour and risk dressing over glass per foot run	–/4½	–/4½
Capped ends to rolls .. .. .. each	–/3¼	–/3¼
Extra labour to cesspools .. .. .. each	3/8	3/8

GLAZIER

Sheet Glass (Ordinary Glazing Quality)

18 oz. clear sheet and glazing to wood, sprigged and with back and front putties, to all normal sizes not exceeding 60″ in length or 40″ wide .. .. per foot super	–/6½
24 oz. ditto .. .. per foot super	–/7¾
32 oz. ditto .. .. per foot super	–/11½

GLAZIER—(*continued*)

Obscured ground sheet glass, net extra to above prices per foot super	–/1¾
⅛″ figured rolled white glass and glazing to wood with beads (measured separately) .. per foot super	–/10½
Ditto, normal tints, ditto .. .. per foot super	1/2¾
Hammered double rolled cathedral white ditto per foot super	–/10
Ditto, normal tints, ditto .. .. per foot super	1/1¾
Add for glazing into metal frames (ordinary rebates) per foot super	–/1⅛
Ditto, metal sashes with ferroput .. per foot super	–/2¼
Ditto, solid metal casements and screw beads per foot super	–/2¼
Wash leather strip or similar material and bedding edge of glass .. .. per foot run	–/3¼

Glazing only thick drawn sheet glass, polished plate or wire polished plate for all normal sizes. (For prices of glass see materials section and add profit, say 10 per cent.) per foot super 6¼d.

PAINTER

Painting, Whitening and Distempering (on new Plastered Walls)

Twice distempering white .. .. per yard super	–/5
Ditto, in common colours .. .. per yard super	–/7
Add for stippling .. .. .. per yard super	–/2
Preparing and painting three coats of paint per yard super	1/9

Preparing and Painting Two Coats of Oil Colour on Ironwork after fixing

General surfaces .. .. .. per yard super	1/1½
Perforated landings and staircases both sides (one side measured) .. .. per yard super	2/6
Pipes, bars, balusters, etc., not exceeding 3″ girth per yard run	–/1¾
Metal Window Frames .. .. .. per yard run	–/2¾
Eaves gutters .. .. per yard run	–/7½
2″ Rainwater pipes .. .. per yard run	–/3
4″ ditto .. .. per yard run	–/6
Squares one side .. .. per dozen	1/9
Large ditto .. .. per dozen	2/3
Extra large ditto .. .. per dozen	3/–
Edges of casements .. .. each	–/3

Painting on New Woodwork

	Knot, prime, stop and paint three coats oil colour	Add or deduct for each coat more or less
General surfaces .. per yard super	2/–	–/6
Fascias and soffites per yard super	2/6	–/7½
Fillets, skirtings, etc., not exceeding 3″ girth .. .. per yard run	–/3	–/0¾
Ditto, not exceeding 6″ .. ,, ,, ,,	–/5½	–/1½
Ditto, not exceeding 9″ .. ,, ,, ,,	–/7	–/1¾
Ditto, not exceeding 12″ .. ,, ,, ,,	–/9	–/2
Squares one side .. .. per dozen	3/6	–/9
Large ditto .. .. .. ,, ,,	4/6	1/–
Extra large ditto .. .. ,, ,,	6/–	1/4
Edges of casements .. .. each	–/6	–/1½

Sundries

Twice creosoting woodwork .. .. per yard super	–/6
Twice limewhiting brickwork .. .. per yard super	–/4

	Sizing	Staining	Once Varnish
General surfaces .. per yard super	–/2	–/4½	–/6
Wax polishing .. .. per foot super			–/4½
Body in and French polish on hardwood surfaces per foot super			1/–

Writing

Plain letters or figures, two coats, 2″ to 12″ letters per dozen inches in height	1/10½
Ditto, shaded .. .. .. ,, ,, ,, ,, ,,	2/6
Plain gold, 2″ to 12″ letters .. ,, ,, ,, ,, ,,	2/6
Ditto, 12″ to 24″ .. .. ,, ,, ,, ,, ,,	3/9

Gilding

	Single Gold	Double Gold
Preparing and gilding in best oil gold per foot super	5/3	8/4
Ditto in matt or burnished gold per foot super	7/4	11/6

Paperhanging

Pasting and hanging only.

	On walls	On ceilings
Preparing new plastered walls for papering per piece (60 feet super)	1/4	1/5½
Plain lining paper .. ,, ,, ,, ,,	1/4	1/8
Common printed papers ,, ,, ,, ,,	2/–	2/6

APPROXIMATE ESTIMATES

ON this and the three following pages the JOURNAL's section of Approximate Estimates is published for the eighth time.

There is nothing revolutionary about the idea—its usefulness lies in its efficiency as a time-saver in calculating the approximate price of work to which the cubing system cannot be applied.

In brief, an Approximate Estimate in considering a roof, converts the several units of pricing involved into a common unit of price per square yard, and then adjusts the price to cover sundry labours. By this means several stages of calculation are saved by the estimator in a hurry.

• *The following composite prices are for work executed complete and should be used for the preparation of Approximate Estimates only.*

FOUNDATIONS

		Thickness of walls 9″	11″ Hollow	13½″
• Excavation in clay soil for foundations 2′ 6″ deep to walls, including stock brickwork in second stocks cement mortar 1 : 3 up to 6″ above ground and horizontal double slate damp-proof course with external facings p.c. 100/– and pointing	*per yard run*	25/1	28/3	35/4
• Ditto, in ordinary soil ditto	*per yard run*	23/10	27/1	33/9

EXTERNAL WALLS

• External walls in Fletton brickwork in cement mortar 1 : 3 including three coat lime plaster and twice distempering one side and facings p.c. 100/– in Flemish bond, joints raked out and pointed with a neat struck weathered joint, the other	*per yard super*	19/4	19/1	24/9
• Ditto, including Keenes cement plain-face and three coats oil colour one side and ditto	*per yard super*	21/–	20/9	26/5
• Ditto, including internal fair face, flush jointed one side and ditto	*per yard super*	17/7½	17/4½	23/0½
• For variation of 10/– per m. in p.c. of facings in Flemish bond (stretcher in cavity work)	*per yard super*	–/9	–/6¾	–/9

APPROXIMATE ESTIMATES—(*continued*)

INTERNAL WALLS AND PARTITIONS

		2″	3″	4½″	9″
● Breeze partitions set in cement mortar or Fletton brick walls and including three coat lime plaster and twice distempering both sides	*per yard super*	9/11	11/1	11/1	16/7
● Ditto, built fair and flush jointed both sides	*per yard super*	—	—	7/8½	13/2
● Ditto, including Keenes cement plain-face and three coats oil colour both sides	*per yard super*	13/3	14/5	14/6	19/11

GROUND FLOORS

● Solid ground floor construction including 9″ excavation, 4″ bed of hardcore, 6″ concrete 6 : 1 surface bed, finished with 1½″ granolithic paving trowelled smooth	*per yard super*	9/10
● Ditto, finished with ¾″ cement and sand 1 : 3 screed and wood block flooring or paving p.c. 10/– yard	*per yard super*	18/2
● Ditto, finished with 2″ × 2″ sawn floor fillets and floor clips and 1″ deal tongued and grooved flooring, batten widths	*per yard super*	12/11½
● Ditto, finished with floor fillets as before and 1″ (nominal) oak tongued and grooved narrow widths strip flooring polished at time of laying	*per yard super*	25/2½
● Sleeper wall ground floor construction, including 15″ excavation, 4″ bed of hardcore, 6″ concrete 6 : 1 surface bed, sleeper walls 12″ high, built honeycomb, 4½″ slate damp-proof course 4½″ × 3″ fir plate, and 4″ × 2″ sleeper joists and 1″ deal tongued and grooved flooring in batten widths	*per yard super*	15/3
● Ditto, with 1″ nominal oak tongued and grooved narrow widths strip flooring polished at time of laying	*per yard super*	27/6

UPPER FLOORS

		With 7″ Joists	With 9″ Joists	With 11″ Joists
● Wood construction including 2″ fir joists on 4″ × 3″ fir plates and herring-bone strutting with three coat lime plaster and twice distempering white to soffite and 1″ deal tongued and grooved flooring in batten widths	*per yard super*	12/–	13/2	14/3
● Ditto, with 1″ nominal oak tongued and grooved narrow widths strip flooring polished at time of laying	*per yard super*	24/3	25/5	26/6
● 5″ thick concrete 4 : 2 : 1 reinforced with fabric suitable at 13′ 0″ spans for carrying ¾ cwt. per ft. super, with two coat lime plaster and twice distempering white to soffite and 1″ Kara Sea deal 100 per cent. rift sawn block flooring wax polished at time of laying ...	*per yard super*			25/7
● Ditto, with 1″ nominal 25/30 per cent. quartered Austrian oak block flooring polished at time of laying	*per yard super*			28/8

APPROXIMATE ESTIMATES—(*continued*)

FLAT ROOFS

		Using 7″ Joists	Using 9″ Joists	Using 11″ Joists
• Wood construction including 2″ fir joists on 4″ × 3″ fir plates and herring-bone strutting with three coat lime plaster and twice distempering white to soffite and best natural rock asphalt roof finish ...	*per yard super*	18/5	19/5	20/6
• 5″ Thick concrete 4 : 2 : 1 reinforced with fabric (suitable at 13′ 0″ span for carrying 40 lbs. per ft. super) with two coat lime plaster and twice distempering white ditto	*per yard super*			22/7

PITCHED ROOFS

• Bangor Countess 20″ × 10″ slating, laid to 3″ lap fixed with zinc nails, including 2″ × 1″ battens, ¾″ roof boarding and 4″ × 2″ rafters (measured on slope)	*per yard super*	13/1
• Westmorland Random green slates No. 1 best 24″ to 12″ long proportionate widths ditto	*per yard super*	17/2
• Machine-made tiles 10½″ × 6½″ laid to a 4″ gauge, fourth course nailed with galvanized nails ditto	*per yard super*	11/6
• Hand-made sand faced tiles ditto ditto	*per yard super*	12/3
• Slate ridges, including cuttings and 1½″ × 9″ deal ridge	*per yard run*	9/10½
• Half-round ridge tile ditto	*per yard run*	7/7
• Slate hips, including cuttings, lead soakers, and 1½″ × 11″ deal hips	*per yard run*	12/5½
• Hip tiles, including cuttings and 1½″ × 11″ deal hips	*per yard run*	14/–
• Lead valley gutter to slated roof, including cuttings and 1½″ × 11″ deal hips	*per yard run*	18/5
• Purpose-made valley tiles, including cuttings and 1½″ × 11″ deal hips	*per yard run*	13/7

DOORS

		Partitions or Walls				
		2″	3″	4½″	9″	13½″
• 2″ flush door p.c. 29/– 2′ 6″ × 6′ 6″, including deal frames or linings, ironmongery p.c. 15/– and simple architraves both sides, all painted	each	100/–	101/5	96/3	100/10½	106/10½

WINDOWS

Prices are for normal size, including suitable ironmongery, glazing with clear sheet glass and painting.

• Standard metal casements with fixed lights	*per foot super*	2/5
• Ditto, with average proportion of opening lights	*per foot super*	3/10
• Standard metal casements in wood frames with fixed lights	*per foot super*	4/–
• Ditto, with average proportion of opening lights	*per foot super*	4/11
• Standard industrial type sashes with fixed lights	*per foot super*	2/2
• Ditto, with average proportion of opening lights	*per foot super*	3/6
• Solid deal frames and 2″ casements	*per foot super*	5/0½
• Deal cased frames and double hung sashes	*per foot super*	4/10½

NOTE.—Standard wood surrounds to metal windows can be obtained at a cheaper price than that given for wood frames above.

APPROXIMATE ESTIMATES—*(continued)*

STAIRCASES

• Deal 9′ 0″ high, including half space landing, newels, balusters and handrail	*each*	£23	10 0
• Austrian oak ditto	*each*	£44	5 0
• Precast concrete ditto	*each*	£32	15 0

DRAINS

		Ordinary Soil	*Clay Soil*
• Manhole, 2′ 3″ × 1′ 6″ × 2′ 0″ deep, including excavation, 6″ (6 : 1) concrete bottom, one brick sides 3rd stocks in cement mortar with brown glazed half-round straight main channel and one brown glazed branch channel, including benching, sides rendered in cement and sand (1 : 3) and a 24″ × 18″ black single seal cast iron manhole cover and frame, weight 0 cwts. 3 qrs. 0 lbs.	*each*	£3 12 6	£3 15 6
• Manhole 2′ 3″ × 3′ 9″ × 4′ 0″ deep ditto including six branches	*each*	£7 2 0	£7 6 6

		Clay Soil		*Ordinary Soil*	
		4″	*6″*	*4″*	*6″*
• British standard quality stoneware drain pipes laid on and including 6″ thick concrete bed flaunched up both sides of pipe and excavating average 2′ 6″ deep	*per foot run*	2/5	3/0½	2/3	2/10½
• Ditto, but excavating 4′ 0″ deep	*per foot run*	4/1½	4/9	3/7½	4/3
• Cast iron drain pipes in 9′ lengths and laying in trench including 6″ concrete bed and excavating average 2′ 6″ deep	*per foot run*	4/8	6/6½	4/6	6/4½
• Ditto, average 4′ 0″ deep	*per foot run*	6/4½	8/3	5/10½	7/9

PATHS AND DRIVES

• 2″ finished gravel paths, including 6″ excavation and 4″ bed of hard-core and edging boards	*per yard super*	5/3
• 7½″ finished gravel drive, including 6″ excavation, 6″ bed of hardcore and edging boards	*per yard super*	6/9
• 2½″ Tarmacadam drive including ditto	*per yard super*	7/10

FENCES

• Cleft chestnut pale fence 4′ 0″ high	*per foot run*	-/10
• Deal weather boards, including posts, arris rails and gravel boards creosoted, 5′ 0″ high	*per foot run*	2/9½
• Ditto, in English oak throughout	*per foot run*	3/10½

The four sections on PRICES published in the issues of Nov. 10, 17, Dec. 1 and this week together complete the PRICES SUPPLEMENT. Next week the FIRST SECTION—PRICES OF MATERIALS, PART 1—will be repeated with items revised according to market quotations.