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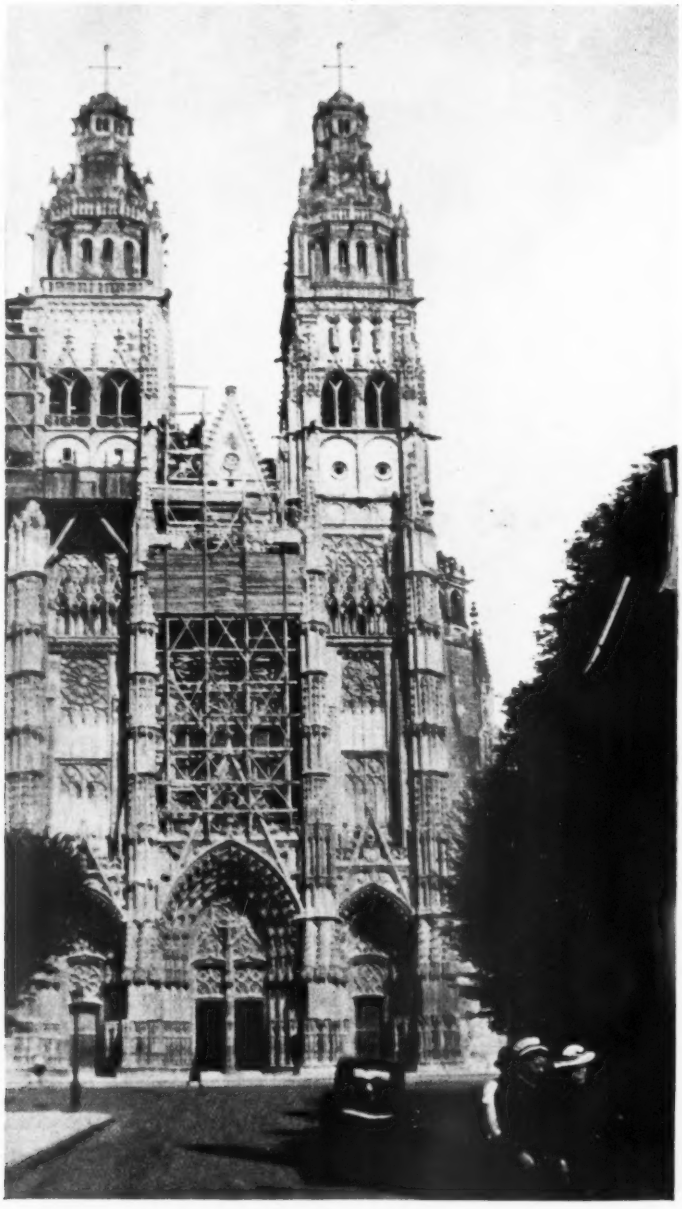
*The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.*

THURSDAY, OCTOBER 21, 1937. NUMBER 2231 : VOLUME 86

## PRINCIPAL CONTENTS

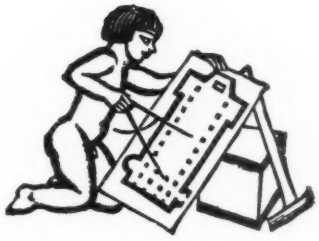
# RENOVATION



*THE Cathedral of St. Gatien, Tours, which is now being renovated The. lower portion of the west towers belong to the twelfth century, while the upper parts are of the Renaissance.*

## FRAM HOUSE, OSLO

*A view from the land side, showing the entrance porch which houses the bowsprit of the "Fram."*



# THE MORRIS OXFORD

LORD NUFFIELD has now given a second million, rather more than a second million, to Oxford. Out of all the ten millions which the maker of Morris cars has given away, these two sums have a peculiar interest.

The economic conditions which have made them possible are the common factors of all large gifts made by wealthy men. The fascination of these two millions lies in speculation on the results for Oxford, and through Oxford for Britain, of the system of mediæval endowment continued into modern times and upon a modern scale, and on the effect of two millions in the hands of a single man as opposed to their effect under more democratic control.

The motor industry is highly protected. But tariff faces tariff, and a large and comparatively well-paid manufacturing industry still leaves motor cars fairly cheap for Britons. To have them cheaper would be nicer, but to hope to do so without guaranteeing the manufacturers foreign sales to offset foreign competition is to expect too much of human nature. So the public pays £20 or £50 more than they might for their cars.

For many manufacturers this tariff seems to be necessary for their continued operation. For one or two it is manifestly not so ; and in one of these prosperous firms, and probably the most efficient of them all —the firm of Morris—the public can see where a good deal of their subsidy is going. It is going back to them in the ways which Lord Nuffield thinks best.

In 1937 redistribution in such a way may be quaintly arbitrary. It may even raise questionings about where the " protection profits " of one or two other firms are going. But in an imperfect world it has tremendous potential virtues in its speed and efficiency in getting things done when they need doing. And Lord Nuffield's way of ensuring contributions to Great Ormond Street from the most hard-fisted motorists has even a spice of humour.

The Nuffield way of doing things has only one drawback—the concentration upon himself of all the responsibility for spending his two millions. And even this most matter-of-fact millionaire has commented with bitterness on the pressure exerted upon him to influence his decision.

Most of the other money he has given has gone to help existing organizations. The Oxford two millions are to create something new. Health and education are two of the social services which special efforts are now being made to improve. To medical research, through Oxford, Lord Nuffield has recently given a million. To a post-graduate college of industrial research he has now given another million.

From these two sums, each concentrated upon a single purpose through a single organization, much can be expected. Lord Nuffield has enabled Oxford to dispense with all the badgering of the Government or of private individuals that is usually needed before democracy can move forward. He has given the money, he has offered a site, a laboratory that is much needed, and has left Oxford University with nothing to do but to go ahead.

It is at this point that the limitations of the individual begin to appear in the process of speeding up democracy. Lord Nuffield has chosen the problems which he would like to help to solve, has specified generally the way in which he would like them tackled, and has now left those things in which he felt it beyond his powers to choose most wisely to be decided by Oxford. It is Oxford University which has to choose the men, the studies and the kind and equipment of the buildings which will be needed.

A centre of pure learning which has left modern studies largely to others, a shrine of spires, High Toryism, higher Communism, and the Church, withdrawn from everyday life—in spite of women undergraduates and Mr. A. P. Herbert—Oxford is asked to step off its perch and get down to medical and industrial research.

Our concern is with the surroundings in which the new Oxford intellectuals will work. In these Oxford's majestic reputation, and the more sentimental kinds of public opinion, may have regrettable results. Both Oxford and Cambridge take an interest in architecture, and the authorities of both have shown since the war that their belief that they know best what is fitting for their new buildings is incapable of producing a masterpiece.

Lord Nuffield, the master of one of the most modern of all processes, will soon provide about half a million for buildings in which will be studied the problems of disease and industry.

It will be in accordance with precedent for Oxford to translate this half million into the stone and marble of columned halls at the hands of a hand-picked Academician. But it would be more encouraging to those who believe in the vitality of Oxford if the buildings—these very special buildings—were to be made the subject of competition amongst all architects. By so doing it is just possible that Oxford may end seventy-five years of architectural mediocrity and Lord Nuffield realize his ambition.

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# NOTES & TOPICS

THE HORSHAM–ARUNDEL–CHICHESTER FRONT

THERE hangs in my club a picture of a fox-hunting young gentleman sitting in a chippendale chair in the airy and highly polished interior of a large country house. When he has finished his coffee which is being administered by the family butler he will put on his bonnet and shawl (retainer in background holding them ready) and go off in a glittering Rolls to the meet where he will exchange this bonnet for a chimney-pot hat.

*

The background to this romantic scene figures in the imagination as the much publicized English countryside, composed of little grass fields and green, confidential fences, great elms, and here and there a village nestling under the tower of an ancient church. The elms will be bare, and the rooks will be describing celestial cartwheels in the air.

*

Or not? Are there instead two angular red villas outside the park, perched in a field with chickens, wire, and black poultry houses, and a hundred yards further on a main road with more wire and a derelict railway hotel, and a railway line which is being electrified, and a local builder who right now is composing a letter to the chicken farmer asking whether he would like to sell his poultry field for desirable development?

*

More likely, I think. If the fox-hunting gentleman and his chippendale chair are located in Sussex, almost certainly. In East Sussex the *clippity-clop* once associated with the hooves of horses, is now the perquisite of the electrified Southern Railway, and in West Sussex the third rail is right now going down on the Horsham–Chichester–Portsmouth line and the local builders are composing their letters to the local chicken farmers. Why wait, O you Amenity hawks, why wait till the damage is done? You have everything on your side, town-planning officers, landowners, panels, local papers, country architects—even fox hunters—all eager to see that development really is desirable, and you have *time* too, for the advance publicity of the Southern Railway has given you ample warning.

*

Sussex today is Development's battleground. In the horseshoe made by the Downs, London has lapped over on the north and is creeping down into the Weald, while on the south the long line of sea-coast resorts from Hastings to Chichester Harbour are edging their way north through the South Downs and throwing their suburbs into the southern lip of the Weald. Washington under Chanctonbury Ring is now an outlier and Findon a suburb of Worthing. Between the nutcrackers of the two advancing armies lies what is left of alleged South-Eastern "rural England." I wonder how many people realize that the distance between the jaws of the nutcrackers is today about *sixteen miles?*

THE DAWN OF REASON

The tension of international affairs at present is sometimes said to be exaggerated. But its existence was probably never more real to most of us than when, last Tuesday, it for once had no place at all in an international announcement.

*

The column on the centre page of *The Times* announced that an anonymous Hamburg citizen offers to provide four annual Hanseatic Scholarships of a value of 3,000 Rm. each of which can be held in Germany for one year by any student of a University in the British Commonwealth. The student may study any subject and provision is made for his travelling in Germany—the scheme bearing much resemblance to the Commonwealth Fund Scholarships in the U.S.A. which have been held by quite a number of architects.

*

In addition, the Shakespeare Prize, of the value of 10,000 Rm., is to be awarded annually in Britain for work of conspicuous merit in any art—the first recipient being Dr. Vaughan Williams.

*

With more of this kind of international gesture—by everyone—the apple cart may yet be kept on its wheels.

NEWS FROM NEWCASTLE

The Special (New Town Hall) Committee of the Newcastle-upon-Tyne City Council has recommended an open competition for the new town hall near Barras Bridge.

*

Merely a proper decision for a great city, the ordinary man may think. To Tynesiders, and even to those like myself with a Northumbrian great-aunt, it is nothing of the sort. It is the end of an epic. Men have been born and lived and died during the battle of the new town hall. Last week's news is not a decision, it is part of a saga.

*

The town hall on its narrow site in the Bigg Market was inconvenient in the '90's, and the arguments and the search for a new site have continued ever since. Jesmond Road and Eldon Square, the Bull Park and several others—local politicians have almost come to be known by the sites for

*The Ecclesiastical Commissioners have set up an enquiry to consider the union of the benefices of St. Paul's and St. John's Churches at Wolverhampton. Above is St. John's Church, a fine building in the Gibbs' manner, built in 1758. The approach to the church is by a terrace above a sunk graveyard.*

which they fought. And the question of an architect has not been the smallest part of the fight.

*

Newcastle has always wanted a local architect for its big jobs. It has also felt that an open competition was due to its own dignity. And the struggles between two proper feelings has caused some architectural ups and downs.

*

The Fire and Police Station, after having been won by a future President, was given eventually to local architects premiated in the competition—an expensive way of nearly satisfying everyone.

*

The City Hall went to the London winners and local patriots were disgruntled and made all the capital possible out of a matter of sight lines in the side galleries.

*

With the present decision big-mindedness has triumphed, and in its usual unostentatious way the R.I.B.A. has perhaps also triumphed. It would be a happy result if a local architect wins (Newcastle has two architects who are often there or thereabouts in open competitions). Failing this, the assessor and winner should remember that they will be very much on trial.

MOTOR SHOW

The Motor Show's move from Olympia to Earl's Court seems to have been worth while if only because the monstrous stand designs that motor manufacturers seem to think "artistic" are now no more. Hanging name boards (in different colours to show which section you're in) give an air of reasonable uniformity, and there is no temptation for exhibitors to build higher and beastlier whatnots each year.

*

The Paris Motor Show, in the Grand Palais, has had standardized boards and standardized lettering for years, and now that England has followed suit, they have this year given up name boards altogether. But, none the less, I think that whoever is responsible for cleaning up the English show deserves a fairly large bouquet: standardized lettering as well would have been even better, but it's probably impossible to persuade the motor trade to be sensible all in one go.

WIRED FOR SHAVING

Have any of you yet been asked to put an electric socket in the bathroom for those whirring clipper things that some people shave with nowadays? A youthful and enthusiastic visitor tried to convert me last week, and even gave me a demonstration in my own living room, though that was largely because he hadn't been able to find a convenient plug in the house where he'd been staying the night before.

*

He even tried it on my chin and then excused its failure by saying I hadn't got the right sort of face, though I still don't know whether the clipper should be adjusted to me, or me to it.

*

But I *don't* like the idea of a socket in the bathroom—nor for that matter do the supply companies. Quite enough people slay themselves each year with faulty hair dryers, and I can see no reason for giving them chances to do the same thing shaving.

*

So I shall just make my clients shave in their bedrooms; for, after all, if you don't need soap or water why do it in the bathroom anyway?

UNAUTHORIZED

The House Governor of St. George's is annoyed with me. Quite rightly. Last week, disturbed by the way in which the time for preparing designs was slipping away, while Conditions advertised as available were not available, I presumed that it was the House Governor who authorized the *R.I.B.A. Journal* to say, on September 11, that Conditions were then ready.

*

The House Governor denies my presumption; he states that the *R.I.B.A. Journal* had no authority from him for making such an announcement.

ASTRAGAL

*Next week's* JOURNAL *will contain a twenty-four page Information Supplement on* GAS EQUIPMENT. *Illustrated with a large number of photographs and tables, this Supplement will deal with the supply and installation of gas, and with most of the latest gas-fired domestic equipment—including fires, radiators, instantaneous and storage heaters, boilers, cookers, refrigerators and miscellaneous appliances.*

# NEWS

## POINTS FROM THIS ISSUE



### CITY ARCHITECT PROPOSED FOR LEICESTER

Councillor R. Simpkins, speaking at Leicester last week, said: "I want to suggest that the city, to a greater degree than previously, should undertake its own architectural work. We have an architectural assistant, who forms part of the surveyor's department, but it is of sufficient importance to warrant the creation of a city architect equal in status to the city surveyor."

### APPOINTMENT

Mr. Frank Mellor, assistant architect county borough of Huddersfield, has been appointed, subject to confirmation by the Town Council, as architect to the Middlesbrough Education Committee, at a salary of £450, rising to £525.

He has held his present appointment since March, 1935, and is in charge of the Huddersfield Education Committee's building work.

### DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Mr. G. M. B. Dobson, D.SC., F.R.S., Lt.-Col. J. H. M. Greenly, C.B.E., and Mr. S. K. Thornley have been appointed members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research.

Professor A. Fowler, C.B.E., D.SC., SC.D., F.R.S., F.R.A.S., Sir Clement D. M. Hindley, K.C.I.E., M.INST.C.E., M.INST.T., M.I.E. (IND)., and Mr. T. Franklin Sibly, D.SC., LL.D, have retired from the Council upon the completion of their terms of office.

### MIDDLESEX COUNCIL SAVES £5,000

After a heated debate at a special meeting of Middlesex County Council last week, the members decided to reject a proposal which would have meant expenditure of £5,000 seeking advice about the suggested extension and modernization of North Middlesex Hospital (states the *Richmond and Twickenham Times*).

Instead, the Council decided to use the services of its own architect.

A Westminster firm was suggested by the Finance Committee for retention to submit a report on the proposals, and it was stated that their fees would be about £5,112. The estimate submitted by the Committee in July was £1,000.

## THE ARCHITECTS' DIARY

**Thursday, October 21**

INSTITUTION OF ELECTRICAL ENGINEERS, *Savoy Place, W.C. Inaugural address by Sir George Lee.* 6 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. *Yorkshire Branch. At the Hotel Metropole, Leeds. Chairman's Address, by Captain G. Maddock.* 7 p.m.

INSTITUTION OF MECHANICAL ENGINEERS. *(Midland Branch.) At the James Watt Memorial Institute, Birmingham. "Modern Cast Irons in Engineering Practice." By J. G. Pearce.* 7.15 p.m.

WELSH SCHOOL OF ARCHITECTURE. *Technical College, Cardiff. "Cement and Concrete." By Raymond Walker.* 5 p.m.

**Friday, October 22**

INSTITUTION OF STRUCTURAL ENGINEERS. *Midland Counties Branch. At the James Watt Memorial Institute, Birmingham. "The Road as a Structure." By H. E. Brooke-Bradley.* 6.30 p.m.

INSTITUTION OF MECHANICAL ENGINEERS. *Storey's Gate, S.W.1. Presidential address.* 6 p.m.

**Tuesday, October 26**

R.I.B.A., 66 *Portland Place, W.1. Exhibition of the designs of students of schools of architecture recognized for the exemption from the R.I.B.A. Intermediate Examination. Until October 29.* 10 *a.m. to* 8 *p.m.*

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Address by the President, L. H. Bucknell.* 8.30 *p.m. Also, Annual exhibition of water-colours, drawings and other etchings by members. Until November* 16.

In the course of the discussion, the view was put forward that the expenditure was a waste of money, and that the Council's own architect could deal with the scheme.

The Committee's recommendation to retain the Westminster firm was lost by 60 votes to 18, and the Council agreed to a proposal to ask its own architect to deal with the scheme and prepare working plans, without comment.

### R.I.B.A. BRONZE MEDAL FOR MR. ROWSE

The Mersey Tunnel ventilating building at Woodside, Birkenhead, has been selected as the building of most exceptional merit erected in a wide area of the North-West within the five years ending in December last.

The architect of the building, Mr. Herbert J. Rowse, has accordingly been awarded the architecture medal in bronze offered by the R.I.B.A.

The competition was open to all members of the Liverpool Architectural Society, and they were entitled to nominate for consideration by a jury any buildings erected by a member, or members in association, in the area of the Society, which includes South-West Lancashire, West Cheshire, North Wales, North Staffordshire, and the town of Whitchurch, and completed within the five years 1932 to 1936.

### LEEDS HOUSING

The delay in the Leeds housing programme through the refusal of the Corporation to accept the tenders offered by building contractors was brought to an end last week when the Housing Committee accepted the offers of four firms of contractors to build 1,750 dwellings at a total cost of over £600,000.

The deadlock occurred more than a year ago when the contractors who had submitted tenders for the erection of about 1,100 houses demanded an extra £10 per house before the contracts were signed. The Corporation refused the increase and the contracts were never ratified.

Discussions have been going on between representatives of the Corporation and building contractors during the last few months, and eventually the basic prices for the different classes of dwellings have been agreed upon as follows: Ageing persons' flats, £250; two-bedroomed houses, £330; three-bedroomed houses, £362; four-bedroomed houses, £384; five-bedroomed houses, £406.

### SLUM CLEARANCE AND DECROWDING IN SCOTLAND

During August, Scottish local authorities in their operation of the Housing Acts displaced 2,711 persons from 600 unfit houses. They also transferred 755 families from overcrowded conditions in fit houses to larger houses, 647 of which belong to local authorities.

The Town Council of Biggar, who recently decided to proceed with the erection of a further 32 houses which will complete its building programme, is one of the first local authorities in Scotland to make definite arrangements for putting an end to slum dwelling and overcrowding in its area.

### BOARD OF EDUCATION: ANNUAL REPORT

The Report of the Board of Education for the year 1936 was published on Monday last. It consists of 80 pages of text and 100 pages of statistical tables with the necessary explanatory notes.

The chapter devoted to elementary schools records that capital expenditure by local education authorities approved by the Board during the year was over £6,000,000, nearly a million pounds greater than in 1935. During the year ended March 31, 1936, plans were approved for 135 new Council schools and for the enlargement and improvement of 587 existing council schools. During the calendar year 69 schools were removed from the "black list."

### R.D.I.

The Chairman of the Royal Society of Arts announced at a recent meeting of the Council, that permission had now been granted to use the letters "R.D.I." to designate the distinction of "Designer for Industry of the Royal Society of Arts."

### THE COUNTRYSIDE

Sir Ronald Storrs, speaking at the annual meeting of the Royal Society of St. George at the Mansion House last week, said: "We are trying, although very late in time, to keep that blessed and beautiful English countryside of Constable and Crome and all our other great artists. One small way in which we can do it is by keeping our architecture unaffected and English. There is no particular point in sham English architecture. We do not want new 'Tudor' with black beams in reinforced concrete against which one strikes one's head. We do not want 'Ye olde inglenook' giving on

to a modern electric radiator in fumed oak. There is no need for affectation either in our countryside or in our architecture.

"There is still less need for it in our houses of entertainment by the roadside. Although it sounds a most English thing, the term 'guest house' should be speedily abolished. When I hear of a guest house I think of a place where one may get a free meal, but it means nothing of the kind. It is a substitute for hotel or inn. Why should we see the sign 'café' in England, still less 'cafeteria'? Why cannot they be coffee houses or taverns or even 'pubs'? I earnestly hope that we will preserve the English countryside and the old inn signs, and that we shall keep proper names for proper places."

### *PHARMACEUTICAL SOCIETY'S NEW BUILDING*

Plans for the new headquarters of the Pharmaceutical Society of Great Britain, to be built in Brunswick Square, W.C., at an estimated cost of about £200,000, have been approved by the London County Council, subject to minor alterations. The architect is Mr. Herbert J. Rowse, F.R.I.B.A. Work will commence next year.

### *BRITISH RAILWAYS: NEW TOWN OFFICE*

The first "British Railways" ticket office, which has been completed following an open competition won by Mr. H. T. Cadbury Brown, A.R.I.B.A., in November, 1936, was opened on Monday last, October 18, by the four main line railway companies (G.W.R., L.M.S., L.N.E.R., S.R.) at No. 162 Queen's Road, Bayswater, London.

### *OFFICIAL OPENINGS*

On Monday last Queen Mary opened the £52,000 "Silver Jubilee Extension" at the West London Hospital.

On Monday last the Duke of Gloucester opened the new Middlesex Sanatorium at Harefield. This building was illustrated in our issue for January 14 last.

On Monday of last week the Duke of Norfolk opened an extension to the Notre Dame High School for Girls, St. George's Road, S.E.1.

The Duchess of Kent is to lay the foundation stone of the Nurses' House at the Elizabeth Garrett Anderson Hospital on Thursday, November 4.

Lord Derby will open the extensions to the Eccles and Patricroft Hospital on November 8.

The new Wigan Grammar School, built at a cost of £36,000, was opened recently by Mr. Oliver Stanley, M.P., President of the Board of Trade. The school replaces an earlier building erected in 1879.

The Westminster City Council's new maternity and child welfare centre and day nursery in Bessborough Street will be opened by the Queen on November 25.

The B.B.C.'s new transmitter station at Stagshaw was opened on Tuesday last by the Duchess of Northumberland.

### *ON THE AIR*

*Monday, October* 25. National Programme. 8 to 8.30 p.m. "Design in Everyday Things: In the house—bedrooms and bathrooms." By Anthony Bertram.

### *EDITOR'S NOTE*

*There is a tale, possibly apocryphal, that a coloured architectural student at Liverpool University, going for the first time to make the acquaintance of his maitre, and finding him in bed in a dressing gown of more than oriental splendour, concluded that he had stepped into the presence of one of his own Gods who for some divine if inscrutable purpose had assumed the disguise of a professor of Architecture.*

*Daily thereafter, so the story goes, the student arrived at the professor's door with a little parcel done up in brown paper which turned out to be a praying mat, and insisted upon making the genuflections proper to his tribe at the deity's feet.*

*We may suppose that the professor suffered some inconvenience from this practice but no embarrassment, for he has never lacked the authentic touch, although his attributes are perhaps nearer those of an incalculable Greek god than those of an oriental divinity. For a large part of the twentieth century he has hurled his thunderbolts and distributed his favours, and no future architectural historian of our time will be able to reckon without his influence before and behind the scenes.*

*Since he retired from Liverpool, Professor Reilly has been inclined to cultivate the affectation of being old, but as no more vital men are to be found amongst architects of any age, and since his views are invariably significant as well as diverting, we have ventured to goad him into fresh activity, of which this column is an outcome.*

*It can be said of him that there has been no one in this century who in his building and in his teaching has done so much to influence the course of English architecture; and no other single member of his generation who has reacted to post-war developments in so creative a way. The chasm between Devonshire House and Peter Jones is a big one —for many of our friends and neighbours a bottomless pit—but it is typical of Professor Reilly that he has leapt it, or perhaps it would be truer to say that he has waved the chasm aside with a noble gesture and, behold, there is no longer a chasm. Such actions, hardly noticed at the time, sometimes prove to be the turning point in a movement. They are the product in this case of a courageous, powerful and elastic personality which charms and terrifies less virile minds with its wit. The same wit softens the very pithy and pointed writings which have made Professor Reilly unique as a commentator; and because his commentaries are unique also in that they seem to issue from his mouth rather than his pen, we have ventured*

to call this monthly commentary

## Professor Reilly Speaking

OWING to a political intrigue such as flourish in universities and on the whole add much to the enjoyment of life, the Liverpool School of Architecture had during the war to leave the pleasant retreat the late Lord Leverhulme had provided for it in the beautiful Queen Anne buildings of the old Bluecoat Hospital in the centre of the town and retire up the hill behind the Adelphi Hotel into the slums among which the main university buildings, being by the late Mr. Alfred Waterhouse, sit in Victorian rectitude and aloofness. However there was fortunately no room in these richly-glazed and highly sanitary structures even for the depleted school of those days. Instead it came to rest in the one-storey dilapidated buildings of an ancient and disused lock hospital close by. There it remained for twenty years, until it was rehoused in its present palatial quarters by the combined generosity of both Lords Leverhulme, the late and the present peers.

It was to these strange surroundings that I returned when the war ended, and it was in them that the school grew to its present size. There was something to be said as studios for those ancient wards with their long range of windows on either side if one could forget their history, and, of course, one soon did. They ran pleasantly out of one another and the years of students could mix. With a building long condemned one did not mind what was done with the walls, at least I did not mind. One vice-chancellor, I remember, did not seem to like very much drawings of full-sized nudes, but that did not matter greatly. Schemes of decoration could be tried out. Keith Ellerton, the present head of the London School of Decoration, made some brave attempts. The grey rats from the basement, however, we rather objected to, especially those of us who thought they might have belonged to the previous regime. I remember being a little uncomfortable once when I was taken down below, blindfolded and initiated with full Ku Klux Klan ceremonies as High Grand Executioner or something of the sort of a Greek letter society we had

*H. S. Goodhart-Rendel, President of the R.I.B.A., the youngest architect President in the 103 years' history of the Institute. He is a grandson of the late Lord Rendel of Hatchlands and was educated at Eton and Trinity College, Cambridge; during the war he served in the Grenadier Guards. He was Slade Professor of Fine Art, Oxford University, 1933-36, and is a musician and a distinguished writer on architecture. He was President of the Architectural Association, 1924-25, and last year was appointed Director of the Association's School of Architecture. He has practised as an architect in England since 1910, two of his most important buildings being St. Wilfrid's Church, Brighton, and Hay's Wharf, London.*

imported from America. Inside, then, the building had a good deal to be said for it for its new purpose, though the open railway cutting near by covered everything with a gentle layer of harmonious soot. Externally and to the town and gown at large the building became known as "Reilly's Cowshed," and very dismal with its black paint and almost blacker bricks it certainly looked to the uninitiated. Really its long ranges of late Georgian windows were not without dignity.

*

On one bleak November evening, dismal as only such a Liverpool evening can be, with sea mist and soot filling the air in equal proportions, there drew up at the small front door a taxi, and out of the taxi and against the background I have tried to describe emerged an apparition. It was a glorious young man, such as we only dream of in the north, in a fur-lined coat with an astrakhan collar, and shining boots. My little room was next the little door through which no doubt shy patients must have passed by the hundred, and I ran out and brought him under cover before the bloom should be washed off by the rain or, worse still, obscured by the soot. I seem to remember some pleasant scent, such as lavender water or eau de Cologne, pervading the room. Then to my surprise the young man produced a clinical thermometer and took his temperature. "If it's up," he said, "I must go back to London at once." It was not up and the young man stayed and delivered a brilliant lecture to the assembled school. His name was Harry Stuart Goodhart-Rendel, and he is now president of the R.I.B.A.

*

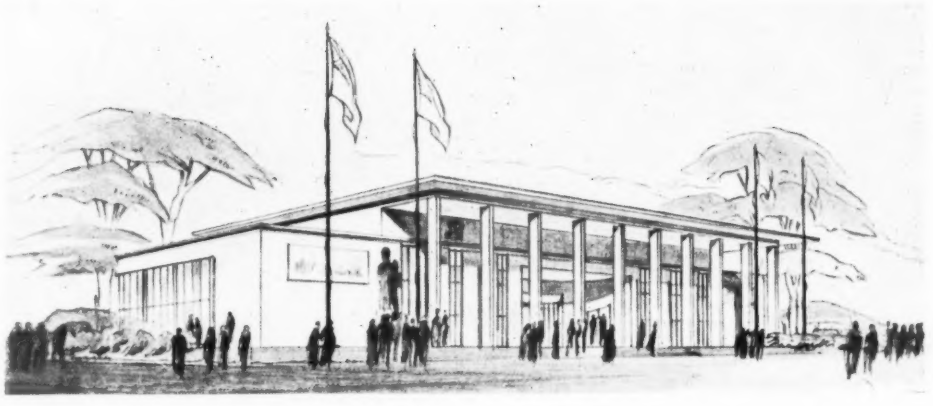
I expect I had invited the future president down because from certain buildings of his which I had seen illustrated I felt he was then clinging like the Liverpool School to the tails of the classical tradition. He, too, had seen its logical end in the full-blown work of the architects of the first half of the nineteenth century and was not content, like the more fashionable architects of those days, with the immature classic of the eighteenth or even of the seventeenth century. Theatrical Jacobean or Elizabethan stuff did not apparently appeal to him. If he was to be classical at all in his work he would be full-bloodedly so. That, too, with St. George's Hall at hand, was the Liverpool attitude. Now, of course, the president and Liverpool, like all the world under fifty and some much older, have realized that once that particular goal was reached the race was finished and a fresh start had to be made. My contention would be that the president and Liverpool reached that particular goal as soon as anyone, though they may not either of them have been the first off the mark in the new race. Who in this country was?

I remember that evening the lecturer told me he had won a competition for a great store in Calcutta when he was seventeen and against such a redoubtable champion of those days as the late Professor Beresford Pite. I was very impressed, of course, but more still with the man himself, and have been ever since. I see from "Who's Who" he was at Cambridge. As a Cambridge man myself I should have said he was Oxford, the greatest compliment a Cambridge man who really knows the limitations of his own university can give. No doubt in him that heartiness which is so characteristic of the young Cambridge undergraduate with his single subject mind and his continual winning of the boat race, or whatever it was in those days, was softened in the president's case first by Eton and then by his music in which he even took his degree. Donald Tovey, too, under whom he studied, must have been a broadening influence.

Whatever the explanations, and they are probably deep in the man himself and have little to do with school or university, we clearly have today as secular head of the profession a unique person. We have a scholar and a critic as well as an architect. It may be said we have had all these before. We have, but I venture to say we have never had these attainments combined with such a lively youthful outlook. We have never had before a president to whom the young will really want to listen. I am told at Oxford they flocked to his lectures when he held the Slade professorship there. I am told, too, he had the good sense to take a house there and really get to know them.

*

Now every new president at the beginning of his career must be thinking what is to be his main and special work beyond the tremendous routine to which he has pledged himself. Percy Thomas's reign will always be remembered for his brave attack on the constitution and his remodelling of it, Sir Giles Scott's for the charming and dignified way he carried through the centenary celebrations. Sir Raymond



*Pavilions for next year's Empire Exhibition in Glasgow: above, a perspective of the British Government Pavilion, designed by Mr. Herbert J. Rowse. Right: a perspective of one of the Colonial pavilions, designed by Mr. Thomas S. Tait.*

Unwin's for the competition for the new building, and so on. What is to be the special work of our new president with his special qualifications? It is an interesting speculation. I feel he can do so much. I feel he knows so much. We all know, too, he can express himself as wittily and pithily as G. B. S. himself. There will be great dinners and occasions when dull old noblemen and ex-ambassadors will make their tedious speeches, or witty judges, knowing nothing about architecture, exercise their wit on things in general. On such he will outshine them all. But that is not enough. He must accomplish something definite or all this talent and brilliance will in the end fade away. I suggest he should remember his own youth, which is nearer to him than it has been to any previous president and make his year of office notable for bringing back youth to the Institute. At the A.A. and at Oxford he has proved he can attach the young to him. When I was with the A.A. in Paris a week or two ago, one of their students told me what an event one of his criticisms was in the school and how they all looked forward to them. Let him have meetings, then, for the young. Lloyd George, I see, is holding a series of meetings in his constituency at which only those under forty are to be allowed to attend. Let the new president limit some of his to the under-thirties. Let him nominate young men who have distinguished themselves, like Denis Clarke Hall, to limited competitions. Let him appoint assessors at least young in spirit who realize what is happening in our world today. In short, let him make the dear old mother Institute youthful again with young blood, alive once more with hope and enthusiasm. As I once saw him, boyish and brilliant, if a little exotic to our provincial eyes, against a background of Liverpool dirt, let us now see him stand out as the champion of the young and their optimistic outlook against that background of professional practice, codes of conduct and all the necessary but dull things for which the Institute stands, but for which it need not stand alone.

# EXHIBITIONS

*[BY D. COSENS]*

AT the London Gallery, Fernand Léger is holding his first exhibition in this country, and it is an extremely interesting one, for though it gives but a slight impression of the development of his painting, at least two phases are well illustrated.

Originally a cubist of great inventive quality, Léger has always been influenced by machine shapes, and his abstracts in strong primary colours are very familiar. His latest work, gouaches painted in Brittany this summer, mark an almost complete break, for nearly all, though abstract in feeling, are based on a much more easily understood representationalism. The representational elements are no longer introduced as mechanical forms to accent a purely abstract conception, but they are now the basis of a far more literary design. This literary quality, so strong in surrealism, is reappearing in the work of many abstract painters. It should be watched, for it is perhaps the beginning of the inevitable retreat from the ultimate sterility of complete abstraction. Those who are interested in such portents should not miss this exhibition.

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Every painter is influenced by the work of others and to some extent by the idiom of his generation, but in time, if he is any good, his own vision changes that influence into something completely personal. Too great an admiration for such a painter as Matisse, for instance, is nearly always catastrophic in its results. Others prove easier masters to follow, and Dégas is perhaps one of the happiest in his disciples.

In his exhibition of paintings at Tooth's, it is apparent that M. Jacques-Emile Blanche has spent a lifetime under that influence. In nearly all his work there is Dégas, but the result is so extraordinarily varied that this collection of paintings might well be by several different painters. This variety in M. Blanche's work is the result of his reaction to a problem, rather than the outcome of his development at any particular date. There are the rather flat, quiet pictures painted in England, the animated summer beach scenes of France, and the violent action of the steeplechases. In all three he has caught a different atmosphere. His oil sketches are particularly charming, and "Hunting in Dorset" (No. 4), suggested with the utmost brevity, is a really fine impression of a somewhat hackneyed subject. This collection gives a good survey of the work, during about forty-five years, of one of the more academic French painters, and compels the reflection that it is infinitely more alive than its English equivalent would be.

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Many people will feel that a collection of paintings, and a considerable collection at that, by the Director of the Tate Gallery, now on view at the Wildenstein, is well

worth a visit. Undoubtedly, Mr. Manson is very successful in the *rôle* of Lucien Pissarro (No. 29), but remove that disguise and the general result, *in propria persona*, (Nos. 12 or 19) is a disappointingly banal pseudo-impressionism.

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Up to a point, Mr. Zawado, in his exhibition at the Adams Gallery, succeeds in spite of the fact that his pictures are rather invertebrate. He paints broadly, and he has an excellent sense of colour, and given a little more support and a little less temperament his painting would be very interesting. "Les Nuages" (No. 10) is perhaps his most successful work, for here the direction of the wall, and the recession beyond it, help to give solidity.

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Léger, The London Gallery, 28 Cork Street. Until November 23.

Jacques-Emile Blanche. Tooth's Gallery, 155 New Bond Street. Until November 6.

J. B. Manson. Wildenstein Galleries, 147 New Bond Street. Until November.

Zawado. Adams Gallery, 2 Pall Mall Place. Until the end of October.

## R. I. B. A.

### *NEWS BULLETIN*

The first volume of the R.I.B.A. Library Catalogue is to be published in November. This immense work, on which the Library staff have been engaged for some years, has only been made possible by the munificence of Sir Banister Fletcher. Sir Banister's gift has enabled the volume to be sold to members at one guinea and to non-members at two guineas, prices that are both greatly below production cost. The first volume contains the author index of 30,000 entries; the second will consist of the subject index. The catalogue will extend knowledge and use of the library, and it will be particularly valuable to members living at a distance from the R.I.B.A. The regular publication in the JOURNAL of the Library Accession List will in future allow members to keep the catalogue up to date.

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On Monday, November 1, at 8 p.m., the President, Mr. H. S. Goodhart-Rendel, will deliver his Inaugural Address. At the same meeting the London Architecture Bronze Medal for 1936 will be presented to Messrs. Stanley Hall, Easton and Robertson, and the presidential portrait of Mr. Percy Thomas will be unveiled. This is the work of Mr. Harold Knight, who also painted the portrait of Sir Ian MacAlister.

Some hitherto unpublished original drawings by Sir Charles Barry and Pugin of the Houses of Parliament will be on view at the Inaugural Meeting. The architectural practice of Sir Charles Barry has continued in unbroken succession, through the hands of two successive Charles Barrys to Sir Charles' great grandson, Mr. Caryl A. R. Barry, A.R.I.B.A. These drawings have remained in the firm's office from the completion of the Houses of Parliament to the present day.

The interesting series of University Extension Lectures on "Architecture: Its Place in Human Society," which is being given on Tuesday evenings at the R.I.B.A. by Mr. Basil R. Ward, A.R.I.B.A., is drawing a regular audience that is as much professional as lay. The fifth of the ten lectures, entitled "The Part Religion has Played," will be delivered on November 2, at 6.30 p.m. The admission to individual lectures is 1s. 6d.

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The "Modern Schools" Exhibition had a most successful send-off from London on its provincial tour. Unofficial comment from Whitehall was congratulatory. Press notices were unusually numerous for a small exhibition, and without exception laudatory. The B.B.C. noted it in its News Bulletin, and got Mr. John Gloag to broadcast on it. The B.B.C. Television Section also "produced" Mr. R. A. Duncan, Chairman of the sub-committee responsible for the Exhibition, on the television screens of London, in a short talk, illustrated by two models from the Exhibition. Members of the R.I.B.A. are also realizing that these exhibitions, though primarily intended for the general public, have a very considerable technical interest. Admitting this, the Exhibition sub-committee got Mr. H. W. Burchett, Chief Assistant Architect for Schools to the Middlesex County Council, to give an informal talk on the Planning of Schools. The Henry Jarvis Hall was packed, and after Mr. Burchett had finished his talk the bombardment of questions lasted more than an hour. The Exhibition is to open at the Central Museum, Hull, on November 1. Also on the same date, November 1, the Civic Centres Exhibition is to open at Kidderminster. Last year R.I.B.A. Exhibitions attracted a total attendance of 182,000.

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On the recommendation of the Board of Architectural Education of the R.I.B.A., the Artists' General Benevolent Institution has awarded a Maintenance Scholarship of £100 per annum to Mr. D. S. Craig to enable him to take the course at the Architectural Association School of Architecture, London.

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The following are the dates on which the forthcoming Examinations will be held:—

*Final Examination:* December 8, 9, 10, 11, 13, 14 and 16, 1937. (Last day for receiving applications: November 8, 1937.)

*Special Final Examination:* December 8, 9, 10, 11, 13 and 14, 1937. (Last day for receiving applications: November 8, 1937.)

## SOCIETIES AND INSTITUTIONS

### *BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION*

Mr. S. N. Cooke, F.R.I.B.A., in his presidential address to Birmingham and Five Counties Architectural Association in Birmingham last week, suggested that help could be given in advising the City Surveyor on the merits of building schemes submitted to him.

If the Association could pull its full weight and make its influence felt, he said, it should be able to render great service to the city and the towns in Birmingham area. It must be recognized that the centre of Birmingham had not been town planned, and there was no restriction of any kind on the architecture of the streets. In other portions of Birmingham, which were town planned, the city had acquired the right to approve elevations.

Although there was no authority to criticize elevations of new buildings in the central areas, he felt that much could be done by the City Surveyor, when elevations were obviously out of harmony with adjoining buildings, by suggesting improvements in the designs when plans were submitted to him for approval. Where the Association could help would be in advising the City Surveyor on the merits of schemes submitted and suggesting how they could best be modified, if it were necessary, to suit the amenities of the street. It would be desirable to have a panel of architects selected by the council of the association. Immediately the plans were received at the Council House, the Building Surveyor would notify the Secretary of the Association, who would at once get in touch with two of the architects on the rota. They would then get in touch with the Building Surveyor's department. He fully realized that the Advisory Art Committee was often consulted by the City Surveyor with regard to buildings to be erected on the Corporation's own property, and it had done excellent work; but he thought this was a matter where the Association could help.

### *SHEFFIELD ARCHITECTS AND SURVEYORS*

"Sheffield estates are equal to those in any part of the country, and superior to most," stated Mr. J. Amory Teather in his presidential address, at a meeting at Sheffield University last week of the Sheffield, South Yorkshire and District Society of Architects and Surveyors. "These new estates," he said, "are admirably laid out, the houses are of many types and each is planned to give the most comfortable and convenient home. They are of several designs externally to avoid monotony and to suit the different levels and aspects."

Discussing the City Council's decision upon the position for the new Assize Courts, and the College of Arts and Crafts, he said: "Certain of our members no doubt consider these buildings of sufficient importance to warrant a national competition, as would be the case in most cities, not because they have the slightest doubt of the ability of the City Architect to produce the best possible building, but because greater variety might thereby be obtained."

### *A.A.S.T.A. ESSAY COMPETITION*

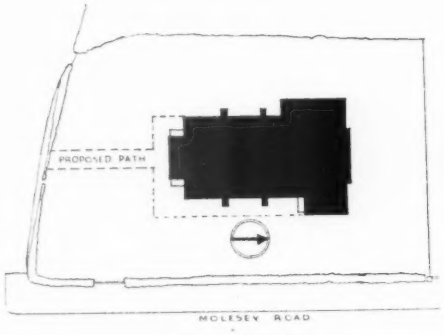
We are informed by the Secretary of the Association of Architects, Surveyors and Technical Assistants that the association is shortly to issue conditions of an essay competition on "The Future and the Architectural Assistant."

The purpose of the competition is to obtain as broad a consensus of opinion as possible from assistants and students on their prospects for the future in the architectural profession. It will be open to any assistant in an architectural office or any student taking an architectural course of training.

Prizes of £20, £10 and £5 will be offered, and the assessors will be Professor C. H. Reilly, O.B.E., F.R.I.B.A., Mr. H. de C. Hastings, and Mr. F. J. Maynard, A.R.I.B.A., President of the A.A.S.T.A.

# CHURCH AT HERSHAM, SURREY

*DESIGNED BY*
*D. H. BEATY-POWNALL*



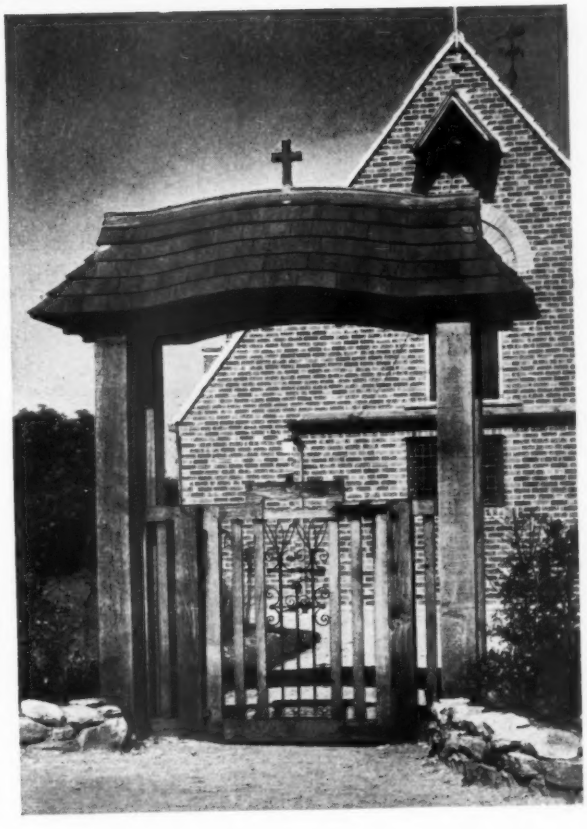

SITE PLAN

**GENERAL PROBLEM**—*A church to seat about 150 persons.*

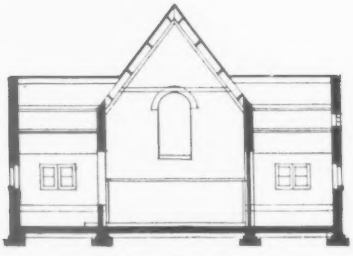
**SITE**—*Molesey Road, Hersham, Surrey.*

**CONSTRUCTION**—*11-in. hollow walls, the outer face in multi-colour sand-faced flettons; roof, pantiles felt and battens, on V-jointed boarding on purlins; turret, cedar shingles. The lych gate was presented locally and is in oak with cedar shingle roof and iron panel in gate.*

*The photographs show: above, a general view taken from Molesey Road; right, the lych gate.*



# CHURCH AT HERSHAM, SURREY: D

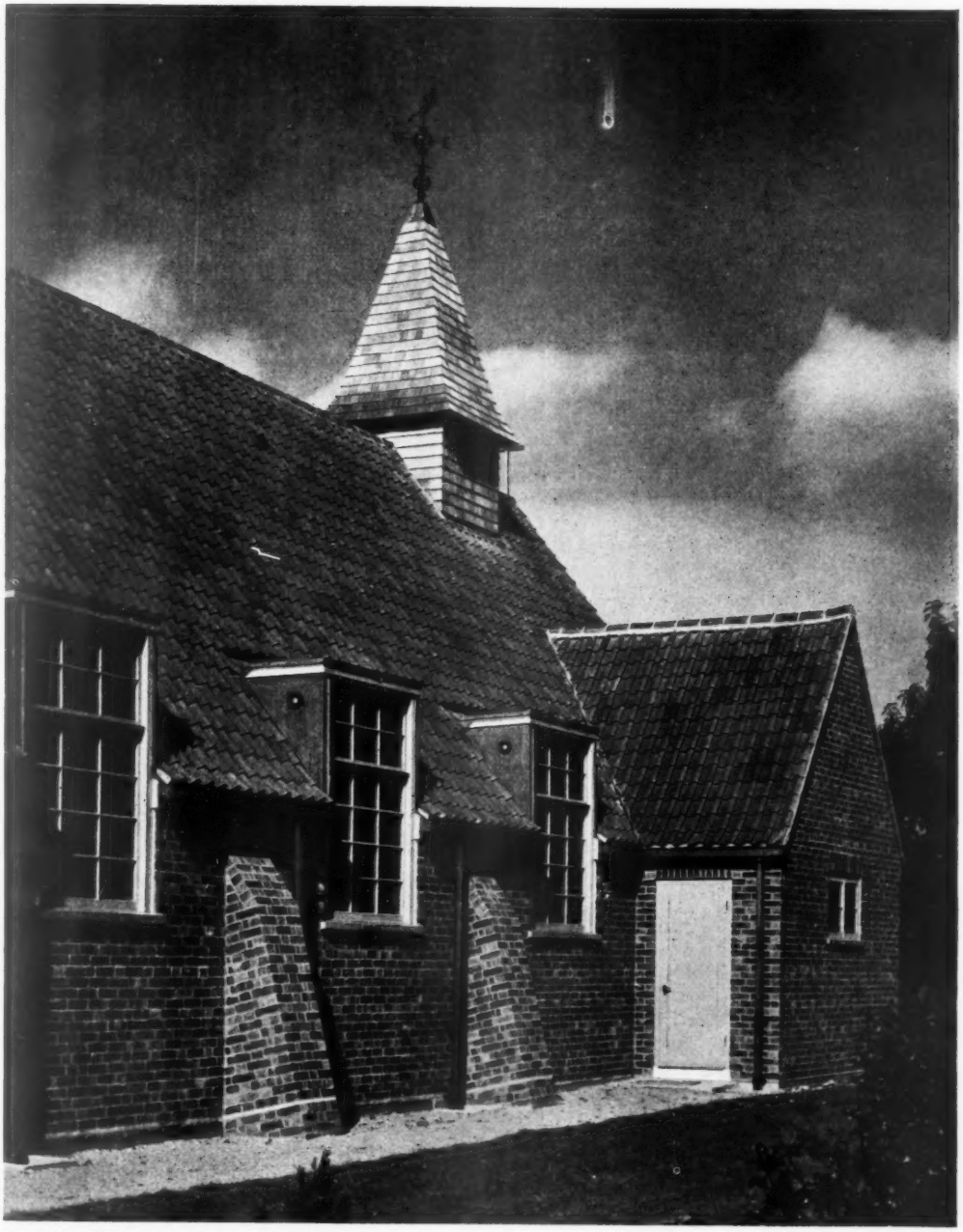


CROSS SECTION

*The photographs show : above, the south front ; left, the chancel ; below, looking down the church from the chancel.*

*For list of general and sub-contractors see page 635.*

# DESIGNED BY D. H. BEATY-POWNALL



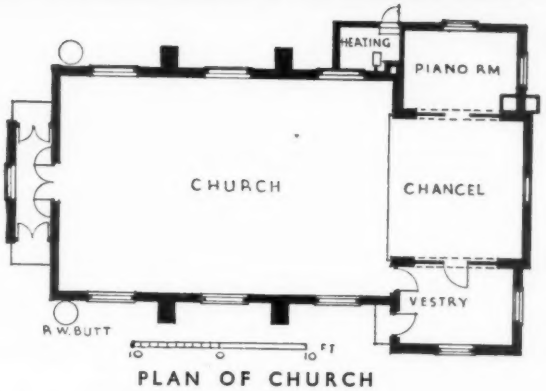
**ELEVATIONAL TREATMENT**—*The client required a fairly big roof, with windows breaking in as dormers to harmonize with other parish buildings. Two semi-circular headed stained glass windows from an earlier church in the parish had to be incorporated.*

**INTERNAL FINISHES**—*Floor, deal block; dado, multi-coloured bricks; walls above, sand lime bricks; roof, plain 4-in. V-jointed boarding on purlins, all in wrought oregon pine; joinery, wax-polished red cedar. The gilt plaster panel at the end of the chancel was presented locally, the oak panelling and surround being designed by the architect.*

**CONTRACT PRICE**—*£1,316=10d. per ft. cube.*

**FINAL PRICE**—*Including additional work such as screen, oak panelling in chancel, etc. (but not layout of ground or lych gate)—£1,445=11d. per ft. cube.*

*The photograph shows part of the Molesey Road front.*



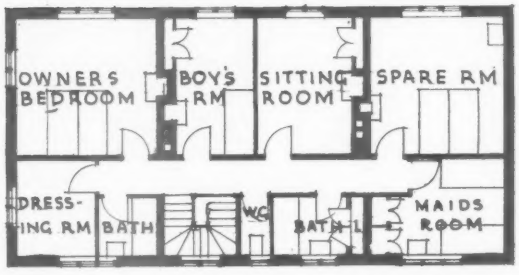

PLAN OF CHURCH

# HOUSE AT BROCKENHURST, HANTS: BY

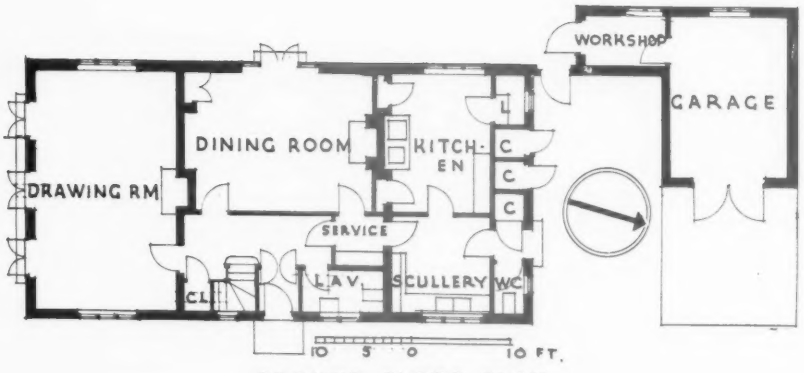
GENERAL PROBLEM — *To provide economically the accommodation required by the client in a house designed in brick and tile, to be approved by the estate surveyor.*

SITE—*A level rectangular plot, length east to west about 210 ft. and depth about 145 ft. The existing sewer was already in and close to the north boundary. The road frontage was on the south side. The house therefore was placed towards the north-east corner of the site, which made for economy in drainage and entrance drive.*

PLAN—*The plan is on the basis of a double square, having the entrance in the centre of the east front. On the ground floor roughly half (the south and west half) consists of the drawing room and dining room, while the remainder contains service and office rooms, fuel stores, etc., and a garage at the north end. On the first floor, the principal bedroom with dressing room and bathroom, occupy the south end; there is a spare bedroom and maid's bedroom at the north with east and west windows, and in the centre two west rooms with stairs and second bathroom facing east.*




FIRST FLOOR PLAN




GROUND FLOOR PLAN

CONSTRUCTION—*Brick cavity walls, pantiled roof, and stone front entrance. The elevations are faced with 2⅜-ins. hand-made, sand-faced, multi-coloured bricks with a wide cream flush joint. The windows are metal casements in wood frames.*

*Above, a view from the south-west; and, a view from the south-east.*

*For list of general and sub-contractors, see page 635.*

## TATCHELL AND WILSON

*Above, the living room; right, the entrance hall; below, the dining room.*

## *LAW REPORT*

NUISANCE FROM NOISE OF DYNAMO

*Purcell* v. *Supershows (Battersea), Ltd., and another. Chancery Division. Before Mr. Justice Simonds.*

THIS was a motion by Dr. Patrick Purcell, of High Street, Battersea, for an injunction against Supershows (Battersea), Ltd., and Popular Fisheries, Ltd., to restrain a nuisance from noise.

Dr. Purcell's case was that the defendants, Supershows, Ltd., had placed on the roof of the house of Popular Fisheries, Ltd., which was a few yards from Dr. Purcell's premises, a dynamo, which was used for illuminating a cinema electric sign advertising the cinema near by. Dr. Purcell alleged that the noise made by the dynamo was like an animal moaning in pain, and that his nerves had been affected by it, and by the vibration the dynamo caused. The noise also prevented him from giving proper attention to his practice.

Mr. Austin Farleigh, for Dr. Purcell, said his lordship had granted an injunction till the present hearing. His evidence would be that the nuisance had continued as before.

Mr. Herbert Shanly, for the defendants, read an affidavit by Mr. Harry Percy Bloom, the governing director of Supershows, stating that defendants had taken every step to prevent any nuisance to Dr. Purcell. The dynamo had been moved to a new position, some distance from the doctor's premises, and this had been approved by the borough engineer. The dynamo stopped at 10 p.m.

Mr. L. Spicer, defendants' engineer, in an affidavit, said a rubber mat had been placed under the dynamo, which reduced the noise to a minimum.

Other evidence was submitted in support of defendants' case.

Mr. Farleigh said Dr. Purcell's assistant, Dr. J. E. Carter, had made an affidavit in which he stated that the noise was nerve-racking, and made it difficult for him to attend to the dispensary patients.

Mrs. Kathleen Purcell, wife of the plaintiff, who is now on vacation, and others, made affidavits in support of plaintiff's case.

Mr. Farleigh contended that in view of his evidence his lordship should continue the injunction.

Mr. Shanly argued that there were facts in this case which pointed to the fact that the plaintiff was asking for more than he was entitled to. Defendants had made every effort to mitigate the noise by improvements. There was a market in the street and also a tramway junction near by, and these, he contended, contributed to the noise of which the doctor complained.

His lordship, in giving judgment, said the difficulty in these nuisance cases was that a noise might be bearable for five minutes, but when it went on hour after hour it became intolerable. He would grant an injunction till the trial of the action restraining the defendants from using or working the dynamo in such a manner as by reason of noise or vibration to cause a nuisance to Dr. Purcell.

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## Market Hall, Harrogate

The Harrogate Town Council last week approved a scheme for the rebuilding of the burnt-out Market Hall at a cost of £40,000.

# LETTERS FROM READERS

*W. ST. G. ABBOTT (House Governor, St. George's Hospital)*

*R. D. MANNING*

*"A PROGRESSIVE"*

*PHILIP R. RATHBONE (Secretary, The Housing Centre)*

## *St. George's Hospital*

SIR,—My attention has been drawn to a paragraph in your issue for October 14, 1937, under the heading "St. George's Hospital." In this paragraph you presume that I authorized the *R.I.B.A. Journal* to print an announcement in their issue of September 11, 1937, that "conditions of the Competition may be obtained on application."

I have to inform you that such a presumption on your part is incorrect. I have never at any time up to this date authorized the *R.I.B.A. Journal* to publish any matters in connection with the rebuilding of this Hospital. I must ask you to publish this letter in your next issue.

W. ST. G. ABBOTT,
*House Governor, St. George's Hospital*

## *Salaried Architects*

SIR,—A matter has been coming to light recently which concerns salaried architects in a most intimate manner, inasmuch as their power of earning a living is, in certain quarters, being attacked.

Certain official bodies, some of which are known to have difficulty in keeping staff owing to their poor working conditions, have organized what can only be described as a conspiracy to prevent their assistants from leaving them for better posts, each agreeing *sub rosa* not to accept applicants from one to another.

The usual procedure is as follows: An assistant employed by A applies for a post with B. After an interview, in which on several occasions the assistant has been actually offered the new post, B telephones A to ask if the latter is willing that the assistant should leave. If the reply is unfavourable, the assistant is blandly informed, with regrets, of course, that the post is after all not available. On certain occasions, however, B has been cynical enough to tell the truth; this is, of course, how the matter is gradually attaining healthy publicity.

There is no question as to the existence of this conspiracy, which is a scandalous interference with the ordinary civil liberty of the individual. I have had personal experience of it; I know personally several men who have come in contact with it; the A.A.S.T.A. have had cases to deal with; questions have even been asked in Parliament about it.

The individual is helpless against this kind of thing. Wide publicity will probably check it; conspirators notoriously dislike being found out. But it should be dealt with for what it is, a matter of principle, and definitely stopped. The A.A.S.T.A. is doing its best; the Institute of Registered Architects might usefully interest itself; but what about the R.I.B.A.?

It is generally reckoned that 60–70 per cent. of the members of the R.I.B.A. are in salaried posts, mostly official. The R.I.B.A. is the senior architectural body and carries more weight than all the rest together. Its members are entitled to its support. Is it too much to expect that the Council should abandon its erstwhile policy of ignoring the majority of its members, face up to the reality of present-day conditions, and make a start by taking up vigorously this surely very important matter?

R. D. MANNING

## *Mr. Falkner's Article*

SIR,—The extraordinary antipathy displayed by many people for any attempt at a good contemporary tradition of design is once more put into words by Mr. Falkner.

As these people usually are, his gaze is so fixed backwards that he thinks of the progressive movement today as one which, springing suddenly into life four or five years ago, will have gone in another one or two. He is blinded by doubtfully glorious pasts. Mr. Falkner does not (seem to) know that the movement, based even on work of last century, gave us its first unmistakable signs over twenty years ago. Since then, though he may not like to face the fact, the movement has gathered strength and influence, the world over, and will go on doing so. It is in vain to call for the Lutyens "to restore the nobility of antique traditions"—this age can produce its own fine traditions of work—the Lutyens are demoded—reactionary.

Further on Mr. Falkner very rashly states that "since Georgian times there has been no connection between painting and architecture." This shows him up.

The movement inspiring the best contemporary architecture has also produced painting and sculpture and so welds them vitally together. Some of the truly great architects are also painters. I fancy in his purely "realist" conception Mr. Falkner meant actual representation of architectural subjects—but even that does not hold. I might point out that painting traditions have developed, too, and pictorial representation is, thank goodness, no longer the only consideration; but if Mr. Falkner wants it very much he will find architecture studied still in Surrealist work!

Finally, I suggest that before we have any more such articles Mr. Falkner reads, carefully: N. Pevsner's "Pioneers of the Modern Movement," H. Read's "Art and Industry," and "Circle" by very varied people in the great progressive movement.—

"A PROGRESSIVE"

## *Housing*

SIR,—On behalf of the Housing Centre, I feel that the private enterprise housing scheme at Frinton, illustrated in your issue for October 7, calls for comment. It is of interest to see that these parlour type houses are intended to be let at 15s. a week for families with a total income of 55s. or less. That is certainly a low rent in the circumstances, even though it may be questioned whether such poor families can afford to pay nearly 30 per cent. of their income in weekly payments.

The real flaw in the scheme, to which you draw no attention, lies in the fact "that the wide road is intended to be used as a children's playground." Admittedly, the road shown is not a main thoroughfare, but there is obviously some danger to children from tradesmen's vans and bicycles.

In congested areas it has sometimes proved necessary to close certain roads to traffic in order that children may have somewhere to play, but that should hardly be necessary on a new scheme at Frinton, which has, it is stated, six miles of open country behind the houses. Quite apart from the relative danger of this particular road, it is surely undesirable to encourage children to regard any new roads on housing schemes as suitable playgrounds.

PHILIP R. RATHBONE,
*Secretary, The Housing Centre*

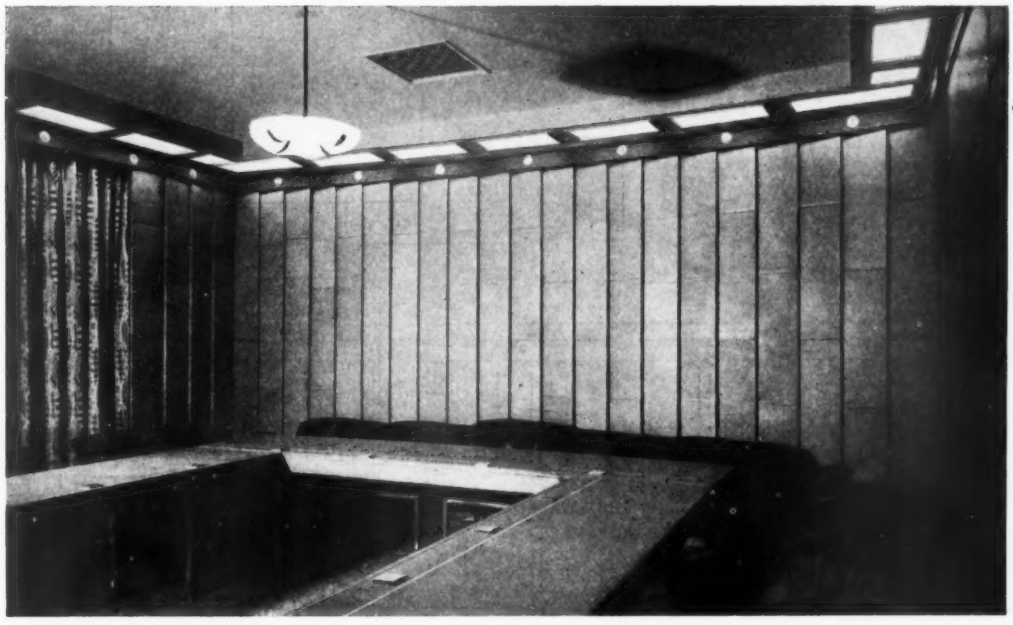
•

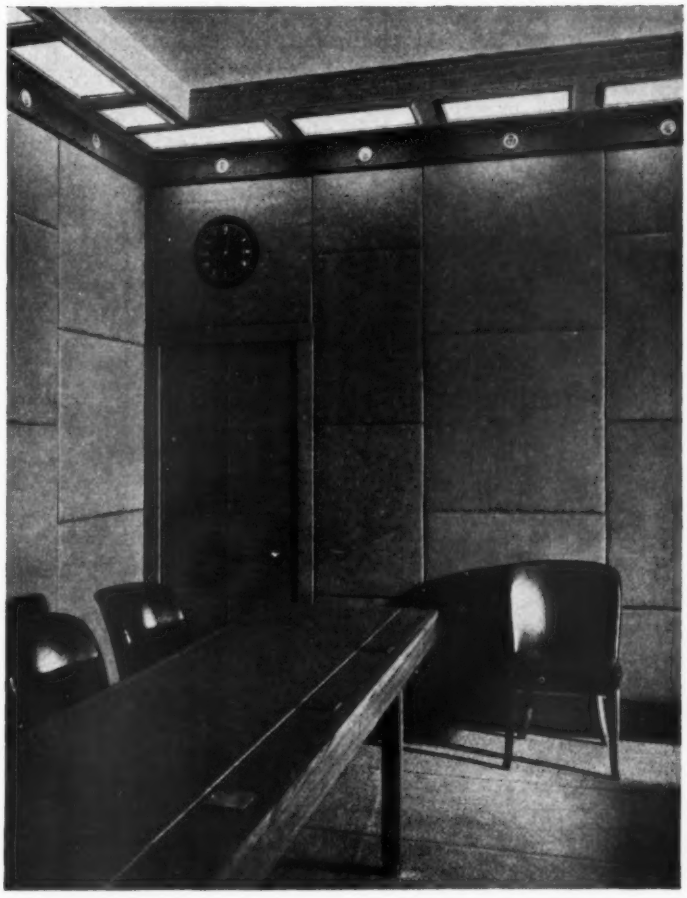
## Underground Car Park for Birmingham

Plans are being prepared for the largest underground municipal car park in this country to be built in connection with the new Birmingham Civic Centre. The car park will be under the garden of the Hall of Memory. The park, estimated to cost £300,000, will provide accommodation for 1,280 cars.

# WORKING DETAILS : 601

LEATHER PANELLING • UNITED TANNERS' FEDERATION, ST. THOMAS'S STREET, E.C. • JOHN GREY

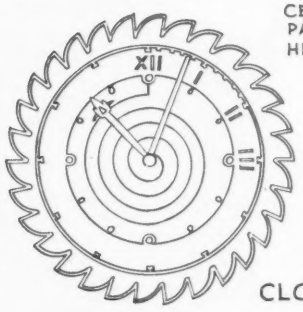




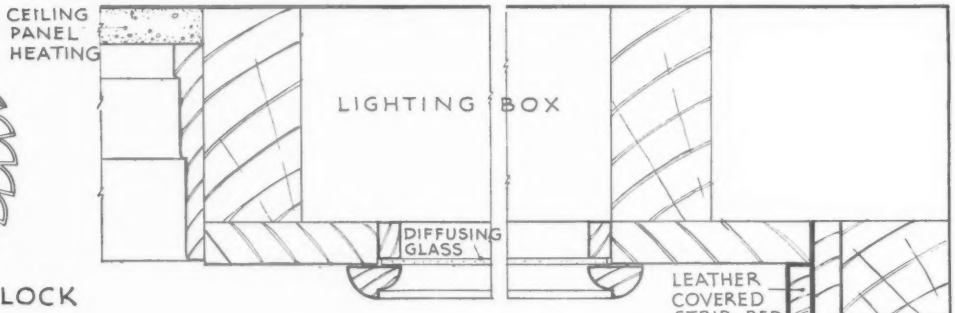
The leather panelling is in the board room. The treatment of this room was an experiment to combine the practical and æsthetic application of leather as a wall covering with a test of various methods of fabricating the material.
The walls consist of a series of panels which are removable for cleaning purposes or for replacement. The leather is cellulosed, stretched over felt and mounted on plywood. The leather and felt are glued to the plywood at the edges, the felt being held in position by the leather cover. The panels on the back wall have no felt backing in order to act as a sounding board behind the chairman.
Details are shown overleaf.

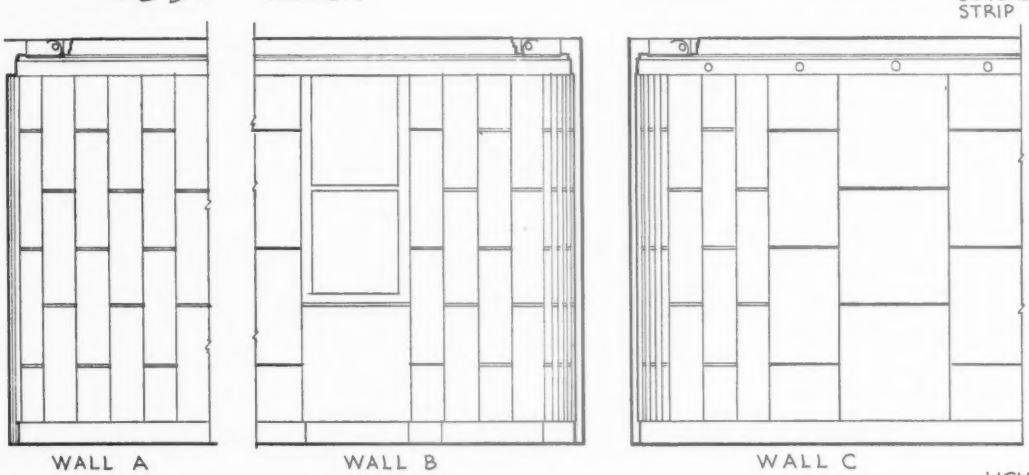
# WORKING DETAILS : 602

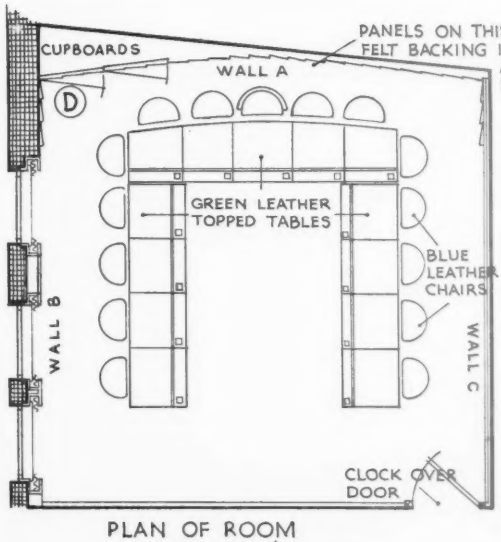
LEATHER PANELLING • UNITED TANNERS' FEDERATION, ST. THOMAS'S STREET, S.E. • JOHN GREY



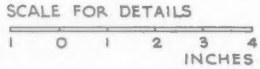

CLOCK

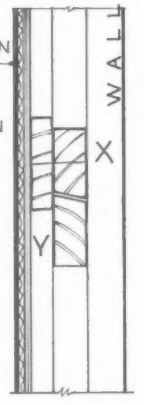



PLAN OF ROOM

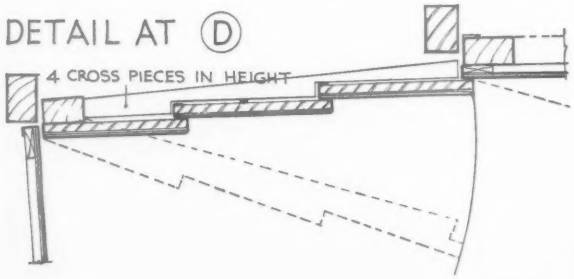




## DETAIL SHOWING METHOD OF HANGING PANELS

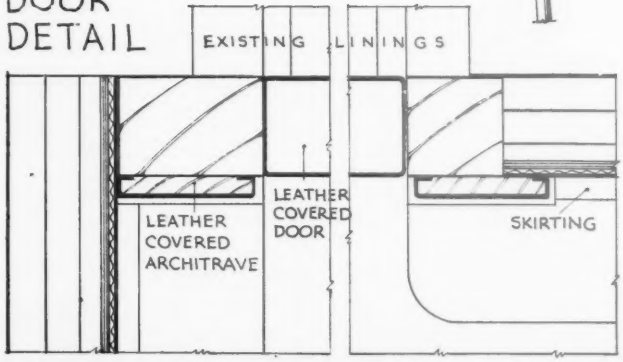
X SPLAYED BATTEN FIXED TO LEATHER PANEL

Y. SPLAYED BATTEN FIXED TO WALL

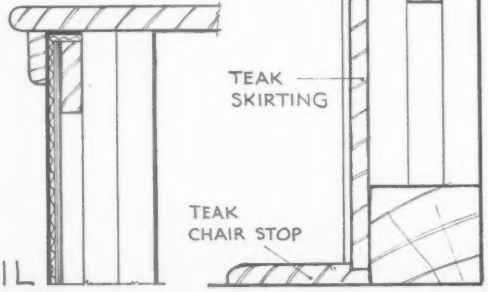
## DETAIL AT (D)




## DOOR DETAIL




## CILL DETAIL




Details of the leather panelling illustrated overleaf.

The Architects' Journal Library of Planned Information

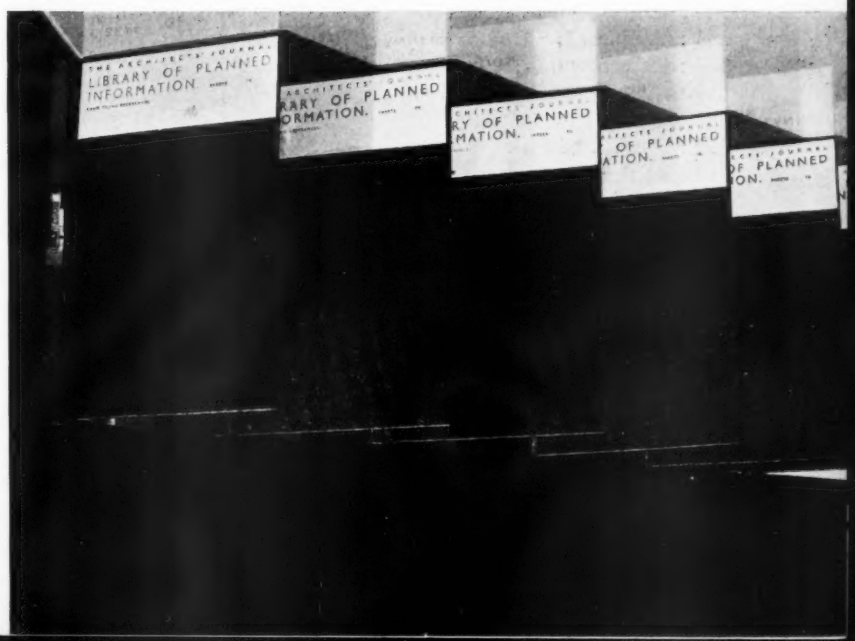
# INFORMATION SHEET

# *SUPPLEMENT*

## SHEETS IN THIS ISSUE

**566** A.B.M. Rain-water Gutters and Fittings

**567** Plywood—I



Sheets Issued since Index :

501 : Aluminium
502 : Fixing Blocks
503 : Approximate Estimating—XII
504 : Aluminium
505 : Aluminium
506 : Approximate Estimating—XIII
507 : Plumbing : Jointing of Copper Pipe
508 : Roofing—Valley Flashings
509 : The Equipment of Buildings
510 : Aluminium
511 : Elementary Schools—II
512 : School Lighting
513 : Approximate Estimating—XIV
514 : Air Conditioning
515 : Insulation of Buildings
516 : Cycle Parks
517 : Cycle Parks
518 : Plumbing Systems—II
519 : Kitchen Equipment
520 : Roofing—Flashings
521 : Motor Cycle Parks
522 : Reinforced Asbestos-Cement Roofing Tiles
523 : Poison Gas Precautions
524 : Kitchen Equipment
525 : Metal Reinforced Asbestos Cement
526 : Leadwork to Photographic Developing Tanks
527 : Asbestos-Cement Corrugated Sheets
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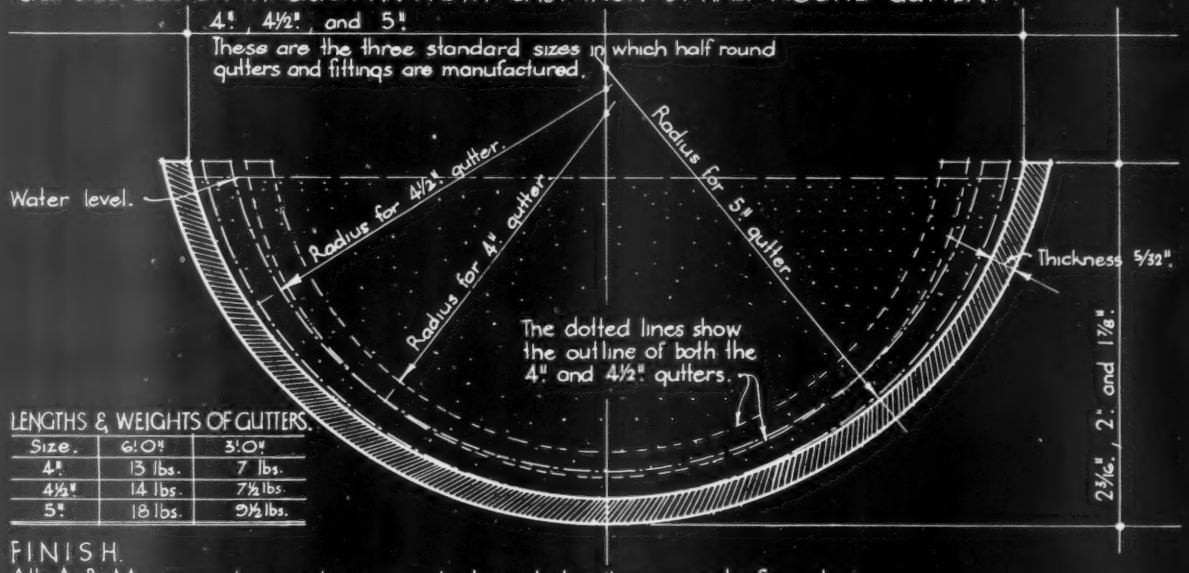
554 : Burnt Clay Roofing Tiles
555 : A.B.M. Draining Boards
556 : Kitchen Equipment
557 : Asbestos Cement Roofing
558 : A.B.M. Rainwater Pipes
559 : Flashing
560 : Kitchen Equipment
561 : Asbestos Cement Roofing
562 : A.B.M. Rainwater Gutters and Fittings
563 : Asbestos-Cement Roofing
564 : The Equipment of Buildings
565 : Air Conditioning

677.

# THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## FULL SIZE SECTION THROUGH AN A·B·M· CAST IRON 5" HALF ROUND GUTTER.




LENGTHS & WEIGHTS OF GUTTERS.

| Size. | 6'·0" | 3'·0" |
|---|---|---|
| 4" | 13 lbs. | 7 lbs. |
| 4½" | 14 lbs. | 7½ lbs. |
| 5" | 18 lbs. | 9½ lbs. |

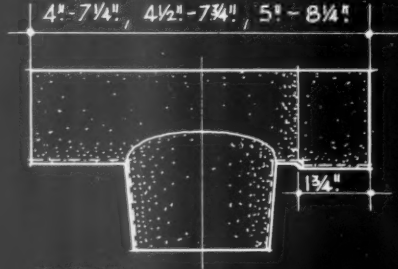
FINISH.
All A·B·M· rainwater goods are supplied painted with one coat of paint.

## TABLE SHOWING SIZE OF GUTTER REQUIRED TO DRAIN A GIVEN FLAT SURFACE AREA.

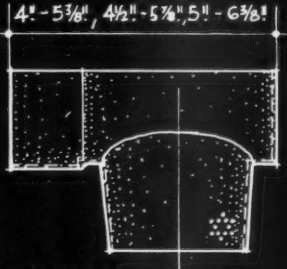
| Area of flat surface to be drained. sq.ft. | Size of half-round gutter required. | Effective cross sectional area of gutter. | Size of drop. | Size of down pipe required. |
|---|---|---|---|---|
| 300. | 4" | 4½. Sq. ins. | 2½" | 2½" |
| 390. | 4½" | 5¼. Sq. ins. | 2½" | 2½" |
| 560. | 5" | 7¼. Sq. ins. | 3" | 3" |

Data based on rainfall of 3" per hour, with a generous safety margin & allowing for one outlet.

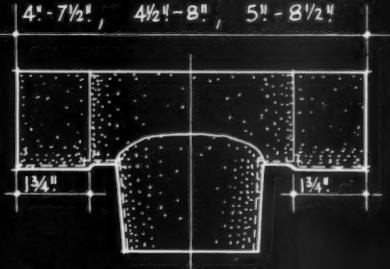
## QUARTER FULL SIZE DETAILS OF FITTINGS FOR A·B·M· HALF ROUND GUTTERS.




OUTLET: SINGLE SOCKET.

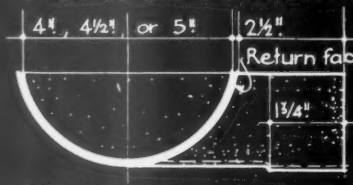



OUTLET: DROP END SOCKET.

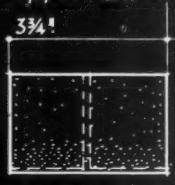



OUTLET: DOUBLE SOCKET.

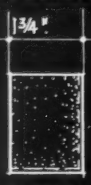
OUTLETS.
4" outlets are made for 2" and 2½" downpipes: 4½" and 5" outlets for 2½" and 3" downpipes respectively.



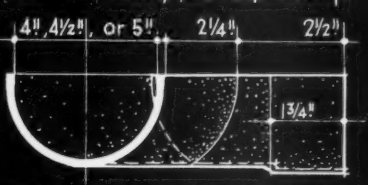

SQUARE ANGLE: LEFT HAND. Also obtainable right handed.




UNION CLIP.




EXTERNAL STOP END.




OBTUSE ANGLE: LEFT HAND. Also obtainable right handed.

*Information from Associated Builders Merchants Ltd.*

INFORMATION SHEET: GUTTERS N°·2: HALF ROUND CAST IRON GUTTERS AND FITTINGS:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1· Oliver A. Bayne

THE ARCHITECTS' JOURNAL
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# INFORMATION SHEET

## • 566 •

# A.B.M. RAIN-WATER GUTTERS AND FITTINGS

Product : Cast Iron Half-round Rain-water Gutters and Fittings

This Sheet deals with A.B.M. half-round rain-water gutters and fittings, which have been standardised in three sizes, 4-in., 4½-in. and 5-in. The straight gutter is supplied in 6-ft. and 3-ft. lengths.

All gutters and fittings are finished with one coat of paint before delivery.

The table on the front of the Sheet shows the recommended size of gutter to drain a roof covering of a given area, measured in a horizontal plane.

**Fittings :**

The fittings are designed to be of minimum weight, in order to lessen the strain on the gutter bolts which are usually used to support fittings, and which may rust away.

All outlets are designed to be of the same minimum internal diameter as the down pipe into which they discharge, so that there is no impedance to the flow of water.

Angle fittings are obtainable either right-angled or obtuse-angled.

The table below gives the prices of A.B.M. Standard Half-round gutter fittings :—

THE A.B.M. STANDARD LIST PRICE FOR HALF-ROUND GUTTER FITTINGS

| | 4″ A.B.M. Std. List | 4½″ A.B.M. Std. List | 5″ A.B.M. Std. List |
|---|---|---|---|
| Angles—Square Right ... ... ... ... | 1/3 | 1/6 | 1/9 |
| ,, Left ... ... ... ... | 1/3 | 1/6 | 1/9 |
| Obtuse Right ... ... ... ... | 1/3 | 1/6 | 1/9 |
| ,, Left ... ... ... ... | 1/3 | 1/6 | 1/9 |
| Nozzle Pieces—Single Socket ... ... ... | 1/3 | 1/6 | 1/9 |
| Double Socket ... ... | 1/3 | 1/6 | 1/9 |
| Drop Ends ... ... ... ... ... | 1/3 | 1/6 | 1/9 |
| Union Clips ... ... ... ... ... | 1/3 | 1/6 | 1/9 |
| Stop Ends ... ... ... ... ... | 7½d. | 9d. | 10½d. |

**Previous Sheets :**

The first four Sheets in this series dealing with A.B.M. products are Nos. 540, 555, 558 and 562.

**Standardised Designs :**

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

Materials and equipment made by a number of manufacturers are stamped with the following symbol  indicating that they conform to the standard of design and quality laid down.

**Information from:** The Associated Builders' Merchants, Ltd.

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

# THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## (A) • FLEXOPLY • PLAIN OR VENEERED DECORATIVE PLYWOOD PANELLING:

**MULTIPLY PANELS:**
Panels are built up to the required thickness by layers of veneer approximately 1/16" thick, the grain of each layer crossing that adjacent at an angle of 90 degrees. The panels are made with an impervious inorganic cement which cannot stain the veneer & which ensures consistent adhesion without blisters.

**THICKNESS:**
The standard thicknesses available are 1/4", 3/8", and 1/2".

Laminated panels with centre layer of red cedar are made in thicknesses of from 5/8" upwards.

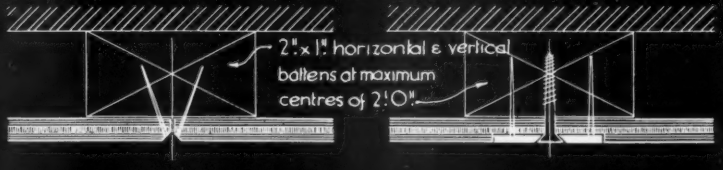
**STOCK SIZES.**
(a) Small.
4'0" and 5'0" long by 2'0", 2'6", 3'0", 3'6", 4'0", and 4'6" wide.

**STOCK SIZES.**
(b.) Large.
6'0", 7'0", and 8'0" long by 2'0", 2'6", 3'0", 3'6", 4'0", and 4'6" wide.

**VENEERS: one side only:**
(a.) For paint finish:
Scarfed, or horizontal or vertical grained Birch, Swedish Pine, Alder.
(b.) For polished finish:
Columbian Pine, European & Canadian Birch, Oak, Mahogany, Sycamore, Teak, Ash, Walnut, Bubinga, etc., See price list on the other side of this Sheet.

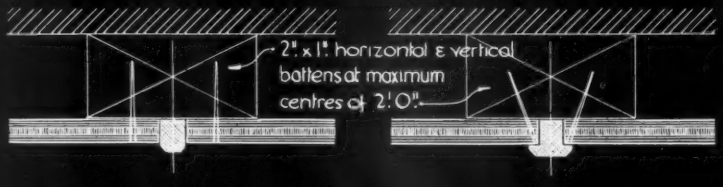
### 1/2 F.S. SECTIONS SHOWING VARIOUS METHODS OF JOINTING FLEXO PLYWOOD WALL PANELS:

(1.) Flexo plywood panels with chamfered edges.




(2.) Flexo plywood panels rebated, and staybrite steel strip inserted.

(3.) Flexo plywood panels butted to hardwood beading.




(4.) Flexo plywood panels fitted into hardwood tee beading.

## (B) FLEXO FLUSH FINISH DOORS: TABLE OF STANDARD VENEERS AVAILABLE:

For paint finish: (1/4" ply.)

| | |
|---|---|
| SCARFED BIRCH. | 2 sides. |
| BEECH. | 2 sides. |
| BIRCH. horizontal grain. | 2 sides. |
| BIRCH. vertical grain. | 2 sides. |
| ALDER. | 1 side or 2 sides & all edges. |
| GALVANISED STEEL. | 1 side or 2 sides & all edges. |

For polished finish (3/8" thick plywood facings)

| | |
|---|---|
| COLUMBIAN PINE; EUROPEAN AND CANADIAN BIRCH; GABOON, PLAIN OR FIGURED AFRICAN & HONDURAS & SAPELE MAHOGANY; PLAIN OR FIGURED OAK AND TEAK, AND AUSTRALIAN AND FRENCH WALNUT; FIG. BUBINGA AND ASH; SYCAMORE; SILKY OAK; AMERICAN WALNUT. | 1 side only, or both sides veneered: |

NOTE: In all cases of single sided veneer, the reverse side is of Alder or Birch.

### (1.) HOLLOW (DEAL) FRAMED DOORS:


4" symmetrically framed stiles and rails enabling the door to be hung in any manner.

8" solid wood about centre to take lock of any size.

1/4" plywood facings are applied under hydraulic pressure with permanent adhesion provided by guaranteed waterproof cement.

STANDARD TYPE D.F.1.

Single vertical lipping.

TYPE D.F.2.

Both vertical edges lipped.

TYPE D.F.O. Similar to above but with no lippings.

### (2.) SOLID (RED CEDAR) LAMINATED DOORS:

These doors are constructed with a laminated core of thoroughly seasoned clear kiln-dried Canadian red cedar, split into widths of about 5/8".

For painted doors, facings of 1/4" thick plywood are applied, while for polished doors the facings are of 3/8" plywood.

TYPE S.C.A.

Lippings left showing on door faces.

TYPE S.C.B.

Lippings covered by facing veneers.

THICKNESS. All these types are of 1 1/2", 1 3/4", or 2" nom. thickness.

For notes on laminated-frame doors, insulated & fireproof doors, & metal-faced doors, see the reverse side of this Sheet.

*Information from Flexo Plywood Industries, Ltd.*

INFORMATION SHEET: PLYWOOD WALL PANELLING AND FLUSH DOORS:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Glen A. Baynes

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

# INFORMATION SHEET

## • 567 •

# PLYWOOD—I

Product : "Flexoply" Panelling and Flush Doors

**Panelling :**

The Flexo plywood panelling described and illustrated on this Sheet is obtainable in a variety of plain and veneered surfaces, and in sizes limited only by transport and fixing difficulties. In addition to the stock size flat sheets, the Company specializes in curved panels and flat panels with rounded returns, and recommends for best results the special manufacture of cut-size panels for each individual room.

The plywood backing is of first quality for all thicknesses of panels and all veneers are carefully selected and matched.

**Construction :**

Panels are made in two distinct constructions : the multiply method and laminated panels. In the latter case the centre layer is constructed with kiln-dried Western red cedar, split up into narrow widths of about $\frac{5}{8}$ in. and of various thicknesses according to the finished thickness of panel required. On either side of this core are laid veneers approximately $\frac{1}{16}$ in. thick and varying in number according to the type of panel required, in a similar manner to that employed in building up the multiply construction. Laminated construction is applicable only to panels of $\frac{5}{8}$ in. thick and upwards.

Either construction is supplied with Canadian birch faces for painting, or veneered in some special wood to choice, laid if necessary to any desired pattern or design.

**Uses :**

The plywood may be used specifically for wall panelling, ceiling linings, staircase balustrades, built-in cupboards and window seats, lift cages and casings, radiator and stanchion casings, pipe ducts, concealed lighting fittings, etc.

**Fixing :**

Neither type of panelling requires special labour or tools for fixing, and either may be cut, or machined as ordinary solid timber. In fixing as wall panelling, grounds should be fitted to the masonry in the ordinary way, and the panels nailed, screwed or pinned according to the finish desired. It is advisable when fixing in new buildings or in situations where the masonry is green or shows any tendency to be damp, to treat the grounds and the backs of the panels with a good quality bituminous paint.

**Finish :**

There are no special precautions to be observed in the final finishing, either in painting, polishing or waxing, as all ordinary methods of finishing solid wood are applicable to Flexo plywood.

**Maintenance :**

When painted, or polished to show the natural grain of the wood, plywood for walls and doors requires very little expense in the way of maintenance. Plywood panels are not easily damaged, and will not split or crack if the walls of the building move through excessive load or through the ordinary process of settling. The surface, being non-absorbent to a high degree, is hygienic and does not collect dust, and is unaffected by smoke and dampness.

**Prices :**

The prices of Flexo multiply wall panelling range between 4½d. and 1s. 1½d. per square foot for the paint finish small stock sizes, and between 5½d. and 1s. 2½d. for the large stock sizes.

Prices of panels for polished finish range between 9d. and 2s. 4d. per square foot according to thickness and the particular veneer used. Special quotations are given for super and cut sizes.

**Super Sizes :**

The Company specializes in the production of wall panels large enough to cover each wall in one piece. By this means cover fillets are eliminated, and maximum size flush surfaces obtained at a minimum fixing cost.

**Insulation Slabs :**

Flexo Insulation slabs are panels constructed with a core of insulating cork of any thickness according to the degree of insulation required, and faced on both sides with plywood either plain, veneered or metal faced (see future Information Sheet of this series) or with any combination of these three. This construction gives a very stiff panel particularly useful as a sound-proofing medium or for refrigerating cabinets, and in other situations where it is desired to prevent the passage of heat or sound. Partitions for offices, flats and hotels, with doors and glazing where required, can be supplied in any size.

**Flexo Flush Doors :**

As shown overleaf, there are two standard types of flush doors manufactured by the Company, the hollow framed and the solid laminated. Non-standard constructions to comply with the requirements of such bodies as Municipal Councils are also made.

(a) *Hollow framed doors* :

The standard product is fitted with one solid hardwood lipping, the other vertical edge being left as framed. This type is designated as D.F.1. Type D.F.2 has both vertical edges, and type D.F.0 neither vertical edge lipped. Lippings are firmly tongued, glued and dowelled to the doors, and are $\frac{5}{8}$ in. thick, including the $\frac{1}{4}$ in. tongue. Types D.F. doors cannot be supplied with the face veneer laid over the lippings. The framing of type D.F. is in deal, with $\frac{1}{4}$ in. thick ply facings cemented on under hydraulic pressure, the ply being faced in the timbers listed or any other to special order.

Another hollow framed door, type L.F., is also available, constructed in the same manner as type D.F., except that the stiles and rails are in $\frac{3}{4}$ in. laminated, kilned Canadian cedar instead of deal. With the framing thus laminated on the block board principle, the door is lighter and will not warp or twist, however extreme the conditions. The prices of this door type are 7d. per square foot in excess of those given below for the D.F. types.

Insulating doors for sound-deadening purposes and for insulation against heat and cold, can be made from both types D.F. and L.F. by the addition of black cork in the interstices of the framing. These doors are priced at 5d. per square foot above the respective costs of the D.F. and L.F. types.

(b) *Solid Laminated Doors* :

This type, designated as S.C., is of heavier construction than the hollow types, being solid throughout, with the core in $\frac{5}{8}$ in. strips of laminated kiln-dried cedar. The facings may be $\frac{1}{4}$ in. or $\frac{3}{8}$ in. thick according to whether a painted or polished finish is intended. The cedar is of light weight but close grain nature, and as it is practically inert after kilning and laminating, this type of door is guaranteed to remain unaffected by changes of moisture and temperature in all situations.

Standard doors are fitted with solid hardwood lippings to both vertical edges, type S.C.A. having the lippings left showing on the door faces, and type S.C.B. having the lippings covered by the facing veneers. Top and bottom edges may be fitted with lippings if required, mitred at the corners, at slight extra cost, and this construction is usually supplied when fireproof doors are specified. Type S.C. doors can also be made with the laminated core of hardwood. Where a fireproof door is intended to be paint finished, galvanized steel facings to the ply are recommended.

In all polished doors, whether veneered on one or both faces, the solid lippings are in timber to match the face veneer unless otherwise specified. Doors to be painted, or in Columbian pine and European birch, cannot be supplied with lippings covered by face veneers.

**Size and Thickness :**

All types of doors are available in nominal thicknesses of 1½ ins., 1¾ ins. and 2 ins. and unless otherwise specified the finished thickness is from $\frac{1}{8}$ in. to $\frac{7}{16}$ in. under the nominal. Stock sizes are 7 ft. by 3 ft., 6 ft. 8 ins. by 2 ft. 8 ins., 6 ft. 6 ins. by 2 ft. 6 ins., 6 ft. 6 ins. by 2 ft. 4 ins., 6 ft. 6 ins. by 2 ft. 0 ins. and 6 ft. 0 ins. by 2 ft. 0 ins.

Doors for paint finish may be supplied $\frac{1}{4}$ in. under sizes given, but doors for polished finish or metal-faced doors are supplied to full dimensions.

**Prices :**

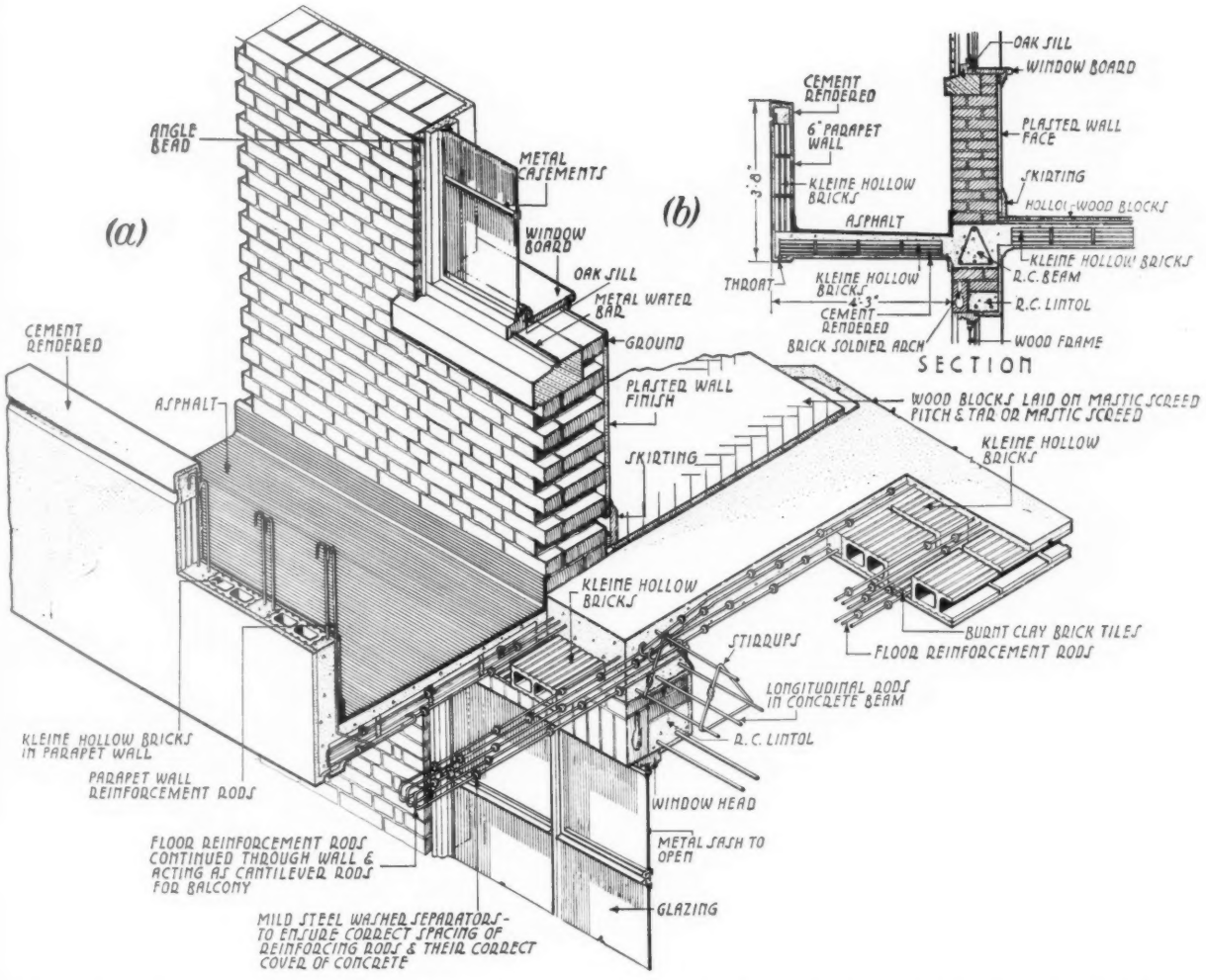
Hollow type D.F.1 range from 17s. for 1½ ins., 17s. 9d. for 1¾ ins., and 18s. 6d. for 2 ins. thickness.

Solid type S.C. range from 30s. 9d., 33s. and 35s. 3d. for 1½ ins., 1¾ ins. and 2 ins. doors respectively.

**Observation Panels, etc. :**

Observation panels, etc., for glazing, complete with fixed and loose beads are provided at the following cost : rectangular, from 6s. 6d. each ; circular from 9s. 6d. each ; rectangular with rounded corners from 12s. 6d. each. Meeting styles rebated for folding doors, 5s. per pair of doors ; rounded for swing doors, 2s. 6d. per pair of doors ; recessed for sliding doors, 7s. 6d. per pair of doors. Mortice locks with or without furniture may be fitted before despatch, and doors for paint finish may be ready primed at small extra cost.

**Manufacturers :** Flexo Plywood Industries, Ltd.
**Address :** Flexo Works, South Chingford, London, E.4
**Telephone :** Silverthorn 2666 (8 lines)
**Telegrams :** Flexoply, Phone, London




*Construction of balcony cantilevered from floor slab : "a," detail of Kleine floor and balcony; "b," section through balcony. From "The Fabric of Modern Buildings."*

# LITERATURE

## CONTEMPORARY CONSTRUCTION

*[By W. E. J. BUDGEN]*

*The Fabric of Modern Buildings :* By E. G. Warland, M.I.STRUCT.E. Isaac Pitman and Sons, Ltd. Price 20s.

THE adjective modern applied to architecture has now come to have such a specialized meaning that it gives one something of a shock to find it applied in this book to those buildings erected recently which, while of "framed" construction, have their "frame" decently hidden behind the traditional materials, brick and stone. The devices and stratagems necessary in this type of construction are well illustrated in a series of really excellent isometric drawings which form the main part of the book.

These drawings, which are almost all illustrations of portions of actual buildings, have been published previously, but are here collected together and used to illustrate chapters on the component parts of buildings such as foundations, floors, walls and roofs.

As there are only 161 pages in the book, and nearly one half of these is taken up with illustrations, it follows that the written matter can only deal very briefly with its subject. Indeed, it is unfortunate that the drawings were not left to speak for themselves since in this written matter the author makes several statements which are incorrect and many more which give an incorrect impression.

Thus he says that "The sizes and length of precast piles are determined solely by the ease with which they may be handled and transported" whereas obviously the size of any pile is determined primarily by the load which it must carry. Again "Retaining walls are often in danger of sliding under very heavy thrusts; therefore, when the resistance depends entirely upon the weight of the wall, it is necessary that the wall shall be designed to resist this possibility." Actually it is even more necessary to make provision to resist sliding when forms of wall other than those which rely solely on their own weight are used. The description of *in situ* concrete might apply to one form of such piling but certainly does not apply to the more common forms.

A calculation is given for the thickness of concrete required in a plain concrete footing and while, owing to the looseness of the definitions of the symbols used, it is difficult to follow, the answer is incorrect.

On the subject of reinforced concrete floor slabs we are informed that the "centre portion of a floor slab can be omitted without weakening the slab," a statement which seems to have neither

theory nor practice to recommend it; while the sentence "Floor slab reinforcing bars are sometimes placed in one direction only, but it is more usual to design the slabs so that the reinforcements run in two directions or at right angles to each other" seems a complicated misstatement of fact.

Of brickwork bond—"Bricks should be placed in a wall so that the vertical joints between those in one course are covered by the vertical joints in the course adjacent, above and below, thus avoiding continuous vertical joints." This seems to contradict itself—or does it? W. E. J. B.

## CHURCHES

[*By PHILIP SCHAPIRO*]

*England's Greater Churches*. A Pictorial Survey, with an Introduction by C. B. Nicolson. Batsford. 3s. 6d. net.

THIS little book, which contains photographs by distinguished modern experts of nearly all the greater abbey churches and cathedrals in this country, attempts to give a very brief account of the development of English church architecture during the mediæval centuries. The omissions are few, which, for so small a work, is pleasantly surprising; sometimes one would have liked to have seen more of one particular cathedral illustrated, as in the case of Chichester, of which only the exterior (and then not the best part of it) is shown, together with an internal relief panel of Romanesque sculpture. But the little that is left untreated is amply compensated for by what is included; in particular must be mentioned the illustrations of the great churches of the Cistercian and other orders, such as Rievaulx and Tintern Abbeys, which after the Reformation were allowed to fall into ruin, by reason of their remote and inaccessible sites. The photographs, which are almost universally of a very high standard, show both exterior and interior views; while the considerable number of illustrations of carvings, sculptures and other architectural details is quite astonishing in a book of this size. The pictures are for the most part arranged in chronological order, which is a pity, for the chronological treatment of history is seldom satisfactory, and at times even a hindrance. Thus in the case of Beverley Abbey, the exterior, which is the work of various periods, is shown under the thirteenth century, to which the transepts and choir chronologically belong, and we have to wait until the pictures dealing with the succeeding centuries before we come to the interior of the nave and the Percy Shrine (and even then the nave is shown out of its proper chronological place). Therefore, the general reader, who wants a companion in exploring the greater churches of England, and to whom in particular this book should be addressed, may sometimes be at a loss to understand how the different styles of architecture fuse and blend. Admittedly, Mr. Nicolson explains in his short introduction that the building of these churches was a leisurely affair, and that additions in different styles were made from time to time; but, unless the reader can see these different styles in fusion, and harmonizing or contrasting, as the case may be, he may be inclined to think that the bounds of the different styles are firmly and rigorously determined. And so, he may not understand at all that most important fact, that there are indeed very few great churches that can truthfully be said to be the work of one century, and one century alone, and in one, and only one, architectural style.

A particularly delightful section of the photographs shows some of the cathedrals, such as Hereford and Gloucester, in their own picturesque surroundings. Obviously a beautiful cathedral like Durham would itself remain beautiful if erected in Regent Street, or, for that matter, in a Wigan slum; but, in such a setting, its beauty would not so readily be seen, nor again would it be so readily appreciated. Yet the same beautiful building, in its own delightful and picturesque setting, becomes all the more lovely, and its grace and splendour is brought to its best advantage. Mr. Nicolson is indeed to be congratulated on having selected these views of some half-dozen of our greater churches in their own settings. The view of Salisbury Cathedral, rising above the water meadows with its magnificent spire, that one gets from the distance, is perhaps among the most delectable in this country; while the cathedral at Lincoln is seen at its best, not from the steep hill upon which it stands, but from the lower town, through the masts of the Witham shipping. Other illustrations especially worthy of mention are the Norwich choir, the interior of St. George's Chapel, the ruins of Fountains Abbey and the exterior (but not the interior) of King's College Chapel.

Apart from the photographs, of which on the whole the interiors are the better, there is little else in this book. The captions are for the most part adequate, and form a more or less connected account of the development of the architecture of the greater English churches during the mediæval centuries. The introduction is of exceptional brevity—it is only three pages—yet it manages to give an understandable description of the origins of these greater churches. That the earlier churches shown were all monastic or cathedral in origin Mr. Nicolson clearly states, but he does not make it readily apparent at first sight that at the Reformation many of these monastic foundations were refounded by Henry VIII, while others, such as Peterborough and Chester, were turned into cathedrals by him. Also his habit of using the spelling of quire for choir is at times irritating. The essential beauty in our English cathedrals and abbeys, exactly the same as the beauty in the Greek tragedies, is to be seen not so much in the finished compositions themselves, as in the spirit that lay behind those compositions.

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## London Regional Planning

The Minister of Health, Sir Kingsley Wood, presided last week at the first meeting of the Standing Conference on London Regional Planning, a body representative of the local authorities of London and Greater London, the Home Counties and the Rural and Urban District Councils Associations, which has been set up, at his suggestion, to consider problems arising out of the planning of the London region. The conference replaces the Greater London Regional Planning Committee which came to an end last year.

The Minister emphasized the importance of having a body of people who are thinking about the planning problems of Greater London, and the real value in the ventilation of ideas for improvements. He said that the new conference, unlike the late committee, would not itself consider and make proposals for planning London, as so many planning schemes in the region had now reached an advanced stage. The conference would generally consider questions referred to it by the constituent authorities. Sir Kingsley believed that this course would greatly facilitate the conference's activities and at the same time increase the immediate usefulness of its work.

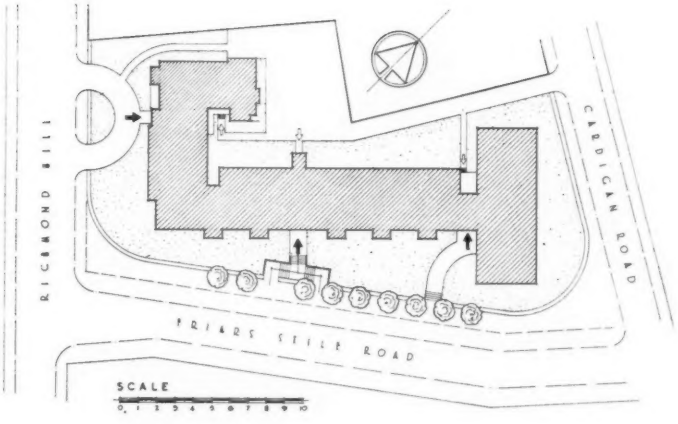
The Minister referred to some of the more important planning problems of London, particularly to the traffic problem, and the control to be exercised over the erection of flats. He felt sure that the views of the conference on these and other questions would prove most valuable.

The conference decided to invite Mr. Ewart G. Culpin (London County Council) and chairman of the previous Greater London Planning Committee to act as chairman. They agreed with a suggestion made by the Minister that certain representatives of outside interests should be co-opted—and decided to invite Mr. Frank Pick, of the London Passenger Transport Board—together with a nominee of the Standing Joint Committee set up under the London Passenger Transport Act, 1933, for co-ordinating the services of the Passenger Transport Board and the suburban services of the four amalgamated railway companies.

In wishing the conference success at the conclusion of the meeting, Sir Kingsley Wood said it had, perhaps, one of the most difficult tasks in local government—the future development of the greatest city in the world—controlled by 127 independent planning authorities. But if the task was one of the most difficult it was also, the Minister said, one of the most interesting and one of the most deserving of completion.

# FLATS ON RICHMOND HILL

*DESIGNED BY C. BERESFORD MARSHALL AND PARTNERS*




**GENERAL**—*A block of 34 flats at rents ranging from £200 to £395 per annum.*

**SITE**—*On Richmond Hill, Surrey, with the shorter façade facing south-west with views over the Thames. The flats are planned mainly with south-east and south-west aspects.*

**CONSTRUCTION**—*Steel-framed, with 11 in. hollow brick panel walls. Roof and floors are of reinforced hollow tiles, and the balconies and bays are cantilevered out from the floor slabs. Internal partitions generally are of 2½ in. partition blocks, those between flats being 10 in. thick composed of two separate skins with a 5 in. cavity between for soundproofing purposes. Staircases and lift wells are surrounded with 9 in. brickwork.*

**EXTERNAL FINISHES**—*The exterior is faced with brown rustic facings having a slightly raked joint, with artificial stone entrances, heads and cills to windows, and balcony and roof copings. Windows to the principal elevations are purpose-made metal casements and are painted pale blue and set in wooden frames, painted cream. Iron railings are provided to the top of balconies and roof parapets.*

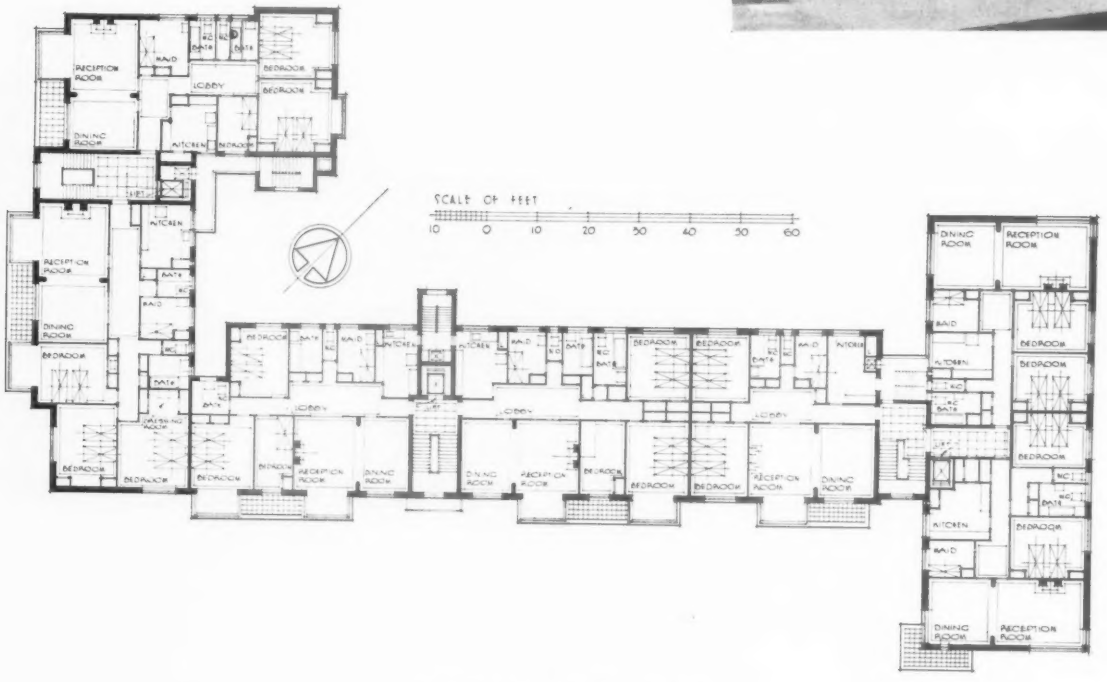
*Above, the front to Friars Stile Road.*

# FLATS ON RICHMOND HILL: DESIGNED BY

**PLAN**—*The flats consist of reception room, dining room, 3 or 4 bedrooms, bathrooms and kitchen. The reception room and dining room are planned* en suite, *and each flat has its own private balcony opening off one or other of these rooms. Three passenger lifts and staircases are provided serving two and three flats on each floor and two are carried up to roof level for escape purposes. A paved terrace is provided at the south-west end for the use of the tenants. There are three service staircases approached from the rear of the building and each is equipped with a small electric goods lift. Each kitchen has a tradesmen's entrance.*

*The basement is situated at the extreme west end of the building, since the site slopes away gradually at this end, and contains a caretaker's flat, heating chamber and fuel store, baggage room and electric intake.*

*Above, a view from Richmond Hill ; right, the principal entrance from Richmond Hill.*




TYPICAL FLOOR PLAN

# C. BERESFORD MARSHALL AND PARTNERS

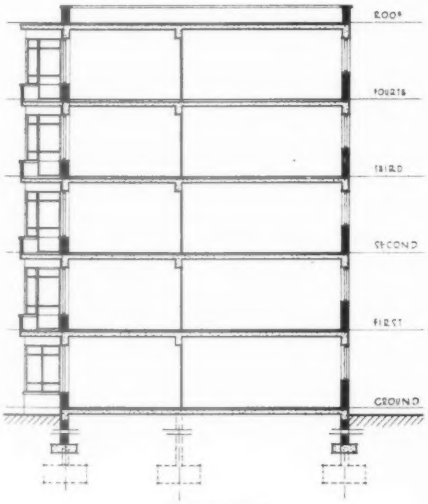
**INTERNAL FINISHES** — *Walls and ceilings to flats are plastered, and entrance foyers and staircases are finished with plastic paint. Flooring consists of tongued and grooved boarding nailed to fillets ; and the reception rooms have 1 in. oak flooring. The front entrance foyers have rubber flooring, and staircases and landings are covered with cork tiles. Staircases have solid reinforced concrete balustrades with chromium handrails.*

**SERVICES**—*Central heating and hot water are provided to all flats ; there are coal fires in all reception rooms.*

**CONTRACT PRICE**—*£45,000.*

*Above, a view from one of the reception rooms ; below, a typical kitchen.*

*For list of general and sub-contractors, see page 635.*




SECTION

# IN THAT CONTINGENCY

The following are abstracts of inquiries recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry and are not necessarily suitable for general application to all similar problems. [Crown Copyright reserved.]

### *Effect of Molasses on Concrete*

¶ *AN architect asked whether the cement face of a concrete tank was likely to be attacked by molasses, and if so, what means could be suggested for protecting the concrete.*

Sugar solutions in general cause some attack on Portland cement concrete, but the rate of attack varies very widely with different conditions. Aluminous cement is more resistant than Portland cement, though it is not immune from attack. An aluminous cement rendering, has, it is believed, been used in some cases with satisfactory results. The only definite information available with regard to molasses is that contained in a short paper by M. N. Clair and M. A. Morrissey (Engineering New Records III, 775 [1933]). Without attempting to reproduce the paper in full, the following general conclusions may be given :

" Concrete tanks have been used to some extent in the U.S.A. for the storage of molasses, in some cases with satisfactory, and in other cases unsatisfactory results. It was concluded that light, refined molasses have a more aggressive action than dark molasses. It was recommended that concrete should be treated with three coats sodium silicate solution. After treatment, the concrete should be allowed to age for at least 28 days before exposure to the molasses."

The use of a tar or bituminous coating is recommended in some of the German literature.

The following specification is given by the American authors, but the Building Research Station has no first-hand experience of its efficacy.

1. The surface of the cement should be freed from dust and grease.

2. The concrete should be allowed to become reasonably dry before treatment, to ensure a maximum absorption of the silicate.

3. If the concrete is dense, and well-matured, three separate applications of the silicate should be sufficient. An interval of not less than 24 hours (more if possible, since drying in the interior of the tank is likely to be slow) should be allowed between successive coats.

4. In applying the solution, care should be taken to ensure that the whole of the surface is well wetted at each application. Thus, the solution might first be sprinkled generally over the surface with a watering can, and then a further quantity applied freely with a scoop or brush.

This process should be repeated at each coating.

5. Strength of solution :—

For the 1st coat, 1 part silicate of soda to 4 parts water.

For the 2nd coat, 1 part silicate to 3 parts water.

For the 3rd coat, 1 part silicate to 2 parts water.

6. The grade of silicate of soda used should be one of high silicate-soda ratio, e.g., $3\frac{1}{2}SiO_2 : 1Na_2O$ to $2\frac{1}{2}SiO_2 : 1Na_2O$. (Proprietary grades approximating to this composition are available in this country.)

7. After the final treatment, the concrete must be allowed to dry thoroughly. When this has been done, it will be advisable to brush off any efflorescence which appears before putting the tank into use, to avoid contamination with soda.

### *Sound Absorption of Plaster*

¶ *AN architect required information regarding plasters for walls and ceilings of a new office building to afford a moderate degree of sound absorption. It was stated that he was inclined to regard hard plaster finishes as undesirably noisy.*

The reverberation time of a room is one of the criteria of comfort, and in the present instance it appeared that the architect was prepared to devote special attention to its adjustment.

The reverberation time of any room is chiefly dependent on two factors :—

(*a*) the volume of the room,

(*b*) the sound absorption coefficient of the materials which line the boundaries and of the furnishings.

Assuming a constant volume for any single room, then the reverberation time will decrease with an increase in the amount of absorption. As the furnishings and floor finish can in this case be regarded as a fixed quantity it remains to consider what treatment is appropriate for the walls and ceiling.

The ordinary types of wall plaster, from the soft lime finishes up to Keene's cement and other hard finishes, have absorption values ranging from 1 to 3 per cent. (open window representing 100 per cent. absorption) and, in rooms with the normal content of furnishings, increase in total sound absorption due to the use of a soft lime plaster in place of a harder finish is virtually negligible. To obtain an appreciable effect by treatment of wall and ceiling surfaces, it is usually necessary to have recourse to special acoustic absorbents with absorption values ranging from 20 per cent. upwards. It is suggested that in the present instance the problem could be dealt with in one of two ways :—

(*a*) to use a *moderate area* of acoustic plaster, or (*b*) to use an alternative type of material such as wallboard.

There are two objections to covering the walls and ceiling entirely with acoustic plaster. The room might change from an extreme of too much noise to an extreme of too much quiet. In the latter condition, not normally experienced, small noises might become as annoying as the larger noises were previously, and there is a sensation of being confined in a small space, which is unpleasant. The other objection is that due to the friable nature of absorbent plasters; their use on walls is often undesirable, at any rate up to shoulder height. A satisfactory solution for smaller rooms is to cover the ceiling with a moderately absorbent acoustic plaster, and to use hard plaster or any other suitable material for the walls.

An inherent advantage in this method of treatment is that traffic noises coming through the windows from below impinge directly on the absorbent and lose appreciably in loudness.

Acoustic plasters can be supplied white, or in a coloured mix. Their surface finish is quite pleasant, but decoration applied to them must be carefully done. Distempering or painting will at once reduce them to the effectiveness of hard wall plasters, by sealing the pores. Stippling and staining can be done to some degree, and the manufacturer will usually supply directions.

The other alternative to achieve quietness in small rooms is to use fibrous wallboards, wood-panelling, or similar materials. Over-correction is not likely to occur with these materials, and they can replace plaster entirely. Any of them having a fair value of sound absorption must be decorated in accordance with the maker's directions if the absorption is to be retained, although their additional mode of absorption by resonance will afford some advantage over hard plaster finishes under any conditions.

### *Corrosion of Lead in Roof*

¶ *AN architect reported that the lead covering the roofs of the nave and aisles of a church roof showed thick white deposits on the underside. Where decay had occurred the lead had been laid on felt on oak boards ; on the chancel roof, lead had been laid direct to deal boards without felt, and no corrosion had occurred. Information was required on the cause of the corrosion and on precautions which should be adopted in re-laying the lead.*

The corrosion product has the appearance of white lead, which has been found in numerous cases where lead has been laid on oak roofing. The white lead is produced by the action of mild acidic substances. There would, however, in this instance, appear to be two alternative possible explanations of the corrosion of the lead :—

1. The sarking felt may contain some substance of a mild acidic nature capable of causing progressive corrosion of lead. The kind of felt which was used is made nowadays from a mixture of jute and hair bound with a complex mixture which may contain wood and coal tars, creosote and resin. It is possible that some constituents of the mixture used can cause corrosion of lead, but probably a lengthy chemical examination, to confirm or disprove this, is hardly necessary.

2. Oak under moist conditions can cause corrosion of lead since the timber contains substances having a slight acidity. A sheet of impervious felt should therefore be used whenever lead is laid on new oak, and this will prevent acidic substances from the oak from reaching the metal. The sarking felt used on the church was not of the impermeable variety, and some acidic vapours

may have passed through the felt from the oak.

Whether either of the two above-mentioned causes is of greater importance is probably immaterial. As regards fixing new work, it will be desirable to insulate the lead from the timber by a layer of pure bitumen felt. The grade 1C in the British Standard Specification No. 747 would appear to be the most suitable, and a sheet of paper should be used between the felt and the lead to prevent any possibility of the metal sticking.

Further information on the corrosion of lead may be found in Building Research Technical Paper No. 8, which may be obtained from H.M. Stationery Office, Adastral House, Kingsway, London, W.C.2, price 1s. net.

*Salt in Sand*

¶ *A BUILDER stated that for a particular job the best available sand was a sea sand containing a proportion of shell. It was proposed to use this material for mortar, external rendering and internal plastering, and information was desired on any harmful effects which might arise.*

The use of unwashed sea sand may lead to dampness and discoloration of plaster and mortar, and it should on no account be used. Even sands from river estuaries, where the sea water is diluted with fresh, can cause trouble, and one case was investigated where serious corrosion of the screws and clips fixing electric light conduit, and also of the switches, occurred from this cause. The danger of the use of sea shore sand can therefore be appreciated.

The dampness in plaster in which sea sand is used is due not so much to the "salt" (common salt : sodium chloride) it contains, as to the more hygroscopic chlorides of calcium and magnesium associated with it in sea water.

It should be appreciated that the troubles arising from the presence of sea salts in sand are most difficult to treat. Stripping and replastering is the least expensive procedure that can be recommended unreservedly, and there is no absolute assurance of success, for the salts causing the dampness may have been absorbed in part by the body of the wall.

The sand can be purified by thorough washing in a sand-washing machine, and if this cannot conveniently be done, an alternative source of sand, e.g., pit sand should be sought. The shells in the sand, will themselves do no harm, but the fact that they tend to retain salts more strongly than sand grains is a reason for recommending *thorough* washing of the sand.

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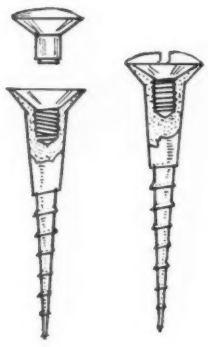
## Exhibition of Pottery and Glass

To mark the completion of the first section of Heal's new shop in Tottenham Court Road, W.C. an exhibition of pottery and glass is now being held in the new extension of the Mansard Gallery. The exhibition includes replicas of many pieces shown in the various National Pavilions at the Paris Exhibition.



# TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

*Thief-proof Screws*

THE drawings at the head of these notes show a rather ingenious type of thief-proof screw which has recently been evolved by Mr. Granville Bradshaw, whom some people may remember as the designer, amongst other things, of a very ingenious oil-cooled engine used in the Belsize-Bradshaw car and in a good many motor cycles during the early nineteen-twenties. The glass trade has, of course, been using screws of much the same pattern for a good many years, but the capping piece is generally a chromium-plated blob or a glass star used purely to give the impression that there is really no fixing at all, with no claims to being thief-proof, for the head of the main screw is slotted in the usual way. With the Bradshaw type the screw head is drilled and tapped but has no slot, the screw being driven by the slotted head of the inner member. Once the main screw is driven any tampering can only remove the inner member, and the main screw can only be removed by drilling it out.

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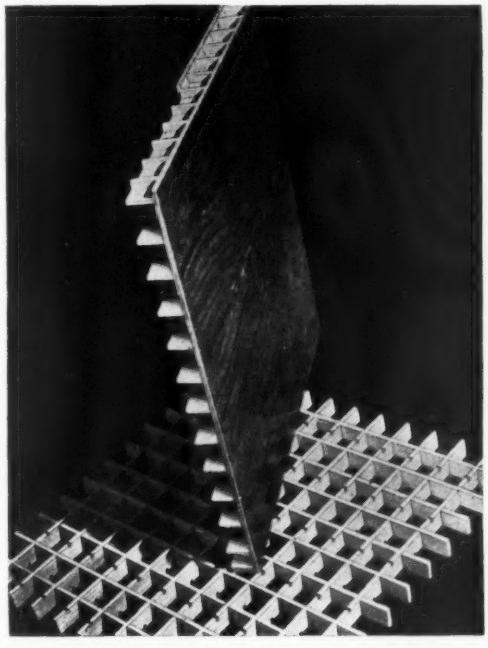
Now it is obvious that this cannot be called a really epoch-making invention, but it may well save a certain amount of petty pilfering. The railway companies, I gather, suffer badly in this way, not because people want to steal the fittings, but because they want a nice stock of chromium-plated screws for fixing things in their own homes. In public buildings of all kinds there is a little pilfering of oddments such as liquid soap holders and these screws will be useful for fixing almost anything liable to arouse a certain degree of covetousness, and for sundry outside jobs such as garden sheds or garages where it is possible to circumvent a padlock by unscrewing the staple fittings, though even these are often arranged so that the screws are inaccessible when the padlock is in position. And I suppose everyone remembers how house name plates used to disappear in the night



*The structure of the Rezo Flush Door. See note overleaf.*

from garden gates during the metal shortage of 1917.

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These screws are made in all the usual lengths and sizes, and there is also a second type (the left hand one of the two shown) where a hardened plug is hammered home after the screw has been driven by a special driver with a threaded end. Metal as well as wood screws are also available.—(*The Tamper-proof Screw Co., 82 High Street, Camden Town, London, N.W.1.*)

*Flush Doors*

One would have thought that it was scarcely possible for anyone to produce a new flush door and yet still make it in such an entirely different way from anybody else that it would be possible to get a patent for the method of construction. But what seems to be an entirely new type, which has been on the French market for some years under the name of Réseau, is now being made and sold in this country by Yelverton, Dawbarn of Birkenhead. There is a photograph showing the method of construction at the foot of page 633, and the most important part of the patent seems to be that the different air cells in the foundation or core are all ventilated by means of the slots in their walls. The core is built up of a series of slotted strips forming a grid and joined together on the over-and-under principle like the compartments in an egg box. The plywood panels are hydraulically pressed on to the core and the continuous and even support of the cell walls keeps the panel nice and flat so that it does not show waves when it is painted or polished.

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This method of construction lends itself equally well to panelling of all kinds, and it is suggested as an alternative to plywood and block boards, the catalogue showing a number of illustrations from the *Normandie*, where it has been freely used for the foot and headboards of bedsteads and as a mounting for the more elaborate decorative mirrors. One of the main reasons for its use here is probably its light weight, for a panel of 1¾-in. finished thickness weighs only 2¼ lbs. to the square foot. But ship work is none the less pretty hard on any material. Remembering how the B.B.C. had to eat their own words after an unfortunate remark about poached eggs getting scrambled on their way to the hungry voyager it would perhaps be rash for me to say anything at all about the damage that vibration can do, but it is worth pointing out that the C.G.T. started using these doors as far back as the *Ile de France*, and that the *Paris* and the *Lafayette* are also equipped with them. In this country they are, incidentally, being marketed under the name of Rezo.—(*Yelverton, Dawbarn Bros., Ltd., West Float, Birkenhead.*)

*. . . and Doors of all Kinds*

From Sharp Brothers and Knight comes a list of standard Enjo doors, which are made to the qualities and sizes standardized by the English Joinery Manufacturers Association, the trade mark on each door being followed by a further individual sign to show which member of the group is the actual manufacturer. All the usual stock sizes are available, and there are plenty of designs from the speculative builders' delight, "complete with mock hinges and studs," to the more restrained types likely to find favour with the architect. It is, of course, only too easy to disapprove of the imitation and the semi-moderne designs, but as long as there is a demand for them it is unreasonable to expect manufacturers to refrain from supplying it in the name of art or good taste. I do not know how many manufacturers there are in the country mass-producing the cheaper type of door, but catalogues appear in an unending stream, not too well produced as a rule, and about half the designs in them are, by architects' standards, unrelievedly horrible. I have found, however, that it is nearly always worth while looking through these catalogues with some care, even if they seem at first glance to be hardly worth the trouble, for there are often a few designs, scattered impartially among the horrors, which are quite simple and pleasant and could well be used for a small house where first cost is important.

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None of the foregoing need be taken as an attack on Messrs. S. B. and K., whose standard of design seems rather better than that of a good many of their contemporaries, but it is a point worth raising about joinery catalogues in general, and this particular example seems as good a peg to hang it on as any. Support the manufacturers whose designs are 50 per cent. pleasant and the others, whose designs are 90 per cent. dreadful, may in time be persuaded that there is something to be said for decency after all.—(*Sharp Brothers and Knight, Ltd., Shobnall Road, Burton-on-Trent.*)

*Hush*

I gather that I was being tactless last week when I suggested that Armourplate glass might well be fitted in the doors of slow combustion stoves, particularly in the new and very pleasant Otto stove which has just been produced by Allied Ironfounders. But Messrs. Pilkington have been courteous enough to send a reply to my query: "There is nothing to be said at the moment." This is at least an answer, at any rate more of an answer than a Foreign Secretary gets nowadays unless he starts distributing *aide-mémoires*, so I suppose there is no need for me to be disheartened. You remember how the Army Council and the Navy League argued when the Oracle prescribed wooden walls for putting Xerxes where he belonged? Messrs. Pilkington are a little too Delphic for me, but one or two interpretations are tabulated below :—

(1) Mind your own business ;
(2) We don't know ;
(3) We do know but we shan't tell you.

Vanity rejects (1) immediately, (2) seems improbable, so I am now inclined to (3). For the present there is nothing to do except abandon a policy of non-intervention and grant belligerent rights both to Pilkingtons and Allied Ironfounders, in the hope that they will be able to make up their minds within the next few months.

## Manufacturers' Items

The new London offices and showrooms of the Ibstock Brick and Tile Co., Ltd., at the L.M.S. Railway Goods Depot, High Street, Kensington, W.8, were opened by the company on October 16. The new telephone number is Western 1281–2.

The showrooms afford improved facilities for the display of Ibstock products, especially for their well-known facing bricks and roofing tiles, of which the Ibstock Company claim to produce the widest range of colours and varieties manufactured by a single works.

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The Management Committee of the Copper Development Association announces that Mr. D. P. C. Neave, who has been General Manager and Secretary of the Association since its inception in 1933, is resigning at the end of the present year. Mr. G. W. Preston, the Association's Electrical Engineer, has been appointed to become General Manager, and Dr. S. Baker, now Assistant Secretary, will become Secretary.

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In the list of sub-contractors for the Stoke Newington Municipal Buildings, published in our issue for October 7, we stated that the wood block flooring was carried out by Messrs. Hollis Bros. & Co., Ltd., and Messrs. G. J. Green and Son. This is incorrect as Hollis Bros. were responsible for the whole of the wood block flooring and the firm of Messrs. G. J. Green and Son carried out the plastering.

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The Morris-Singer Company have just sent us a copy of their latest publication devoted to signs. No fewer than thirty signs are illustrated and copies of the booklet may be obtained on application to the firm at Dorset House, Clapham Road, London, S.W.8.

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The patent 3 DF 2 Durasteel steel-and-asbestos sheets were subjected to a series of unusually severe tests at the Greenford factory of Messrs. Durasteel Roofs, Ltd., on October 6. The experiments were witnessed by a large number of consulting engineers, architects and technical officials from Government Departments.

It was shown that an incendiary medium composed of 3 lb. of Thermit iron will easily penetrate a ¼-in. mild steel plate, the recorded time in this case being 9 seconds from the moment of ignition. An equal quantity of Thermit simultaneously ignited on ⅜-in. Durasteel 3 DF 2 sheeting burnt itself out without penetration. It is well known that the fierce combustion of Thermit attains a temperature of 5,400 degrees F., but although the top-side surface of the 3 DF 2 Durasteel had fused, inspection after the test showed the underside to be unmarked. After this experiment the ¼-in. mild steel plate and a section of the ⅜-in. 3DF 2 patent sheet already tested were subjected to the flame of an oxy-acetylene burner. As was to be expected, a piece of the steel (measuring 6 ins. by 4 ins.) was readily cut by the flame in 30 seconds ; while it took over 3 minutes to deal with a fissure 3 ins. long in the 3 DF 2 sheet, which has a compressed layer of asbestos composition keyed between its thin steel faces. It was later observed that, while the outstanding fire resistance of 3 DF 2 makes it difficult to cut with oxy-acetylene flame, the material is readily sheared by guillotine, or can be easily worked with drill and hacksaw.

A demonstration of real fire conditions was created by quenching a timber-and-petrol blaze inside a small hut constructed from wood framing shielded and lined with sheets of 3 DF 2 fire protection panelling. Pyrometer readings during the fire mounted to 670 degrees C., and after 7 minutes, while the temperature still read 650 degrees C., the door of the hut was opened, and a hose played on the hut interior. Observers inspected the hut inside and out immediately after the test, and were able to record no damage to the 3 DF 2 sheets, which were quite unaffected by the fire and quenching. It was noted that the same hut had been subjected to earlier fire tests, and no

sheets had required replacement for the present trials.

This fire test hut, which measured 6 ft. by 5 ft. by 5 ft. was later put to an explosion test when a charge of 1 lb. of blasting powder contained in a heavy steel cylinder was fired inside the structure. The following results were recorded after the explosion :—

The hut was greatly distorted, its roof being almost lifted off together with the chimney. Two large fragments of steel cartridge casing, weighing respectively 1 lb. 12½ oz. and 1 lb. 7½ oz. had penetrated the 3 DF 2 sheets forming the inner lining of the hut and were found to have perforated the outer 3 DF 2 sheeting where they remained lodged. No splintering of the sheeting was apparent. Two smaller fragments had also holed the inner 3 DF 2 lining in other places, but these had merely dented the outer 3 DF 2 sheeting. Apart from these actual impacts from the cartridge shrapnel, the 3 DF 2 sheets of which the hut was built were still virtually unaffected. The force of the explosion was such that a corner of the 6-in. concrete slab forming the base of the cabin had been blown away. The door was also blown open.

# THE WEEK'S BUILDING NEWS

### LONDON & DISTRICT (15 MILES RADIUS)

LEWISHAM. *Flats, etc.* Plans passed by the Lewisham B.C. : Flats, Canadian Avenue, Catford, Wright and Renny; flats, Lee Terrace, Mr. Joseph ; 114 flats, Whitefoot Lane Estate, Mr. A. du T. Bottomley, for the London C.C. ; 27 houses, Ringmore Rise, Mr. H. Macintosh.

WESTMINSTER. *Cinema, etc.* Plans passed by the Westminster City Council : Cinema, restaurant and shops, Regent Street, Carlton Street and St. Albans Place ; flats (Westminster Gardens, Section B), New Street, No. 2 Millbank ; rebuilding as cinema, Daly's Theatre, Cranbourn Street ; flats, Old Barrack Yard, Knightsbridge ; flats, 7-10 Lowndes Square.

WESTMINSTER. *Conveniences.* The Westminster City Council is to construct conveniences adjoining Chelsea Bridge, at an estimated cost of £7,000.

### SOUTHERN COUNTIES

CATERHAM. *Flats.* Plans passed by the Caterham U.D.C. : 24 flats, Limpsfield Road, Hamsey Green, Warlingham, The Chelsea Property Co., Ltd.

GRAVESEND. *Houses, etc.* Plans passed by the Gravesend Corporation : 14 houses, Valley Drive, Mr. F. T. Mattocks.

HOVE. *Hotel, etc.* Plans submitted to the Hove Corporation : 14 houses, Poplar Avenue, Mr. H. L. Ford ; six houses, Park Rise, Mr. G. W. Warr ; hotel, Hotel Ambassador, Flag Court site, Kingsway, Messrs. Jackson and Greenen.

PORTSMOUTH. *Housing.* The Portsmouth Corporation proposes to proceed forthwith with the erection at Cosham of 600 houses to deal with overcrowding.

PORTSMOUTH. *Houses.* Plans passed by the Portsmouth Corporation : Ten houses, Grant Road, Farlington, Mr. P. J. Kelly ; six houses, Northern Parade, Messrs. E. and G. Dye ; 15 flats, Northern Parade, Mr. W. H. Hellier.

WORTHING. *Houses, etc.* Plans passed by the Worthing Corporation : Seven houses, Ilex Way and Anscombe Road, Novean Homes (Worthing), Ltd. ; 16 houses, Mulberry Lane, H. Nicholl & Co. ; 12 flats, High Street, Tarring, Circle Land Co., Ltd. ; 14 houses, Field Place Estate, Yates, Cook and Darbyshire ; 10 houses, Rosebery Avenue, West Park Estate, Ltd. ; eight houses, Stone Lane, Sands & Co. ; 14 houses, Mulberry Lane, Mr. P. Haworth ; 24 houses, Clarendon Road, Sompting Manor Estates (Worthing), Ltd. ; six houses, Goring Hall Estate, Green Chester & Co., Ltd. ; 16 houses, Ardingley Drive, Chatsmore Estates, Ltd. ; nine houses, Alinora Avenue, Princes (Worthing), Ltd.

### SOUTH-WESTERN COUNTIES

CHELTENHAM. *Houses, etc.* Plans passed by the Cheltenham Corporation : block of flats, Cambray House, John Davis Estates ; 28 houses and bungalows, off Arle Road, Western Estates, Ltd. ; 12 houses, Hayward's Lane, Charlton Kings, Cheltenham Estates, Ltd.

SWINDON. *Houses.* Plans passed by the Swindon Corporation : 28 houses, Wheeler Avenue, Mr. F. F. Jefferies : 42 houses, Headlands Grove, Mr. A. J. Colborne.

BRISTOL. *Buildings.* The Bristol Corporation is to lay out the Bedminster cemetery and erect buildings at a cost of £40,900.

BRISTOL. *Schools.* The Bristol Education Committee has obtained sites on the Southmead, Knowle and Speedwell housing estates for the erection of nursery schools.

### MIDLAND COUNTIES

BIRMINGHAM. *School.* The Birmingham Education Committee is to erect an elementary school in Turves Green, Northfield, at a cost of £49,000.

BIRMINGHAM. *School.* The Birmingham Education Committee has acquired a site in Redditch Road, King's Norton, for the erection of an elementary school.

CHESTERFIELD. *Houses.* Plans passed by the Chesterfield Corporation : Ten houses, Smithfield Avenue, Mr. A. Smith ; 20 houses, Walton Road Estate, Mr. I. D. Wilcockson.

ILKESTON. *School, etc.* The Ilkeston Corporation has purchased land on the Field House Estate for the erection of an infants' school and a welfare centre.

MARKET HARBOROUGH. *Market.* The Market Harborough U.D.C. is to erect a covered market at the western end of the cattle market, at an estimated cost of £4,500.

STOURBRIDGE. *School.* The Worcestershire Education Committee has obtained sanction to borrow £37,400 for the erection of an elementary school at Stourbridge.

WALSALL. *Civic Buildings.* The Walsall Corporation is to provide accommodation for various departments in the vicinity of the Town Hall, at a cost of £3,500.

WEST BROMWICH. *School.* The West Bromwich Education Committee is to acquire a site at Church Vale for the erection of a secondary school.

WEST BROMWICH. *Housing.* The West Bromwich Corporation has purchased 22 acres in Dial Lane for a housing scheme.

### NORTHERN COUNTIES

BARNSLEY. *Nurses' Home, etc.* The Barnsley Corporation has approved plans for the erection of a maternity and nurses' home.

BIRKENHEAD. *Housing.* The Birkenhead Corporation is to erect tenements in Quigley Street.

BLACKPOOL. *Cinema.* Plans have been prepared by Mr. Halstead Best, F.R.I.B.A., on behalf of Mr. Arthur Hall, of South Shore Theatres, Ltd., for the erection of a cinema theatre near the Oxford Hotel, Marton, Blackpool.

BLACKPOOL. *Baths.* The Blackpool Corporation has now obtained sanction to borrow £261,735 for the erection of baths, including remedial and Turkish establishments.

BOLTON. *Clinic.* The Bolton Corporation is to erect a school clinic at Tonge Moor.

BOLTON. *School.* The Bolton Education Committee is to prepare revised plans for the junior mixed and infants' school at Crompton Fold for 400 scholars.

BOLTON. *Schools.* The Bolton Education Committee has approved plans for a nursery school at Pikes Lane for 120 children and at Pilkington Street for 160 children.

BOLTON. *Houses.* The Bolton Corporation is to erect 34 houses on the Willows Lane Estate by direct labour.

BOLTON. *Housing.* The Bolton Corporation is to purchase Breightmet Hall Estate for housing purposes.

BOLTON. *Houses.* Plans passed by the Bolton Corporation : 16 houses, Brampton Road, W. and A. Rigby ; 14 houses, Regan Street, Mr. F. Merrison ; 12 houses, Oxford Grove, Drapers, Ltd.

BRADFORD. *Schools.* The Bradford Education Committee is to erect new premises for the Grange High School for Boys and adapt the old premises as an extension for the girls' school.

SHINEY ROW, CO. DURHAM. *Cinema.* Plans have been approved by the Houghton-le-Spring U.D.C. for the Lyric Cinema. The estimated cost of the building is £17,500. The architect is Mr. J. Hedley Simson, who has also been instructed to prepare plans for the Ritz Cinema, Berwick, under the direction of Mr. J. M. Mcfarlane.

### SCOTLAND

GLASGOW. *Houses.* The Glasgow Corporation is to erect 148 houses at Holmfauldhead Drive.

### ISLE OF MAN

DOUGLAS. *Houses.* Plans passed by the Douglas (I. of M.) Corporation : Eight houses, Devonshire Crescent, Messrs. McKibbin and Kewley ; 14 houses, Messrs. T. and F. Chapman.

DOUGLAS. *Swimming Baths.* The Douglas (I. of M.) Corporation has had under consideration plans of a proposed new swimming bath at Port Skillion, and consideration of the matter has been deferred for the committee to inspect the site after the borough engineer and surveyor has pegged out the position of the proposed new bath.

# THE BUILDINGS ILLUSTRATED

**ST. ANDREW'S CHURCH, HERSHAM** (pages 613–615). Architect : D. H. Beaty-Pownall. The general contractors were Geo. Jarvis & Co., Ltd.

**HOUSE AT BROCKENHURST** (pages 616–617). Architects : Tatchell and Wilson. The general contractors were Chapman, Lowry and Puttick, Ltd., who were also responsible for the electric light, power and bells, central heating and hot water. The sub-contractors and suppliers included : Daneshill Brick and Tile Works, facing bricks ; Bratt Colbran, Ltd., fireplaces ; Carter & Co., wall tiling ; Roberts, Adlard & Co., Ltd., pinion pantiles ; Shanks & Co., Ltd., sanitary fittings ; C. E. Welstead, Ltd., metal windows.

**BLOCK OF FLATS, RICHMOND** (pages 629–631). Architects : Messrs. C. Beresford Marshall and Partners. Consulting Engineer : Arthur Beedle, A.M.I.STRUCT.E. The general contractors were E. D. Winn & Co., Ltd., and the sub-contractors and suppliers included : Ragusa Asphalte Paving Co., Ltd., asphalte ; D. G. Somerville & Co., Ltd., artificial stone ; London and Wales Steel Construction Co., Ltd., structural steel ; Frazzi, Ltd., special roofings ; Sorbo, Ltd., patent flooring ; Chase & Co., Ltd., central heating ; W. N. Froy and Sons, Ltd., fireplaces and sanitary fittings and door furniture ; Hall Boilers, Ltd., boilers ; Smith and Hammond, Ltd., electric wiring ; Armstrong Cork Co., Ltd., stairtreads ; Williams and Williams, Ltd., casements ; Conrad Parlanti, Ltd., metalwork ; Marryat and Scott, Ltd., lifts.

# RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

| | | | I. s. | I. d. | II. s. | II. d. |
|---|---|---|---|---|---|---|
| A | ABERDARE ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| A | Aberdeen ... | Scotland | 1 | 7 | 1 | 2½ |
| $A_1$ | Abergavenny ... | S. Wales & M. | 1 | 6½ | 1 | 2 |
| $A_2$ | Abingdon ... | S. Counties | 1 | 5½ | 1 | 1½ |
| A | Accrington ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Addlestone ... | S. Counties | 1 | 6 | 1 | 1½ |
| A | Adlington ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Airdrie ... | Scotland | *1 | 7 | 1 | 2½ |
| C | Aldeburgh ... | E. Counties | 1 | 3 | 0 | 11½ |
| A | Altrincham ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $B_2$ | Appleby ... | N.W. Counties | 1 | 3½ | 0 | 11½ |
| A | Ashton-under-Lyne | N.W. Counties | 1 | 7 | 1 | 2½ |
| B | Aylesbury ... | S. Counties | 1 | 5 | 1 | 0½ |
| B | BANBURY ... | S. Counties | 1 | 5 | 1 | 0½ |
| $B_1$ | Bangor ... | N.W. Counties | 1 | 4½ | 1 | 0½ |
| $A_2$ | Barnard Castle | N.E. Coast | 1 | 5½ | 1 | 1½ |
| A | Barnsley ... | Yorkshire | 1 | 7 | 1 | 2½ |
| B | Barnstaple ... | S.W. Counties | 1 | 6 | 1 | 0½ |
| A | Barrow ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Barry ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| B | Basingstoke ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | Bath ... ... | S.W. Counties | 1 | 6 | 1 | 1½ |
| A | Batley ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_2$ | Bedford ... | E. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Berwick-on-Tweed | N.E. Coast | 1 | 6 | 1 | 1½ |
| $A_2$ | Bewdley ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| B | Bicester ... | S. Counties | 1 | 5 | 1 | 0½ |
| | Birkenhead ... | N.W. Counties | *1 | 8 | 1 | 5 |
| A | Birmingham ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Bishop Auckland | N.E. Coast | 1 | 6½ | 1 | 2 |
| A | Blackburn ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Blackpool ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Blyth ... ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| B | Bognor ... | S. Counties | 1 | 6 | 1 | 0½ |
| A | Bolton ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Boston ... | Mid. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Bournemouth... | S. Counties | 1 | 6 | 1 | 1½ |
| $B_2$ | Bovey Tracey | S.W. Counties | 1 | 4 | 1 | 0 |
| A | Bradford ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_1$ | Brentwood ... | E. Counties | 1 | 6½ | 1 | 2 |
| A | Bridgend ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| B | Bridgwater ... | S.W. Counties | 1 | 6 | 1 | 0½ |
| $A_1$ | Bridlington ... | Yorkshire | 1 | 6½ | 1 | 2 |
| A | Brighouse ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Brighton ... | S. Counties | 1 | 6 | 1 | 1½ |
| A | Bristol ... | S.W. Counties | 1 | 7 | 1 | 2½ |
| B | Brixham ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| A | Bromsgrove ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| B | Bromyard ... | Mid. Counties | 1 | 5 | 1 | 0½ |
| A | Burnley ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Burslem ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Burton-on-Trent | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Bury ... ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Buxton ... | N.W. Counties | 1 | 6½ | 1 | 2 |
| $A_1$ | CAMBRIDGE ... | E. Counties | 1 | 6½ | 1 | 2 |
| $B_1$ | Canterbury ... | S. Counties | 1 | 4½ | 1 | 0½ |
| A | Cardiff ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| A | Carlisle ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| B | Carmarthen ... | S. Wales & M. | 1 | 5 | 1 | 0½ |
| B | Carnarvon ... | N.W. Counties | 1 | 5 | 1 | 0½ |
| $A_1$ | Carnforth ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Castleford ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_2$ | Chatham ... | S. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Chelmsford ... | E. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Cheltenham ... | S.W. Counties | 1 | 6½ | 1 | 1½ |
| A | Chester ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Chesterfield ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| B | Chichester ... | S. Counties | 1 | 5 | 1 | 0½ |
| A | Chorley ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $B_1$ | Cirencester ... | S. Counties | 1 | 4½ | 1 | 0½ |
| A | Clitheroe ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Clydebank ... | Scotland | 1 | 7 | 1 | 2½ |
| A | Coalville ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Colchester ... | E. Counties | 1 | 6 | 1 | 1½ |
| $A_1$ | Colne ... ... | N.W. Counties | 1 | 6½ | 1 | 2 |
| $A_2$ | Colwyn Bay ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| $A_1$ | Consett ... | N.E. Coast | 1 | 6½ | 1 | 2 |
| $A_2$ | Conway ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| A | Coventry ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Crewe ... ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Cumberland ... | N.W. Counties | 1 | 5½ | 1 | 1½ |
| A | DARLINGTON ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | Darwen ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $B_1$ | Deal ... ... | S. Counties | 1 | 4½ | 1 | 0½ |
| $A_2$ | Denbigh ... | N.W. Counties | 1 | 5½ | 1 | 1½ |
| A | Derby ... ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Dewsbury ... | Yorkshire | 1 | 7 | 1 | 2½ |
| B | Didcot ... | S. Counties | 1 | 5 | 1 | 0½ |
| A | Doncaster ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $B_1$ | Dorchester ... | S.W. Counties | 1 | 4½ | 1 | 0½ |
| $A_2$ | Driffield ... | Yorkshire | 1 | 5½ | 1 | 1½ |
| $A_2$ | Droitwich ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| A | Dudley ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Dumfries ... | Scotland | 1 | 6 | 1 | 1½ |
| A | Dundee ... | Scotland | 1 | 7 | 1 | 2½ |
| A | Durham ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| $A_2$ | EASTBOURNE ... | S. Counties | 1 | 6 | 1 | 1½ |
| $A_1$ | Ebbw Vale ... | S. Wales & M. | 1 | 6½ | 1 | 2 |
| A | Edinburgh ... | Scotland | 1 | 7 | 1 | 2½ |
| $A_2$ | Exeter ... | S.W. Counties | *1 | 6 | 1 | 1½ |
| B | Exmouth ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | FELIXSTOWE ... | E. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Filey ... ... | Yorkshire | 1 | 5½ | 1 | 1½ |
| A | Fleetwood ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $B_1$ | Folkestone ... | S. Counties | 1 | 4½ | 1 | 0½ |
| A | Frodsham ... | N.W. Counties | 1 | 7 | 1 | 2 |
| $B_2$ | Frome ... | S.W. Counties | 1 | 4 | 1 | 0 |
| A | GATESHEAD ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| B | Gillingham ... | S. Counties | 1 | 5 | 1 | 0½ |
| $A_1$ | Glamorgan-shire, Rhondda Valley District | S. Wales & M. | 1 | 6½ | 1 | 2 |
| A | Glasgow ... | Scotland | 1 | 7 | 1 | 2½ |
| $A_2$ | Gloucester ... | S.W. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Goole ... ... | Yorkshire | 1 | 6 | 1 | 1½ |
| $A_2$ | Gosport ... | S. Counties | 1 | 6 | 1 | 1½ |
| $A_3$ | Grantham .. | Mid. Counties | 1 | 5½ | 1 | 1 |
| $A_1$ | Gravesend ... | S. Counties | 1 | 6½ | 1 | 2 |
| A | Greenock ... | Scotland | *1 | 7 | 1 | 2 |
| A | Grimsby ... | Mid. Counties | 1 | 7 | 1 | 2 |
| B | Guildford ... | S. Counties | 1 | 5 | 1 | 0 |
| A | HALIFAX ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Hanley ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Harrogate ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Hartlepools ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| B | Harwich ... | E. Counties | 1 | 5 | 1 | 0½ |
| B | Hastings ... | S. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | Hatfield ... | S. Counties | 1 | 6 | 1 | 1½ |
| B | Hereford ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | Hertford ... | E. Counties | 1 | 6 | 1 | 1½ |
| A | Heysham ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Howden ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | Huddersfield ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Hull ... ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | ILKLEY ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Immingham ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Ipswich ... | E. Counties | 1 | 6 | 1 | 1½ |
| $B_2$ | Isle of Wight ... | S. Counties | 1 | 4 | 1 | 0 |
| A | JARROW ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | KEIGHLEY ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_2$ | Kendal ... | N.W. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Keswick ... | N.W. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Kettering ... | Mid. Counties | 1 | 6½ | 1 | 2 |
| $A_2$ | Kidderminster | Mid. Counties | 1 | 6 | 1 | 1½ |
| $B_1$ | King's Lynn ... | E. Counties | 1 | 4½ | 1 | 0½ |
| A | LANCASTER ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Leamington ... | Mid. Counties | 1 | 6½ | 1 | 2 |
| A | Leeds ... ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Leek ... ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Leicester ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Leigh ... ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| B | Lewes ... ... | S. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | Lichfield ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| A | Lincoln ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| | Liverpool ... | N.W. Counties | *1 | 8½ | 1 | 3½ |
| $A_2$ | Llandudno ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| A | Llanelly ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| | London (12-miles radius) | | 1 | 8½ | 1 | 3½ |
| | Do. (12-15 miles radius) | | 1 | 8 | 1 | 3 |
| A | Long Eaton ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Loughborough ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Luton ... ... | E. Counties | 1 | 6½ | 1 | 2 |
| A | Lytham ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | MACCLESFIELD | N.W. Counties | 1 | 6½ | 1 | 2 |
| $A_2$ | Maidstone ... | S. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Malvern ... | Mid. Counties | 1 | 5½ | 1 | 1½ |
| A | Manchester ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Mansfield ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $B_1$ | Margate ... | S. Counties | 1 | 4½ | 1 | 0½ |
| $A_2$ | Matlock ... | Mid. Counties | 1 | 5½ | 1 | 1½ |
| $A_1$ | Merthyr ... | S. Wales & M. | 1 | 6½ | 1 | 2 |
| A | Middlesbrough | N.E. Coast | 1 | 7 | 1 | 2½ |
| $A_2$ | Middlewich ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| $B_2$ | Minehead ... | S.W. Counties | 1 | 4 | 1 | 0 |
| $B_2$ | Monmouth & S. and E. Glamorganshire | S. Wales & M. | 1 | 4 | 1 | 0 |
| A | Morecambe ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | NANTWICH ... | N.W. Counties | 1 | 6 | 1 | 1½ |
| A | Neath ... ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| A | Nelson ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Newcastle ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | Newport ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| A | Normanton ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Northampton | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | North Shields... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | North Staffs ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Norwich ... | E. Counties | 1 | 6½ | 1 | 2 |
| A | Nottingham ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Nuneaton ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | OAKHAM ... | Mid. Counties | 1 | 5½ | 1 | 1½ |
| A | Oldham ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Oswestry ... | N.W. Counties | 1 | 5½ | 1 | 1½ |
| $A_1$ | Oxford ... | S. Counties | 1 | 6½ | 1 | 2 |
| A | PAISLEY ... | Scotland | *1 | 7 | 1 | 2½ |
| $B_2$ | Pembroke ... | S. Wales & M. | 1 | 3½ | 0 | 11½ |
| A | Perth ... ... | Scotland | *1 | 7 | 1 | 2½ |
| $A_1$ | Peterborough ... | E. Counties | 1 | 6½ | 1 | 2 |
| A | Plymouth ... | S.W. Counties | *1 | 7 | 1 | 2½ |
| A | Pontefract ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_1$ | Pontypridd ... | S. Wales & M. | 1 | 6½ | 1 | 2 |
| $A_2$ | Portsmouth ... | S. Counties | 1 | 6 | 1 | 1½ |
| A | Preston ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | QUEENSFERRY | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | READING ... | S. Counties | 1 | 6½ | 1 | 2 |
| B | Reigate ... | S. Counties | 1 | 5½ | 1 | 1½ |
| $A_2$ | Retford ... | Mid. Counties | 1 | 5½ | 1 | 1½ |
| $A_1$ | Rhondda Valley | S. Wales & M. | 1 | 6½ | 1 | 2 |
| $A_2$ | Ripon ... ... | Yorkshire | 1 | 5½ | 1 | 1½ |
| A | Rochdale ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| B | Rochester ... | S. Counties | 1 | 6 | 1 | 0½ |
| $A_1$ | Ruabon ... | N.W. Counties | 1 | 6½ | 1 | 2 |
| A | Rugby ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Rugeley ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| A | Runcorn ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | ST. ALBANS ... | E. Counties | 1 | 6½ | 1 | 2 |
| A | St. Helens ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $B_2$ | Salisbury ... | S.W. Counties | 1 | 3½ | 0 | 11½ |
| $A_1$ | Scarborough ... | Yorkshire | 1 | 6½ | 1 | 2 |
| A | Scunthorpe ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Sheffield ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Shipley ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_2$ | Shrewsbury ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Skipton ... | Yorkshire | 1 | 6 | 1 | 1½ |
| $A_2$ | Slough ... | S. Counties | 1 | 6 | 1 | 1½ |
| $A_1$ | Solihull ... | Mid. Counties | 1 | 6½ | 1 | 2 |
| $A_2$ | Southampton... | S. Counties | 1 | 6 | 1 | 1½ |
| $A_1$ | Southend-on-Sea | E. Counties | 1 | 6½ | 1 | 2 |
| A | Southport ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | S. Shields ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| $A_1$ | Stafford ... | Mid. Counties | 1 | 6½ | 1 | 2 |
| A | Stirling ... | Scotland | 1 | 7 | 1 | 2½ |
| A | Stockport ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Stockton-on-Tees | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | Stoke-on-Trent | Mid. Counties | 1 | 7 | 1 | 2½ |
| B | Stroud ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| A | Sunderland ... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | Swansea ... | S. Wales & M. | 1 | 7 | 1 | 2½ |
| $A_2$ | Swindon ... | S.W. Counties | 1 | 5½ | 1 | 1½ |
| $A_1$ | TAMWORTH ... | N.W. Counties | 1 | 6½ | 1 | 2 |
| B | Taunton ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| A | Teesside Dist.... | N.E. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Teignmouth ... | S.W. Coast | 1 | 6 | 1 | 1½ |
| A | Todmorden ... | Yorkshire | 1 | 7 | 1 | 2½ |
| $A_1$ | Torquay ... | S.W. Counties | 1 | 6½ | 1 | 2 |
| $B_2$ | Truro ... ... | S.W. Counties | 1 | 4 | 1 | 0 |
| $A_2$ | Tunbridge Wells | S. Counties | 1 | 5½ | 1 | 1½ |
| A | Tunstall ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Tyne District.... | N.E. Coast | 1 | 7 | 1 | 2½ |
| A | WAKEFIELD ... | Yorkshire | 1 | 7 | 1 | 2½ |
| A | Walsall ... | Mid. Counties | 1 | 7 | 1 | 2½ |
| A | Warrington ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| $A_1$ | Warwick ... | Mid. Counties | 1 | 6½ | 1 | 2 |
| $A_1$ | Wellingborough | Mid. Counties | 1 | 6½ | 1 | 2 |
| A | West Bromwich | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Weston-s.-Mare | S.W. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Whitby ... | Yorkshire | 1 | 6 | 1 | 1½ |
| A | Widnes ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| A | Wigan ... | N.W. Counties | 1 | 7 | 1 | 2½ |
| B | Winchester ... | S. Counties | 1 | 5 | 1 | 0½ |
| $A_2$ | Windsor ... | S. Counties | 1 | 6 | 1 | 1½ |
| A | Wolverhampton | Mid. Counties | 1 | 7 | 1 | 2½ |
| $A_2$ | Worcester ... | Mid. Counties | 1 | 6 | 1 | 1½ |
| $A_2$ | Worksop ... | Yorkshire | 1 | 5½ | 1 | 1½ |
| $A_1$ | Wrexham ... | N.W. Counties | 1 | 6½ | 1 | 2 |
| $A_2$ | Wycombe ... | S. Counties | 1 | 5½ | 1 | 1½ |
| B | YARMOUTH ... | E. Counties | 1 | 5 | 1 | 0½ |
| B | Yeovil ... | S.W. Counties | 1 | 5 | 1 | 0½ |
| A | York ... ... | Yorkshire | 1 | 7 | 1 | 2½ |

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

**The rates for every trade in any given area will be sent on request. The rates of wages have been revised consequent upon the increase in wages which came into operation on February 1, together with all revisions following authorized annual regradings.**

# CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality and include delivery to site in Central London area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

## WAGES

| | £ s. d. |
|---|---|
| Bricklayer . . . . . per hour | 1 8½ |
| Carpenter . . . . . ,, | 1 8½ |
| Joiner . . . . . ,, | 1 8½ |
| Machinist . . . . . ,, | 1 8½ |
| Mason (Banker) . . . . . ,, | 1 9½ |
| ,, (Fixer) . . . . . ,, | 1 8½ |
| Plumber . . . . . ,, | 1 9½ |
| Painter . . . . . ,, | 1 8½ |
| Paperhanger . . . . . ,, | 1 7½ |
| Glazier . . . . . ,, | 1 7½ |
| Slater . . . . . ,, | 1 8½ |
| Scaffolder . . . . . ,, | 1 8½ |
| Timberman . . . . . ,, | 1 4½ |
| Navvy . . . . . ,, | 1 4½ |
| General Labourer . . . . . ,, | 1 3½ |
| Lorryman . . . . . ,, | 1 3½ |
| Crane Driver . . . . . ,, | 1 6½ |
| Watchman . . . . . ,, | 1 7½ |
| . . . . . per week | 2 10 0 |

## MATERIALS

### EXCAVATOR AND CONCRETOR

| | £ s. d. |
|---|---|
| Grey Stone Lime . . . . . per ton | 2 2 0 |
| Blue Lias Lime . . . . . ,, | 1 18 6 |
| Hydrated Lime . . . . . ,, | 2 6 0 |
| Portland Cement, in 4-ton lots (d/d site, including Paper Bags) . . ,, | 1 19 0 |
| Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags) . ,, | 2 5 0 |
| White Portland Cement, in 1-ton lots ,, | 8 15 0 |
| Thames Ballast . . . . . per Y.C. | 6 6 |
| ¾" Crushed Ballast . . . . . ,, | 7 0 |
| Building Sand . . . . . ,, | 7 6 |
| Washed Sand . . . . . ,, | 8 6 |
| 2" Broken Brick . . . . . ,, | 8 0 |
| ½" ,, . . . . . ,, | 10 3 |
| Pan Breeze . . . . . ,, | 6 6 |
| Coke Breeze . . . . . ,, | 8 9 |

### DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

| | 4" s. d. | 6" s. d. |
|---|---|---|
| Straight Pipes . . . per F.R. | 0 9 | 1 1 |
| Bends . . . . each | 1 9 | 2 6 |
| Taper Bends . . . ,, | 3 6 | 5 3 |
| Rest Bends . . . ,, | 4 3 | 6 3 |
| Single Junctions . . ,, | 3 6 | 5 3 |
| Double . . . . ,, | 4 9 | 6 6 |
| Straight channels . . per F.R. | 1 6 | 2 6 |
| ¾" Channel bends . . each | 2 9 | 4 0 |
| Channel junctions . . ,, | 4 6 | 6 6 |
| Channel tapers . . ,, | 2 9 | 4 0 |
| Yard gullies . . . ,, | 6 9 | 8 9 |
| Interceptors . . . ,, | 16 0 | 19 6 |
| IRON DRAINS: | | |
| Iron drain pipe . . per F.R. | 2 3 | 3 8 |
| Bends . . . . each | 6 4 | 13 1 |
| Inspection bends . . ,, | 11 5 | 14 4 |
| Single junctions . . ,, | 11 2 | 22 10 |
| Double junctions . . ,, | 17 2 | 30 9 |
| Lead Wool . . . . lb. | 6 | — |
| Gaskin . . . . . ,, | 5 | — |

### BRICKLAYER

| | £ s. d. |
|---|---|
| Flettons . . . . . per M. | 2 12 0 |
| Grooved do. . . . . ,, | 2 14 0 |
| Phorpres bricks . . . . ,, | 2 15 0 |
| ,, Cellular bricks . . . ,, | 2 15 0 |
| Stocks, 1st quality . . . ,, | 4 11 0 |
| ,, 2nd ,, . . . ,, | 4 2 6 |
| Blue Bricks, Pressed . . ,, | 8 14 0 |
| ,, Wirecuts . . . ,, | 7 12 6 |
| ,, Brindles . . . ,, | 7 0 0 |
| ,, Bullnose . . . ,, | 9 0 0 |
| Red Sand-faced Facings . . ,, | 6 18 6 |
| Red Rubbers for Arches . ,, | 12 0 0 |
| Multicoloured Facings . . ,, | 7 10 0 |
| Luton Facings . . . . ,, | 7 10 0 |
| Phorpres White Facings . . ,, | 3 17 3 |
| ,, Rustic Facings . . ,, | 3 12 3 |
| Midhurst White Facings . . ,, | 4 0 0 |
| Glazed Bricks, Ivory, White or Salt glazed, 1st quality: | |
| Stretchers . . . . . ,, | 21 0 0 |
| Headers . . . . . ,, | 20 10 0 |
| Bullnose . . . . . ,, | 27 10 0 |
| Double Stretchers . . . ,, | 29 10 0 |
| Double Headers . . . ,, | 26 10 0 |
| Glazed Second Quality, *Less* . ,, | 1 0 0 |
| ,, Buffs and Creams, *Add* . ,, | 2 0 0 |
| ,, Other Colours . . ,, | 5 10 0 |
| 2" Breeze Partition Blocks . ,, | 1 7 |
| 3" ,, ,, ,, . . ,, | 1 10 |
| 4" ,, ,, ,, . . ,, | 2 1 |
| ,, ,, ,, . . ,, | 2 6 |

### MASON

| The following d/d F.O.R. at Nine Elms: | s. d. |
|---|---|
| Portland stone, Whitbed . . F.C. | 4 4½ |
| ,, Basebed . . . ,, | 4 7½ |
| Bath stone . . . . ,, | 2 10 |
| York stone . . . . ,, | 6 6 |
| ,, ,, Sawn templates . ,, | 7 6 |
| ,, ,, Paving, 2" . . F.S. | 1 8 |
| ,, ,, ,, 3" . . ,, | 2 6 |

### SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

| | £ s. d. |
|---|---|
| 24" × 12" Duchesses . . per M. | 28 17 6 |
| 22" × 12" Marchionesses . ,, | 24 10 0 |
| 20" × 10" Countesses . . ,, | 19 5 0 |
| 18" × 10" Viscountesses . ,, | 15 10 0 |
| 18" × 9" Ladies . . . ,, | 13 17 6 |
| Westmorland green (random sizes) . per ton | 8 10 0 |
| Old Delabole slates d/d in full truck loads to Nine Elms Station: | |
| 20" × 10" medium grey . per 1,000 (actual) | 21 11 6 |
| ,, ,, green ,, ,, | 24 7 4 |
| Best machine roofing tiles ,, ,, | 4 5 0 |
| Best hand-made do. . . ,, ,, | 4 17 6 |
| Hips and valleys . . . ,, ,, | |
| ,, hand-made . . . each | 9 |
| Nails, compo . . . . ,, | 9½ |
| ,, copper . . . . per lb. | 1 4 |
| ,, ,, . . . . ,, | 1 6 |

### CARPENTER AND JOINER

| | £ s. d. |
|---|---|
| Good carcassing timber . . F.C. 2s. 7d.– | 2 10 |
| Birch . . . . . as 1" F.S. | 9 |
| Deal, Joiner's . . . . ,, ,, | 5 |
| ,, ,, 2nds ,, ,, | 4 |
| Mahogany, Honduras . . ,, ,, | 1 3 |
| ,, African . . . ,, ,, | 1 1 |
| ,, Cuban . . . ,, ,, | 2 6 |
| Oak, plain American . . ,, ,, | 1 0 |
| ,, Figured ,, . . ,, ,, | 1 3 |
| ,, plain Japanese . . ,, ,, | 1 2 |
| ,, Figured ,, . . ,, ,, | 1 5 |
| ,, Austrian wainscot . ,, ,, | 1 6 |
| ,, English . . . . ,, ,, | 1 11 |
| Pine, Yellow . . . . ,, ,, | 1 0 |
| ,, Oregon . . . . ,, ,, | 4 |
| ,, British Columbian . ,, ,, | 4 |
| Teak, Moulmein . . . ,, ,, | 1 3 |
| ,, Burma . . . . ,, ,, | 1 2 |
| Walnut, American . . . ,, ,, | 2 3 |
| ,, French . . . . ,, ,, | 2 3 |
| Whitewood, American . . ,, ,, | 1 1 |
| Deal floorings, ¾" . . . Sq. | 18 6 |
| ,, 1" . . . . ,, | 1 1 6 |
| ,, 1¼" . . . . ,, | 1 2 0 |
| ,, 1½" . . . . ,, | 1 5 0 |
| Deal matchings, ¾" . . . ,, | 1 10 0 |
| ,, 1" . . . . ,, | 14 0 |
| ,, 1¼" . . . . ,, | 15 6 |
| Rough boarding, ¾" . . . ,, | 1 4 0 |
| ,, 1" . . . . ,, | 16 0 |
| ,, 1¼" . . . . ,, | 18 0 |
| Plywood, per ft. sup.: | |

| Thickness | ¼" | | | ⅜" | | | ½" | | | ¾" | | | 1" | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Qualities | A | B | BB | A | B | BB | A | B | BB | A | B | BB | A | B | BB |
| | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. |
| Birch 60 × 48 | 4 | 2½ | 2 | 5 | 3 | 2½ | 7 | 5 | 4 | 8 | 6 | 5 | | | |
| Cheap Alder . | – | 2 | 1½ | – | 3½ | 2 | – | – | – | – | – | – | | | |
| Oregon Pine . | – | 2½ | – | 3 | 2½ | – | 4 | 3½ | – | 5 | 4½ | – | | | |
| Gaboon Mahogany | 4 | 3½ | – | 5 | 4½ | – | 7 | 6½ | – | 8 | 7 | – | | | |
| Figured Oak . | 6½ | 5 | – | 7½ | 5½ | – | 10 | 8 | – | 11/– | 9 | – | | | |
| Scotch glue . . . . . | | | | | | | | | | | | | lb. | | 8 |

### SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices from which should be deducted the various percentages as set forth below.)

| | ¼" | ⅜" | ½" | ¾" | 1" | 1¼" | 1½" | 2" |
|---|---|---|---|---|---|---|---|---|
| Tubes 2'–14' long . per ft. run | 4 | 5½ | 9½ | 1/1 | 1/10 | | | |
| Pieces, 12"–23" long . each | 10 | 1/1 | 1/11 | 2/8 | 4/9 | | | |
| ,, 3"–11½" long . ,, | 7 | 9 | 1/3 | 1/8 | 3/– | | | |
| Long screws, 12"–23½" long ,, | 11 | 1/3 | 2/2 | 2/10 | 5/3 | | | |
| ,, ,, 3" M–½" long ,, | 8 | 10 | 1/5 | 1/11 | 3/6 | | | |
| Bends . . . . ,, | 8 | 11 | 1/7½ | 2/7½ | 5/2 | | | |
| Springs not socketed . ,, | 5 | 7 | 1/1½ | 1/11½ | 3/11 | | | |
| Socket unions . . ,, | 2/– | 3/– | 5/6 | 6/9 | 10/– | | | |
| Elbows, square . . ,, | 10 | 1/1 | 1/6 | 2/2 | 4/3 | | | |
| Tees . . . . ,, | 1/– | 1/3 | 1/10 | 2/6 | 5/1 | | | |
| Crosses . . . . ,, | 2/2 | 2/9 | 4/1 | 5/6 | 10/6 | | | |
| Plain sockets and nipples ,, | 3 | 4 | 6 | 8 | 1/3 | | | |
| Diminished sockets . ,, | 4 | 6 | 9 | 1/– | 2/– | | | |
| Flanges . . . . ,, | 9 | 1/– | 1/4 | 1/9 | 2/9 | | | |
| Caps . . . . ,, | 3½ | 5 | 8 | 1/– | 2/– | | | |
| Backnuts . . . . ,, | 2 | 3 | 5 | 6 | 1/1 | | | |
| Iron main cocks . . ,, | 1/6 | 2/3 | 4/2 | 5/4 | 11/6 | | | |
| ,, with brass plugs . ,, | — | 4/– | 7/6 | 10/– | 21/– | | | |

| Discounts | TUBES Per cent. | | Per cent. |
|---|---|---|---|
| Gas . . . | 66⅔ | Galvanized gas . | 56⅔ |
| Water . . . | 61⅔ | ,, water . | 51⅔ |
| Steam . . . | 58⅔ | ,, steam . | 46⅔ |
| | FITTINGS | | |
| Gas . . . | 57⅔ | Galvanized gas . | 48⅔ |
| Water . . . | 53⅔ | ,, water . | 46⅔ |
| Steam . . . | 48⅔ | ,, steam . | 41⅔ |

| | s. d. |
|---|---|
| Rolled steel joists cut to length . . cwt. | 15 6 |
| Mild steel reinforcing rods, ⅜" . . . ,, | 18 0 |
| ,, ,, ,, ½" . . . ,, | 17 9 |
| ,, ,, ,, ⅝" . . . ,, | 17 6 |

### SMITH AND FOUNDER – *continued*

| | s. d. |
|---|---|
| Mild steel reinforcing rods, ¾" . . . cwt. | 17 6 |
| ,, ,, ,, ⅞" . . . ,, | 17 6 |
| ,, ,, ,, 1" . . . ,, | 17 6 |
| ,, ,, ,, 1¼" . . . ,, | 17 6 |
| ,, ,, ,, 1½" . . . ,, | 17 6 |

| Cast-iron rain-water pipes of ordinary thickness metal | 3" s. d. | 4" s. d. |
|---|---|---|
| | F.R. 1 0 | 1 3½ |
| Shoes . . . . each | 2 0 | 3 0 |
| Anti-splash shoes . . ,, | 4 6 | 8 0 |
| Boots . . . . ,, | 3 0 | 4 0 |
| Bends . . . . ,, | 2 7 | 3 9 |
| ,, with access door . ,, | — | 6 3 |
| Heads . . . . ,, | 4 0 | 5 0 |
| Swan-necks up to 9 offsets ,, | 3 9 | 6 0 |
| Plinth bends, 4½" to 6" ,, | 3 9 | 5 3 |
| Half-round rain-water gutters of ordinary thickness metal . F.R. | 5 | 6 |
| Stop ends . . . . each | 6 | 6 |
| Angles . . . . ,, | 1 7 | 1 11 |
| Obtuse angles . . . ,, | 2 0 | 2 6 |
| Outlets . . . . ,, | 1 9 | 2 3 |

### PLUMBER

| | £ s. d. |
|---|---|
| Lead, milled sheets . . . cwt. | 1 7 3 |
| ,, drawn pipes . . . ,, | 1 6 9 |
| ,, soil pipes . . . ,, | 1 9 9 |
| ,, scrap . . . . ,, | 18 0 |
| Solder, plumbers' . . . lb. | 1 1½ |
| ,, fine do. . . . ,, | 1 4 |
| Copper, sheet . . . ,, | 1 0½ |
| ,, tubes . . . ,, | 1 2½ |

| L.C.C. soil and waste pipes: | 3" | 4" | 6" |
|---|---|---|---|
| Plain cast . . F.R. | 1 0 | 1 2 | 2 6 |
| Coated . . . ,, | 1 1 | 1 3 | 2 8 |
| Galvanized . . ,, | 2 0 | 2 6 | 4 6 |
| Holderbats . . each | 3 10 | 4 0 | 4 9 |
| Bends . . . ,, | 3 9 | 5 3 | 10 3 |
| Shoes . . . ,, | 2 10 | 4 4 | 9 6 |
| Heads . . . ,, | 4 8 | 8 5 | 12 9 |

### PLASTERER

| | £ s. d |
|---|---|
| Lime, chalk . . . . per ton | 2 0 0 |
| Plaster, coarse . . . ,, | 2 15 0 |
| ,, fine . . . . ,, | 4 7 6 |
| Hydrated lime . . . ,, | 3 0 9 |
| Sirapite . . . . ,, | 3 6 0 |
| Keene's cement . . . ,, | 3 6 0 |
| Gothite plaster . . . ,, | 5 6 0 |
| Pioneer plaster . . . ,, | 3 6 0 |
| Thistle plaster . . . ,, | 3 6 0 |
| Sand, washed . . . ,, | 3 6 0 |
| Hair . . . . Y.C. | 11 6 |
| Laths, sawn . . . lb. | 6 |
| ,, rent . . . bundle | 2 4 |
| Lath nails . . . . lb. | 3 9 |
| | 3 |

### GLAZIER

| | s. d. | s. d. |
|---|---|---|
| Sheet glass, 24 oz., squares n/e 2 ft. s. F.S | | 2½ |
| ,, ,, 26 oz. ,, ,, ,, | | 3½ |
| Flemish, Arctic, Figures (white)* . ,, | | 7½ |
| Blazoned glasses . . . ,, | | 2 6 |
| Reeded: Cross Reeded . . ,, | | 11 |
| Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite ,, | | 6½ |
| Crown sheet glass (n/e 12" × 10") ,, | | 2 0 |
| Flashed opals (white and coloured) . ,, | 1 0 and | 2 0 |
| ¼" rough cast; rolled plate . ,, | | 6 |
| ¼" wired cast; wired rolled . ,, | | 10½ |
| ¼" Georgian wired cast . . ,, | | 11½ |
| ¼" Polished plate, n/e 1 ft. . ,, | †1 0 to | ‡1 3 |
| ,, ,, 2 . . . ,, | †1 4 ,, | ‡1 6 |
| ,, ,, 4 . . . ,, | †2 6 ,, | ‡2 9 |
| ,, ,, 8 . . . ,, | †2 11 ,, | ‡3 4 |
| ,, ,, 20 . . . ,, | †3 1 ,, | ‡3 9 |
| ,, ,, 45 . . . ,, | †3 3 ,, | ‡4 0 |
| ,, ,, 100 . . . ,, | †4 0 ,, | ‡4 10 |
| Vita glass, sheet, n/e 1 ft. . ,, | | 1 0 |
| ,, ,, ,, 2 ft. . ,, | | 1 3 |
| ,, ,, ,, over 2 ft. . ,, | | 1 9 |
| ,, ,, plate, n/e 1 ft. . ,, | | 1 6 |
| ,, ,, ,, 2 ft. . ,, | | 3 0 |
| ,, ,, ,, 5 ft. . ,, | | 4 0 |
| ,, ,, ,, 7 ft. . ,, | | 5 0 |
| ,, ,, ,, 15 ft. . ,, | | 6 0 |
| ,, ,, ,, over 15 ft. ,, | | 7 6 |
| "Calorex" sheet 21 oz., and 32 oz. ,, | 2 6 and | 3 6 |
| ,, rough cast ¼" and ½" . ,, | 8½ ,, | 1 0 |
| Putty, linseed oil . . . lb. | | 3 |

* *Colours, 1d. F.S. extra.*
† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

### PAINTER

| | £ s. d. |
|---|---|
| White lead in 1-cwt. casks . . cwt. | 2 17 9 |
| Linseed oil . . . . gall. | 3 2 |
| Boiled oil . . . . ,, | 3 5 |
| Turpentine . . . . ,, | 3 9 |
| Patent knotting . . . ,, | 14 0 |
| Distemper, washable . . cwt. | 2 6 0 |
| ,, ordinary . . . ,, | 2 0 0 |
| Whitening . . . . ,, | 4 0 |
| Size, double . . . . firkin | 3 0 |
| Copal varnish . . . . gall. | 13 0 |
| Flat varnish . . . . ,, | 14 0 |
| Outside varnish . . . ,, | 16 0 |
| White enamel . . . . ,, | 1 15 0 |
| Ready mixed paint . . . ,, | 13 6 |
| Brunswick black . . . ,, | 7 6 |

# CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

## EXCAVATOR AND CONCRETOR

| | | s. | d. |
|---|---|---|---|
| Digging over surface n/e 12" deep and cart away | Y.S. | 2 | 9 |
| " to reduce levels n/e 5' 0" deep and cart away | Y.C. | 8 | 6 |
| " to form basement n/e 5' 0" and cart away | " | 9 | 0 |
| " " 10' 0" deep and cart away | " | 9 | 6 |
| " " 15' 0" deep and cart away | " | 10 | 0 |
| If in stiff clay add | " | | 6 |
| If in underpinning " | " | 4 | 0 |
| Planking and strutting to sides of excavation | F.S. | 1 | 0 |
| " " to pier holes | " | | 5 |
| " " to trenches | " | | 5 |
| " " extra, only if left in | " | | 3 |
| Hardcore, filled in and rammed | Y.C. | 10 | 0 |
| Portland cement concrete in foundations (6–1) | " | 1 6 | 0 |
| " " (4–2–1) | " | 1 12 | 6 |
| " " underpinning | " | 1 16 | 0 |
| Finishing surface of concrete, space face | Y.S. | | 7 |

## DRAINLAYER

| | | 4" s. | d. | 6" s. | d. |
|---|---|---|---|---|---|
| Stoneware drains, laid complete (digging and concrete to be priced separately) | F.R. | 1 | 6 | 2 | 3 |
| Extra, only for bends | Each | 2 | 8 | 3 | 0 |
| " junctions | " | 3 | 9 | 4 | 6 |
| Gullies and gratings | " | 16 | 6 | 18 | 0 |
| Cast iron drains, and laying and jointing | F.R. | 5 | 9 | 8 | 3 |
| Extra, only for bends (cast iron) | Each | 12 | 3 | 18 | 4 |

## BRICKLAYER

| | | £ | s. | d. |
|---|---|---|---|---|
| Brickwork, Flettons in lime mortar | Per Rod | 26 | 10 | 0 |
| " " in cement | " | 27 | 12 | 6 |
| " Stocks in cement | " | 34 | 0 | 0 |
| " Blues in cement | " | 50 | 0 | 0 |
| Extra only for circular on plan | " | 2 | 0 | 0 |
| " backing to masonry | " | 1 | 10 | 0 |
| " rising on old walls | " | 2 | 0 | 0 |
| " underpinning | " | 5 | 10 | 0 |
| Fair Face and pointing internally | F.S. | | | 1½ |
| Extra over fletton brickwork for picked stock facings and pointing | " | | | 8 |
| " " " red brick facings and pointing | " | | | 11 |
| " " " blue brick facings and pointing | " | 1 | 4 | |
| " " " glazed brick facings and pointing | " | 3 | 6 | |
| Tuck pointing | " | | | 7½ |
| Weather pointing in cement | " | | | 3 |
| Slate dampcourse | " | | | 10 |
| Vertical dampcourse | " | 1 | 1 | |

## ASPHALTER

| | | s. | d. |
|---|---|---|---|
| ½" Horizontal dampcourse | Y.S. | 4 | 9 |
| ½" Vertical dampcourse | " | 7 | 9 |
| ½" paving or flat | " | 6 | 3 |
| 1" paving or flat | " | 7 | 6 |
| 1" × 6" skirting | F.R. | 1 | 0 |
| Angle fillet | " | | 2½ |
| Rounded angle | " | | 2½ |
| Cesspools | Each | 5 | 6 |

## MASON

| | | s. | d. |
|---|---|---|---|
| Portland stone, including all labour, hoisting, fixing and cleaning down, complete | F.C. | 17 | 9 |
| Bath stone and do, all as last | " | 13 | 6 |
| Artificial stone and do | " | 13 | 0 |
| York stone templates, fixed complete | " | 10 | 6 |
| " thresholds | " | 13 | 6 |
| " sills | " | 1 | 0 6 |

## SLATER AND TILER

| | | £ | s. | d. |
|---|---|---|---|---|
| Slating, Bangor or equal to a 3" lap, and fixing with compo nails, 20" × 10" | Sqr. | 3 | 10 | 0 |
| Do., 18" × 9" | " | 3 | 7 | 0 |
| Do., 24" × 12" | " | 3 | 17 | 0 |
| Westmorland slating, laid with diminished courses | " | 6 | 0 | 0 |
| Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course | " | 3 | 0 | 0 |
| Do., all as last, but of machine-made tiles | " | 2 | 16 | 0 |
| 20" × 10" medium Old Delabole slating, laid to a 3" lap (grey) | " | 2 | 16 | 0 |
| " " " " " " (green) | " | 4 | 15 | 0 |

## CARPENTER AND JOINER

| | | £ | s. | d. |
|---|---|---|---|---|
| Flat boarded centering to concrete floors, including all strutting | Sqr. | 2 | 2 | 6 |
| Shuttering to sides and soffits of beams | F.S. | | | 7 |
| " to stanchions | " | | | 7 |
| " to staircases | " | | 1 | 6 |
| Fir and fixing in wall plates, lintols, etc. | F.C. | | 3 | 9 |
| Fir framed in floors | " | | 4 | 6 |
| " " roofs | " | | 6 | 6 |
| " " trusses | " | | 7 | 6 |
| " " partitions | " | | 8 | 6 |
| 1" deal sawn boarding and fixing to joists | Sqr. | 1 | 14 | 6 |
| 1" " " " " " | " | 1 | 17 | 6 |
| 1½" " " " " " | " | 2 | 3 | 0 |
| 1½" × 2" fir battening for Countess slating | " | | 9 | 6 |
| Do., for 4" gauge tiling | " | | 12 | 0 |
| Stout feather-edged tilting fillet | F.R. | | | 4½ |
| Patent inodorous felt, 1 ply | Y.S. | | 2 | 3 |
| " " " 2 " | " | | 2 | 9 |
| " " " 3 " | " | | 3 | 3 |
| Stout herringbone strutting to 9" joists | F.R. | | | 10½ |
| 1" deal gutter boards and bearers | F.S. | | 1 | 2 |
| 1½" " " " " | " | | 1 | 6 |
| 2" deal wrought rounded roll | F.R. | | | 8 |
| 1" deal grooved and tongued flooring, laid complete, including cleaning off | Sqr. | 2 | 1 | 0 |
| 1¼" do. | " | 2 | 10 | 0 |
| 1½" do. | " | 2 | 17 | 0 |
| 1" deal moulded skirting fixed on, and including grounds plugged to wall | F.S. | | 1 | 6 |
| 1½" do. | " | | 1 | 9 |

## CARPENTER AND JOINER—*continued*

| | | s. | d. |
|---|---|---|---|
| 1½" deal moulded sashes of average size | F.S. | 1 | 9½ |
| 2" " " " " " | " | 1 | 11½ |
| 1½" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" beads, 1" inside and outside linings, ⅝" parting beads, and with brass faced axle pulleys, etc., fixed complete | " | 3 | 7 |
| 2" " " " " " | " | 3 | 10 |
| Extra only for moulded horns | Each | | 6 |
| 1½" deal four-panel square, both sides, door | F.S. | 2 | 0 |
| 2" " " " " " | " | 2 | 8 |
| 1½" " but moulded both sides | " | 2 | 4 |
| 2" " " " " " | " | 3 | 0 |
| 4" × 3" deal, rebated and moulded frames | F.R. | 1 | 0 |
| 4½" × 3½" " " " " " | " | 1 | 4 |
| 1½" deal tongued and moulded window board, on and including deal bearers | F.S. | 1 | 9 |
| 1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages | " | 2 | 6 |
| 1½" deal moulded wall strings | " | 2 | 1 |
| 1½" " outer strings | " | 2 | 4 |
| Ends of treads and risers housed to string | Each | 1 | 9 |
| 3" × 2" deal moulded handrail | F.R. | 1 | 3 |
| 1" × 1" deal balusters and housing each end | Each | 2 | 0 |
| 1½" × 1½" " " " " " | " | 2 | 9 |
| 3" × 3" deal wrought framed newels | F.R. | 1 | 3 |
| Extra only for newel caps | Each | 6 | 0 |
| Do., pendants | " | 6 | 0 |

## SMITH AND FOUNDER

| | | s. | d. |
|---|---|---|---|
| Rolled steel joists, cut to length, and hoisting and fixing in position | Per cwt. | 18 | 6 |
| Riveted plate or compound girders, and hoisting and fixing in position | " | 1 6 | 6 |
| Do., stanchions with riveted caps and bases and do. | " | 1 2 | 0 |
| Mild steel bar reinforcement, ½" and up, bent and fixed complete | " | 1 4 | 6 |
| Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. | F.S. | | 11 |
| Wrot-iron caulked and cambered chimney bars | Per cwt. | 1 10 | 0 |

## PLUMBER

| | | £ | s. | d. |
|---|---|---|---|---|
| Milled lead and labour in flats | cwt. | 1 | 18 | 0 |
| Do. in flashings | " | 2 | 1 | 6 |
| Do. in covering to turrets | " | 2 | 7 | 0 |
| Do. in soakers | " | 1 | 12 | 9 |
| Labour to welted edge | F.R. | | | 3½ |
| Open copper nailing | " | | | 3 |
| Close " " | " | | | 4 |

| Lead service pipe and fixing with pipe hooks | F.R. | ½" s. 1 | d. 2 | ¾" s. 1 | d. 4 | 1" s. 1 | d. 8½ | 1½" s. 2 | d. 7 | 2" s. 3 | d. 6 | 4" s. — | d. — |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Do. soil pipe and fixing with cast lead tacks | | — | | — | | — | | — | | — | | 7 | 3 |
| Extra, only to bends | Each | — | | — | | — | | — | | 2 | 3 | 7 | 6 |
| Do. to stop ends | " | 6½ | | 8 | | 9 | | 11 | | 1 | 0 | — | |
| Boiler screws and unions | | 3 | 3 | 3 | 9 | 5 | 0 | 8 | 0 | — | | — | |
| Lead traps | | — | | — | | — | | 8 | 0 | 11 | 6 | — | |
| Screw down bib valves | " | 6 | 9 | 9 | 6 | 11 | 0 | — | | — | | — | |
| Do. stop cocks | " | 7 | 0 | 9 | 6 | 12 | 6 | — | | — | | — | |

| | | £ | s. | d. |
|---|---|---|---|---|
| 4" cast-iron ½-rd. gutter and fixing | F.R. | | 1 | 0 |
| Extra, only stop ends | Each | | 1 | 0 |
| Do. angles | " | | 1 | 6 |
| Do. outlets | " | | 2 | 9 |
| 4" dia. cast-iron rain-water pipe and fixing with ears cast on | F.R. | | 1 | 7 |
| Extra, only for shoes | Each | | 1 | 3 |
| Do. for plain heads | " | | 5 | 6 |

## PLASTERER AND TILING

| | | s. | d. |
|---|---|---|---|
| Expanded metal lathing, small mesh | Y.S. | 2 | 0 |
| Do. in n/w to beams, stanchions, etc. | " | 2 | 9 |
| Lathing with sawn laths to ceilings | " | 1 | 3 |
| ½" screeding in Portland cement and sand or tiling, wood block floor, etc. | " | 1 | 5 |
| Do. vertical | " | 1 | 7 |
| Rough under on walls | " | 1 | 2½ |
| Render, refloat and set in lime and hair | " | 1 | 9 |
| Render and set in Sirapite | " | 1 | 11 |
| Render backing in cement and sand, and set in Keene's cement | " | 2 | 9 |
| Extra, only if on lathing | " | | 4 |
| Keene's cement angle and arris | F.R. | | 6 |
| Arris | " | | 1½ |
| Rounded angle, small | " | | 3 |
| Plain cornices in plaster, including dubbing out, per 1" girth | " | | 1½ |
| 1" granolithic pavings | Y.S. | 3 | 6 |
| 1½" " " " " | " | 4 | 6 |
| 6" × 6" white glazed wall tiling and fixing on prepared screed | " | 17 | 6 |
| 9" × 3" " " " " | " | 1 2 | 6 |
| Extra, only for small quadrant angle " " " " | F.R. | | 8 |

## GLAZIER

| | | s. | d. |
|---|---|---|---|
| 21 oz. sheet glass and glazing with putty | F.S. | | 6½ |
| 26 oz. do. and do. | " | | 7½ |
| Flemish, Arctic Figured (white) and glazing with putty | " | 1 | 1 |
| Cathedral glass and do. | " | 1 | 2 |
| Glazing only, British polished plate | " | | 7 |
| Extra, only if in beds | " | | 2 |
| Washleather | F.R. | | 4 |

## PAINTER

| | | s. | d. |
|---|---|---|---|
| Clearcolle and whiten ceilings | Y.S. | | 6 |
| Do. and distemper walls | " | | 9 |
| Do. with washable distemper | " | 1 | 1 |
| Knot, stop, prime and paint four coats of oil colour on plain surfaces | " | 3 | 3 |
| Do. on woodwork | " | 3 | 6 |
| Do. on steelwork | " | 3 | 0 |
| Do. and brush grain and twice varnish | " | 5 | 6 |
| Stain and twice varnish woodwork | " | 1 | 11 |
| Stain and wax polish woodwork | " | 4 | 6 |
| French polishing | F.S. | 1 | 2 |
| Stripping off old paper | Piece | 2 | 0 |
| Hanging ordinary paper from | " | 2 | 9 |