THE ARCHITECTS' JOURNAL

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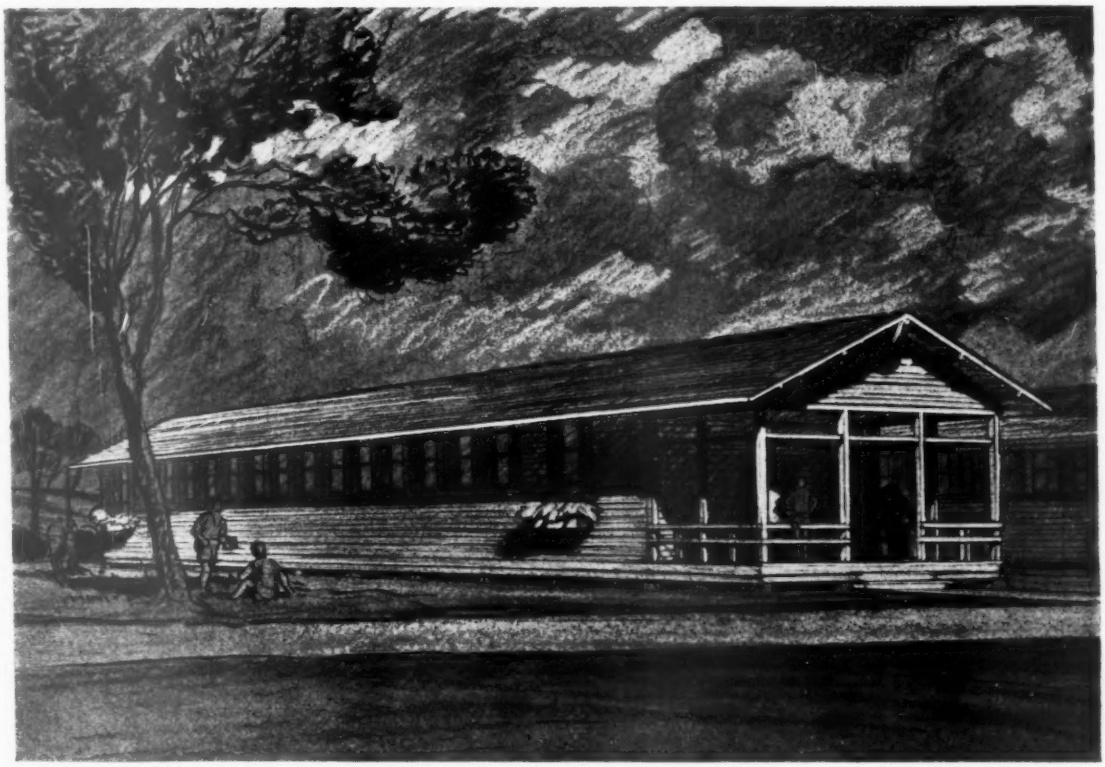
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, JANUARY 18, 1940. NUMBER 2348 : VOLUME 91

PRINCIPAL CONTENTS

NATIONAL CAMPS



Top, perspective (by J. D. M. Harvey) of a typical dormitory block for a National Camp. Above, general view of the dormitory blocks at a National Camp in Surrey (Alister G. MacDonald, architect; Sir John Burnet, Tait and Lorne, consulting architects), which is fully illustrated and described elsewhere in this issue.

Looking After Small Builders

NO fewer than £225,000,000 is normally spent on new buildings each year. Now that private building work is at a standstill, small builders and their employees in many parts of the country find themselves without work.

BUILDING IN WAR-TIME

NEEDS OF A GREAT INDUSTRY

BUILDING INDUSTRY

FOR A PRACTICAL SCHEME

AIR RAID

The Need of Accurate Plans

THE ARCHITECT'S PLIGHT

TO THE EDITOR OF THE TIMES

ARCHITECTS AND ENGINEERS

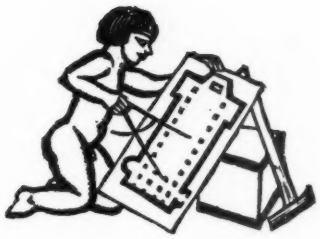
A REPLY FROM THE WAR OFFICE

TO THE EDITOR OF THE TIMES

FOUR AND A-HALF MONTHS

The reproduction of newspaper cuttings which appears above is a minute sample of those which have appeared since September 3 about architects, building and the war. But this sample (arranged roughly in order of date) makes clear the three succeeding stages of architects' outlook on the war : the first concentration on the war work of the architect only ; the realization of the importance of the whole building industry as a component of national war effort ; and attempts to ensure the full wartime use of the industry, which culminated in the request for a Ministry of Building.

With each stage the scope of architectural effort widened ; and the cuttings reproduced serve as a reminder that the first object of architects' energies in 1940 will still be the attainment of a balanced use in war of all the resources of the industry.



FIRST WAR SERVICE

NEW YEAR issues contain a survey of the previous year and usually a forecast of the more important events which are likely to take place in the following year.

This year the survey should extend backwards over the last peace—over twenty years rather than one ; and the JOURNAL has made an attempt to do it. But this year a survey of any past period is less important than a forecast. And this year architects are *professionally*★ interested in only one forecast—what will happen to the building industry in 1940.

It is obvious that the assumptions on which such a forecast is based may be invalidated before this article is written. A building forecast cannot therefore say what will happen : it can only try to decide the conditions, the sole conditions, in which the industry can be best used in wartime.

If architects agree, with the rest of the industry, that certain conditions are the prerequisite for efficient war service, there will be a far greater chance of those conditions being created. And the best way of finding those conditions and securing architectural agreement is to go back to September 3 and trace very shortly what has happened to architects since war began. But it is worth noting, before we do so, that a year ago the forecast in which architects were interested would have been, *not* what would happen to the building industry, but what would happen to architects.

On September 3 architects had a national Register, which they hoped would be much used by official departments, and provincial panels ready to undertake A.R.P. and other work. And, like the rest of the public, they expected air raids which did not come.

Instead, within ten days, Press cuttings began to contain references to building stoppages. Within a fortnight it was plain that shelter construction was doing nothing to prevent most of the building industry becoming idle. Estimates of the works stopped by the Government circular rose as high as £200,000,000.

Architects were concerned at the building stoppage ; but only, at that stage, because of its effect on themselves. The Architectural Association announced its " Groups " scheme on September 15 and was followed by suggestions of useful small-scale architectural employment. A month later a letter was published in *The Times* from Sir Herbert Baker asking for the employment of architects for art's sake, followed by one from Professor Reilly and a War Office reply. This correspondence, called " The Architect's Plight," reminded architects of two important facts. First, that in the eyes of the public architects were a luxury product, useless in war. Second, that in this war the building industry would matter a great deal—perhaps vitally ; and therefore it was the building industry and not the architectural profession which architects must seek to keep in health.

The Press cuttings of October, in dozens and hundreds, headed *Small Builders' Distress* or *Building Difficulties*, showed that there was plenty for architects to do in helping to establish conditions in which the industry could be employed as fully and fairly as wartime allows.

The joint move by the whole industry to lay down those conditions began in November with the assembly of figures showing the size of the industry and the volume of work stopped by war. The figures are too familiar to need repetition ; but the conclusions to which they compelled architects and the rest of the industry cannot be repeated too often.

They were three in number : the industry was so large and its influence so wide that its maintenance in tolerable prosperity is of the greatest importance to the country's economic strength. Wartime building contracts had not hitherto been wisely allocated. No one Government department was charged either with the proper allocation of war contracts or with general supervision of the industry's welfare.

During the last three weeks these conclusions have received great support and publicity from a correspondence in *The Times* called, this time, " Building in Wartime." From that correspondence, and from the events that went before, architects can see clearly the conditions, the only conditions, in which the building industry can be well employed, well maintained in war—with all that may mean to the country.

The conditions demand the official recognition of building as the basic internal industry ; and its supervision in wartime by a single authority who can arrange and allocate all war contracts, continuously examine its volume of work and take steps to keep that volume up to a reasonable level.

The fulfilment of the conditions thus depends upon the establishment of a Ministry of Building—in fact if not in name. The achievement of this single control of the industry should be the war service on which architects should first concentrate their *professional* energies and influence.

★ Many other events, other forecasts, now interest architects as human beings vastly more than anything connected with building—above all, the course of the present war. But the building industry not only is a factor in the war ; it also is an organization of which architects have special knowledge, which lies immediately to their hand. The first constructive service of architects in this war is therefore to make sure that the industry is made ready for anything war may need from it.

1939

By Astragal

JANUARY

"WE have but one wish—to make our contribution to the general pacification of the world." This New Year's Day message from Adolf Hitler seemed to justify the forebodings already present in everyone's mind. The reaction from Munich was gaining strength, and all the architectural papers were printing attacks on the R.I.B.A. and instructional sheets on A.R.P. The building industry was on the brink of decline, and the profession, confused and depressed, was divided into those who couldn't be bothered with A.R.P., and those who could talk of nothing else. The special glamour-girl number of the A.J. provided a spark in the gloom, but failed to stop everyone from talking about Finsbury.

FEBRUARY

THE Government issued a white paper explaining their policy of small shelters and the encouragement of private enterprise. Camps superseded A.R.P. as news, and the Government initiated a million-pound camps scheme, the Building Centre organized a camps competition, and the Housing Centre a camps exhibition. Mrs. Borders won a limited sort of victory over the building societies, Mr. Chermayeff brought out a pamphlet on A.R.P., and the result of the St. George's Hospital Competition was at last announced. A fairly quiet month.

MARCH

ON March 15, *Punch* published a cartoon from the scholarly hand of Sir Bernard Partridge, showing John Bull awaking from a nightmare and exclaiming "Thank God that's over." This was funny enough for *Punch*, for on the same day German troops entered Prague, and the Premier announced that a guarantee could not apply to something which did not exist. A week later Memel was occupied.

The building industry showed a slight improvement, and the R.I.B.A. was attacked this time on the competitions front. The International Building Club opened up in Park Lane, and Britain pledged her help to Poland.

APRIL

"PLANNED A.R.P.," a popular version of Tecton's Finsbury report, was published. The following week the Home Office rejected the "deep shelter" policy—over Easter Italy polished off Albania, and a little later Hitler denounced the Anglo-German Naval Agreement. In London the designers of the King George V Memorial were asked to try again, and the Government introduced a Building Societies Bill. Negotiations were opened with Soviet Russia.

MAY

THE Civil Defence Bill compelled landlords and authorities to provide a certain standard of protection for the public by September next, if they wanted any loans. Local authorities were also requested to give priority to A.R.P. work.

Architects were removed without warning from the "Reserved" register, and a week later were as suddenly restored above the age of 30. Litvinov was dismissed from office, and Britain reached agreement with Turkey. Everyone talked about Russia or about Frank Lloyd Wright.

JUNE

THE A.J. issued two special numbers on A.R.P., answering the double questions—1, What degree of protection is necessary or possible? 2, How is it best provided? The Government Handbook No. 5 made its long-awaited appearance, and the R.I.B.A. held a conference in Dublin. Everyone talked about the World's Fair and what "reserved" really meant. The *Daily Express* continued daily to repeat the mystic incantation "There will be no war."

JULY

THE first Finsbury shelter was started, and the A.J. issued a special number on Camps. Nearly everyone was away on holiday. Those who weren't, and also probably those who were, talked about Danzig, and Federal Union.

AUGUST

THE Ministry of Health announced that local authorities would be held responsible for maintaining adequate housing accommodation in wartime. Loans for repairs would be available. Mr. Tait was appointed Chief Architect for the Government camps scheme, and Mr. Morrison started forming demolition squads. On August 21 the German-Soviet Agreement was published. The Home Office refused their support for Dr. Oscar Faber's A.R.P. schemes for Hampstead. The month ended with the crisis at boiling point, the invasion of Poland, appeals for peace from the Pope, King Leopold and President Roosevelt, and the evacuation of children into the country.

SEPTEMBER

AT 11 a.m. on September 3, Britain declared war on Germany, and within a few moments the first air-raid warning was sounded.

The Government issued a revised A.R.P. Code and the Ministry of Supply took over the control of timber. Normal building virtually ceased, and many architects, schools and businesses moved into emergency quarters. In perfect summer weather amateur Vanburghs filled and stacked sandbags.

Statues disappeared behind casings and sandbags, buildings took on the appearance of Florentine palaces, complete with small windows and rusticated bases, and black and yellow A.R.P. signs appeared at every corner. Shopping crowds clawed impotently at black-painted plywood screens in the shop doorways, and a brisk trade was carried on in torch batteries, which, when exhausted, could profitably be resold as "A.R.P. Types." Cars, brandishing their official labels as though they were licences to ignore all safety and courtesy, hurtled through the streets on obviously unimportant errands, and, on an average, 25 persons were killed every night on the roads. The price of sandbags rocketed almost as quickly as the sandbags themselves disintegrated beneath the attacks of the weather and of urchins with pen-knives. The shops were emptied of black cloth and the lost property offices filled with mislaid gasmasks. A large number of women were quick to realize that this was the long-awaited opportunity to wear trousers for any and every activity, and there was a tendency to cultivate the appearance of having been up all night. Most of this artificiality disappeared when the air raids failed to materialize, and London relaxed a little into more normal conditions.

Within two weeks the A.J. had started an Information Centre and the B.I.N.C. had set up an emergency War Committee.

OCTOBER

ON October 6 Hitler, having conquered Poland with the help of Russia, offered peace. The Government replied that they were planning for a three-years' war. Members of the A.A. initiated a group system on a profit-sharing basis, under which members placed themselves as organized bodies at the disposal of government departments. The building industry was still in complete chaos and the profession bewildered and aggrieved. Everyone sat back and blamed the R.I.B.A.

NOVEMBER

THE Government announced that air-raid damage would be paid for at the end of the war—if there is any money left. Mr. Yerbury went ahead with his scheme for an atelier. The building industry was still disorganized, and in need of work. Large firms were naturally busy on Government work, but channels taking work to the rest of the industry were few and hopelessly choked. Topics of conversation alternated between the R.I.B.A. and the Ministry of Information, to the detriment of both bodies.

DECEMBER

SOVIET Russia invaded Finland, giving All-my-eye-and Kingsley Martin and his friends something to think about. Ministry of Health began to allow a certain amount of civil building to continue, and several councils obtained sanction to proceed with housing projects. Mr. Yerbury's atelier was scheduled to open in January, 1940. The year closed, leaving about 10,000 architects in serious need of work.

PERSON-ALITIES

FIRST place for personality of the year goes to **Frank "Get-away-from-it-all" Lloyd Wright,** who got away with it so successfully at the R.I.B.A. The impressive appearance of this almost legendary prophet, his soft, dawdling voice, his obvious sincerity and easy charm captivated his audience and achieved without effort the surrender of the *avant garde*. Not till long afterwards was the question asked: "What really was the preacher's message?" Was it really no more than fragments well phrased but disconnected, a few wisecracks, and some coloured films? No matter. He had brought for a few weeks Romance into our lives, and for a time A.R.P. was forgotten.

Second place goes to the **Borough of Finsbury** for their well-known services to architecture. We also take off our hat to:—**Mr. Percy Thomas** for winning the Gold Medal, and **Mr. G. Grey Wornum** for winning the Bronze Medal: to **Mr. E. Stanley Hall** for being elected President of the R.I.B.A., **Mr. J. Murray Easton** for being elected President of the A.A., and **Mr. Howard Robertson** for having such distinguished partners: to **Mr. J. L. Martin** and **Mr. J. H. Forshaw** for becoming deputy architects to the L.M.S. and the L.C.C. respectively: to **Mr. Branzell** (of Sweden) for inventing for hotels a system of interlocking floors, and **Mr. Paul Nelson** (of America) for designing a suspended house: to the **Zoological Society** for their support to contemporary design, and in spite of the way they look after their new buildings: to **Sir Harry Brittain** for inadvertently raising the year's loudest laugh at the R.I.B.A., and **Lord Maugham** for being, with equal innocence, the runner-up: to **Mr. Christopher "Capability" Tunnard**, upon receiving an appointment in the U.S.A., and **Mr. Ove Arup** for offering £500 to anyone who could prove he was entitled to the degree of doctor: to **Herr Hitler** for forbidding the provision of open fireplaces in new houses, and **Sir Alison Russell** for inventing a fireplace which will never smoke: to **Mr. John Betjemann** for his pamphlet "Antiquarian Prejudice," and the **Ministry of Health** for theirs—"Houses We Live In": to **Mr. John Gloag** for producing his twenty-first book and in spite of his disappearance to America as his prophet arrived.

To **Sir Edwin Lutyens**, P.R.A., upon becoming once more F.R.I.B.A., and **Mr. Cook** for entering, on a protest swim, the flooded trenches of Primrose Hill: to **Lord Derwent** for initiating the Best Building Ballot, and **Lord Jersey** for throwing Osterley Park open to the public: to **Mr. Wells Coates** for filling a column in "Who's Who," and **Dr. Clark** (of New York) for discovering that the average working life of an architect was 43 years.

To **Mr. Osbert Lancaster** for finding his Home, Sweet Home in the Ministry of Information, and **Mr. Robert Byron** for being in the vanguard of Federal

Union : to the **Dean of Canterbury** for so adequately protecting his cathedral against air raids—C.E. after his name apparently stands genuinely for Civil Engineer as well : to **Mr. Edward Carter** for piloting through Volume II of the R.I.B.A. catalogue, and **Mr. Epstein** for his enterprise at Blackpool : to **Mr. Philip Scholberg** for his suggestion that the grid pylons were really supported by the cables, and anyway the whole system was erected to annoy the C.P.R.E. : to **Mr. John Summerson** for his scholarly debunking of the great London landlords, and to **Mr. Goodhart-Rendel** for maintaining his reputation as a man of discernment by having his presidential portrait painted by **Augustus John** : to **Messrs. Peter Jones** and their architects for their success in the Ballot, and **Tecton** for keeping, with every reason, in the headlines : to the **Georgian Group** for describing war as "a period during which the usual threat to Georgian buildings is temporarily in abeyance."

SAYING OF THE YEAR

"What does all this R.I.B.A. mean?"—Judge Rope Reeve at Stourport.

SOCIETIES

LIKE most people the R.I.B.A. has had a troubled year. On all sides it has been attacked and criticized for "not giving a lead to the profession." To the question, "Reserved for What?" it was accused of having no answer. Much of this criticism was justified, but by no means all of it. What, in fact, *was* the R.I.B.A.'s war policy? It was apparently that of loyal subservience to the Government. By avoiding trouble with the Home Office, by ignoring its snubs and yielding to its caprices it was hoped, perhaps rather naively, that when and if war came the profession would be remembered. With this object a highly valuable register of architects was compiled, and as close a contact as possible was maintained with the Government.

The policy has been criticized as a negative one, and, indeed, it has not proved successful—sucking-up, went the old prep-school maxim, is a mug's game. For the fact that many of the contacts with the Government were fruitless the R.I.B.A. cannot alone be blamed. What else could the R.I.B.A. have done? Two things. First, it should have made available as soon as possible the fullest information on bombing and on protection from it. Secondly, it should have insisted with all its authority upon the absolute necessity of proper surveys preliminary to all A.R.P. undertakings. It did neither of these two things, and to this extent can be accused of failing the profession.

When war came the R.I.B.A. retired into its shell, sealed the doors, and waited like everyone else for the bang. When the bang did not arrive, architects emerged one by one from their boltholes, seething with the irritation of reaction, and returned like hornets to the attack. This time the R.I.B.A. was stung into activity. Contacts were re-established with Government departments, salaried jobs for members were found where possible, and a valuable register organized of cancelled or delayed contracts. More important still was the common front established with the Building Industry, for in this essential line-up lies the profession's only hope.

Other activities of the R.I.B.A. followed normal lines. The conference was held this year in Dublin, and at the elections official architects were triumphant—due perhaps to sectional propaganda. The Public Relations Committee revealed that 50 per cent. of the country's buildings are designed by architects—or 85 per cent. if you don't count speculative and municipal housing. So there goes one more excuse.

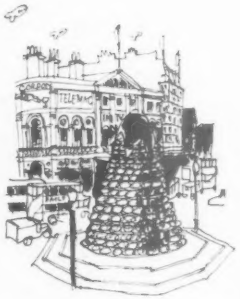
The Architects' Registration Council raised their subscription and removed an architect for unprofessional conduct.

The A.A.S.T.A. produced, through a committee, a vigorous report on evacuation and the Institute of Civil Engineers earned admiration for the magnificent response of their members to their Benevolent Society funds. ("Fourpence-a-Head" architects, please note.)

The A.A. took a step backward when as a result of Board of Education pressure and a members' plebiscite, the students were deprived of their vote. "Focus," however, continued to appear, and more surprisingly, maintained its high initial standard. The end of the year sees Bedford Square still open, but the school comfortably ensconced behind exquisitely proportioned sash-windows in Hadley Wood.

The S.P.A.B. moved their offices into two charming old houses in Great Ormond Street, and the Georgian Group organized a vastly successful Fête Champetre at Osterley Park which was attended by all the quality, including Mr. Hussey (who stoutly denied fingering the tapestries) and Astragal.

TOWN . . .

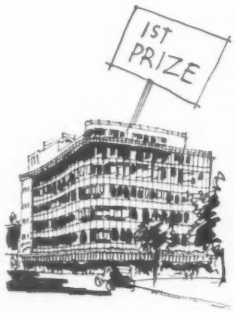


FROM the planning point of view this has not been a progressive year. In London the Bressey report received its first setback when the Highways Committee of the L.C.C. rejected its proposals on financial grounds. Despite objections, the long-delayed and rather makeshift scheme for extending Cromwell Road as a western outlet was officially adopted and is now in construction. An alternative plan, sponsored by the R.I.B.A. and prepared in a competition won by the London University Town Planning School, treated this problem on a broader and more developed basis, but was rejected. A controversy simmered over the "saving" of Parliament Square, and the King George V Memorial was redesigned, following an outburst of criticism of the first design which was wholly justified. Part of Trafalgar Square was fenced off for reconstruction by Sir Edwin Lutyens, and later revealed itself, to the surprise of everyone, including presumably Sir Edwin, as an air-raid shelter. Waterloo Bridge began to take shape, the Gaiety Theatre and Vine Street Police Station were scheduled for demolition, and the remarkable headquarters of Imperial Airways were completed. In the suburbs a large number of Georgian looking buildings were erected to house Territorial Army activities, and throughout the summer mechanical excavators tore at the turf of the parks and squares.

. . AND COUNTRY

IN the country hundreds of acres continued to disappear every week before the onslaughts of building development or the insatiable demands of expanding war departments.

In March an important P.E.P. report was issued dealing with the location of industry, a subject already receiving the study of a Royal Commission. This report emphasized once more the need for balanced regional development, and while not minimizing the difficulties of "labour transfer," recommended the appointment of a Commission empowered to evacuate stagnant areas where necessary. P.E.P. are to be congratulated upon a valuable and objective piece of work.



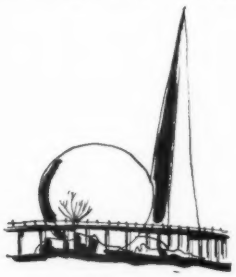
BEST BUILDING BALLOT

AN architectural event of sufficient importance to demand a separate heading took place at the beginning of the year. This was the Best Building Ballot, organized by Astragal in response to a suggestion from Lord Derwent that a plebiscite of ARCHITECTS' JOURNAL readers should decide which really *were* the best modern buildings—a subject upon which Astragal and Lord Derwent had for some time been unable to agree.

As architects are discouraged from criticising the work of their colleagues, Astragal suggested instead a plebiscite of distinguished laymen, and to this end readers were asked to submit a list of suitable names. As a result, over 60 more or less famous persons were written to and asked to vote for what they thought were the six best buildings of the day. Not all of them replied—Paul Robeson, for instance, disarmingly confessed that he hadn't the faintest interest in the subject—but the majority took considerable trouble over their selection. The votes were counted and the results, published in May, were something of a surprise, not forgetting the minor surprises caused by the Editor's mistakes in counting votes as the voting in general showed strong support for contemporary design. The first three buildings were (1) Peter Jones Store, Sloane Square; (2) Battersea Power Station; (3) St. James's Underground Building. The three winning firms of architects were (1) Tecton, (2) Adams, Holden and Pearson, (3) Serge Chermayeff.

Finally, from the list of voters eight persons were selected as potentially suitable to serve on a Vigilance Committee, should one ever, as Mr. Goodhart-Rendel suggested, be formed. THE ARCHITECTS' JOURNAL Eight were: Lord Esher, Charles Marriott, Mrs. Hugh Dalton, Prof. J. D. Bernal, Henry Moore, William Hickey, Henry Morris, and Rebecca West.

Just another little matter to put on the shelf until the war's over.



EXHIBITIONS

THERE were three large-scale exhibitions held in 1939 of which the most important was, of course, the World's Fair at New York. It was criticized as being architecturally unprogressive, but as a piece of showmanship it has probably never been equalled. New Yorkers are likely to remember it for longer than anyone else, principally because it has been planned as a permanent park for their city. Memorable features were the Trylon Theme Centre, the General Motors Exhibit, and Salvador Dali's underwater drawing-room with its pneumatic piano.

Like all exhibitions it was dogged by bad luck, disputes, delays and strikes, and it reached its maturity in a world crisis. The latest problem before Mr. Grover Whalen, following Russia's decision not to participate next year, is to decide which of two claimants is to dismantle the U.S.S.R. Pavilion—Housebreakers or Marble-workers.

Less publicised, doubtless for excellent reasons, but almost as large, was the Golden Gate Exhibition at San Francisco, memorable for its "Dnude Ranch."

An immaculately designed exhibition at Zurich received far less attention than it deserved. Gay, imaginative and precise, it was of its kind one of the best ever staged.

In England the year opened with the dismantling of Glasgow Exhibition, discussions over the fate of "Tait's Tower," and the start of the B.I.F., remarkable for the first appearance of an umbrella-shaped comb sold under the name of Mein Gampf. The Borough of Finsbury staged an important and dramatically arranged A.R.P. exhibition which was opened by Mr. Herbert Morrison. The Ideal Home Exhibition, held this year at Earl's Court and grouped round a Kaleidakon—(floodlit pylon to you)—had one important feature, the All-Europe House, designed by Elizabeth Denby. This beautifully dimensioned and ingeniously planned exhibit was a first-class piece of propaganda.

The L.C.C. Jubilee Exhibition was meaty but unimaginatively displayed; the Royal Academy, under its new architect-President, was no more distinguished than usual, and the show of official architecture at the Building Centre was frankly dull.

The most ambitious and important exhibition organized during the year by the R.I.B.A. was the Roads Exhibition in March. This was excellent. It was followed by an interesting show of Cotman drawings, and a small exhibition of Landscape Architecture.

Perhaps the liveliest show of the year was the exhibition of students' work at the A.A. The designs showed a clear and analytical approach to the problems set, and judging by the results the view system of working is proving a success.

ASTRAGAL.

GUNN

ÆSTHETICALLY, the writer has no sympathy with the application of " styles " to modern building, but every possible sympathy with the evolution of that curious and intangible quality known to the appreciative as Style—a quality dependent upon grouping, balance, mass, detail which is " in scale," and many other contributive factors which should all be present in a satisfactory work of architecture. As a single instance of the application of this outlook to terms of building-design, a resolution never to use a column as applied decoration, but only for the function of support, was an early principle from which he has never departed. This, however, does not mean that the proportions made agreeable by familiarity, by which base, order, and attic seem present in spirit though not in substance, need be similarly excluded, nor does it mean that the natural quality of symmetry is anathema.

As to the so-called " new " materials, these can be thankfully accepted, but used with discrimination. Because it is possible to do all sorts of odd things in reinforced concrete —things in apparent defiance of natural stability—it is not necessary to do them on every possible occasion.

There remains the effect of modern methods upon the older building crafts. It is surely impossible to avoid a feeling of sadness that the laboriously acquired skill of the accomplished bricklayer, mason, carpenter, joiner, smith and plasterer should be displaced and rendered useless by a general adoption of a slick, hard, method of design which calls only for hedge-carpentry to make the " forms," mud-shovelling to place the concrete, and the fixing of sheet-materials in various applications to complete the visible surface. This is, no doubt, an extreme position, not yet actually reached, but it is the ultimate end in sight if some present tendencies continue.

JORDAN

IT seemed a fine sort of period to review when the Editor first asked me. Then I looked back to see how much I could really remember. Nineteen-nineteen : it was not until the autumn that I was scratching away at the Orders, in the sure conviction, since we had not yet reached the era of seriously doubting what our teachers taught, that this was the golden road to the building of marvellous gabled mansions. The years that followed were not so much years of disillusionment and lost opportunities (though there was plenty of that for us all) as years of correction, of learning for one's self what one ought to have been taught, years of changes which took place very rapidly and of incessant self-adaptation to those changes.

It is difficult to remember, but I think that the young architect in 1919 *felt that he had the world at his feet. It is true that building was almost prohibitively expensive, but that, of course, would put itself right in time. Everything that was wrong was due to the war and everything therefore would adjust itself in a few years' time. " Victorian taste " was bad and we knew better. English architecture between* 1900 *and* 1914 *was in such excellent taste and the Morris cretonnes were still so good that, really, there was nothing to worry about. All we had to do was to go on where we had had to leave off on account of the Kaiser. The Bolsheviks could be put in their place soon enough, Labour would cause no trouble (for were not the working men going to have homes for heroes), and war, of course, could never happen again. President Wilson had dealt with that little matter once and for all. There was no reason, so far as we could see, why we should not just build and build and build.*

On facing page : Top, Victory Arch, Montreal—by Septimus Warwick.

Below, left, experimental cottages for Crittall Manufacturing Co., Braintree — by C. H. B. Quennell and W. F. Crittall. Right, 1st Premiated Design, Class 3, *Daily Express* Model Homes Competition —by L. E. Cole.

and W. P. Crittall. Right, 1st Premiated Design, Class 3, *Daily Express* Model Homes Competition —by L. E. Cole.

ARCHITECTURE OF THE GREAT TRUCE

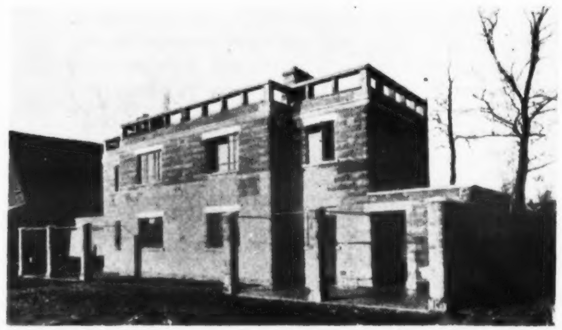
WAR necessarily throws us into the melting-pot and ends an architectural phase. In an attempt to estimate the failures and achievements of the architecture of 1919-39 the JOURNAL has asked Mr. Edwin Gunn and Mr. R. Furneaux Jordan each to prepare a review based upon the more widely known buildings.

Both authors are known as representatives of the two main schools of architectural opinion between 1919 and 1939—the so-called traditional and modern.

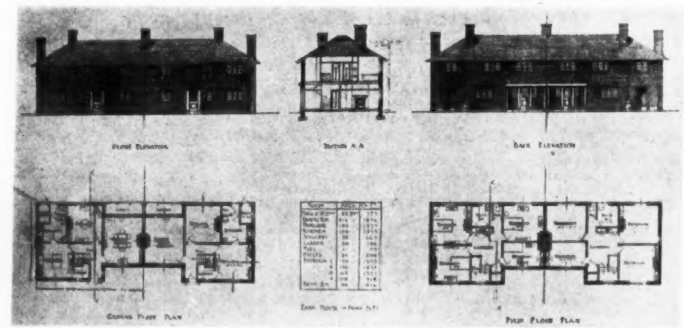
In this familiar sense Mr. Gunn's views oppose those of Mr. Jordan. But it is interesting to see that the two views, as reflected in the dual commentary, are not as antagonistic as might be supposed: even that, from different starting points, they come near to converging in their estimation of the faults and merits of what may be called the

1919

J: *We begin, not unnaturally, but ironically, with a spate of war memorials. They have not stopped yet, for the unfinished fountains to the admirals of Jutland are surrounded with National Service poster hoardings and are likely to be so for a good time to come. However, it was in 1919 and the early 1920's that they came full flood; the Cenotaph set the note of chaste restraint and Greek corrective curves. It was a success; for being purely abstract it left every man free to put his own interpretation upon it. The Scottish national war memorial was its antithesis. It left nothing, absolutely nothing, to the imagination, and mistook a mere tasteful cataloguing of facts and achievements for imagination itself. The note of chaste restraint was not normally sustained. For example, there was the Menin Gate at Ypres; there was the stone gun at Hyde Park Corner, for ever firing shells into the Buckingham Palace greenhouses. Also there were Victory Arches, including that of Mr. Septimus Warwick at Montreal.*



1919



1919

J: *Then came the housing shortage and a general consequent feathering of nests. Everything was very expensive and the jerry-builder cashed in. He is still in—well in. Every expedient (except, of course, a National Plan) was resorted to in order to solve the problem, and real efforts were made by the local authorities to achieve something a little better and a little cheaper than the jerry builders, and to provide a sensible minimum of accommodation. There had been very little technical research at the time, and no research at all into the psychology of the people who were going to live in the houses, and the results were not wildly successful. Some authorities gave out their housing schemes to private architects, and even offered prizes for the best parlour-type (£400) and the best non-parlour-type (£300), but they soon got fed up with the inefficiency of the average private practitioner, educated as he was in the tradition of another era and with a completely empirical approach to his problems. Thus was the "official architecture" controversy launched on its long voyage. It is still a long way from port, and there are mines about.*

G: Housing—which now has a specialized meaning transcending mere houses—has been very much in the news between 1919 and 1939, and has shown alternate swing towards flats on the one hand and cottage estates on the other. Leeds, Liverpool, Manchester and London (and no doubt many other cities as well) have accomplished notable things, and whatever other fields of architectural effort may vanish after the financial exhaustion likely to follow this war, these will presumably go on—but how? The one thing which seems certain is that the two extreme types each have something in their favour; this is *not* a case of "choose aye the middle course." Unless a settlement which renders future wars impossible should emerge, the choice seems to indicate either distribution of small dwellings, preferably with flat concrete roofs 8 in. thick; or widely-spaced groups of multi-storey buildings on a frame basis. Probably both will be employed.

1921

J: *It was very soon after the war that the "new poor" became conscious of themselves and faced, with stoicism and British phlegm, the reduction of their incomes from the four- to the three-figure level. They joked against themselves in "Punch," cocktails replaced the glories of Edwardian dining . . . and the flat began to replace the town house. The mutual actions and reactions of economic cycles upon the form of the city still remains open as a subject for original study; the 6s. income tax and the threat of a capital levy if the Bolshies "got in" undoubtedly transformed the face of the largely eighteenth-century West End of London. The flat boom was on, and there was not much precedent. The early efforts of, say, Mr. Frank Verity present fascinating problems for solution by those who are interested in the thought processes underlying design. The type of block which adorns the corner of Oxford Street and Park Lane soon spread to Portland Place, where it was less welcome.*

1921

J: *In the meantime, in spite of the virtual disappearance of the æsthetic rich, for whom a young Mr. Lutyens had scattered mansions through the Home Counties and beyond during the two decades that preceded the war, the English country-house was still living. Let us admit, by all means, that this "picking up of the English tradition" where it had been dropped in the fifteenth century was all a game of make-believe; let us admit that it was just a culmination of the "great retreat" . . . the retreat from structure to romanticism. Nevertheless, we must also admit that by the time Morris, Eden Nesfield, Philip Webb and the young Lutyens had done their work, the retreat had been turned into a genuine if rather rarefied and not very important style. The tragedy of it all lay in the demands which it made upon those who essayed to blend tile and oak and delphiniums into a really lovely whole. It never could have been more than the wraith of a style, and the imitators of the Morris–Lutyens manner would have been wiser to think out their problems afresh.*

G: It is perhaps hardly necessary to describe the characteristics of 1914 architecture—they were, in fact, as varied and as vague as it is possible to imagine. Though much of the simpler domestic work tended towards an unaffected rationalism, most architects afforded the opportunity to "spread themselves" on more monumental subjects would produce more or less ornate exercises to show that they (in the felicitous words applied by Halsey Ricardo to the great Wren) "could extract the uttermost possible from the Renaissance box of bricks."

1921

J: *The stucco façades and colonnades of Nash were gradually replaced in the years that followed by a mess of architectural pottage concerning which the lay-public are now a little shame-faced. Of this pottage the one pre-war effort still remains the most spirited bit of the street—Norman Shaw's Piccadilly Hotel. It was not until* 1922 *that a serious effort was made to cope with the burning, but now rather* vieux jeux, *problem of the Portland stone façade on top of plate glass. Heal's was a genuine effort, and it also attempted something which worried us considerably more then than it does now—to "express the construction." I suppose that Simpson's in Piccadilly is a direct if rather distant descendant of Heal's. It is amusing, by the way, to notice how the setting back of the display window at Heal's provides, today, a very useful little blacked-out shopping arcade. If civilization is to face a series of wars, shall we build permanent structures for black-out—or shall we not build at all?*

G: Among street façades, nothing better has yet been done than the original Heal's in Tottenham Court Road by Smith and Brewer, but the germ of a new ordinance which might revolutionise our streets and solve the traffic problem appears in Hay's Wharf offices by Mr. Goodhart-Rendell. In this building the ground storey is open as a motor park, with only hall, stairs and lift to the offices above encroaching on this space. Imagine streets lined with buildings of this type in which the full street space was devoted to wheel traffic (no footpaths), with parking space to each block beneath its upper stage.

Top, left: Flats in Oxford Street—by Frank T. Verity. Centre, Kelling Hall, Norfolk—by Edward Maufe. Right, Messrs. Heals—by Dunbar Smith and Brewer.

Frank T. Verity. Centre, Kelling Hall, Norfolk—by Edward Maufe. Right, Messrs. Heals—by Dunbar Smith and Brewer.

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1921

J: *The New Age! Iron and steel and steam and electricity and speed, and even, perhaps, the radio. How excited we all got, and how confused! We prated of lightness, of glass and of new materials, and yet—such is the incredible perverseness of human nature—in our search for a means of expression we turned to Ancient Egypt, of all places, and found some quite unaccountable inspiration in the pylons of Karnak. This contradiction in terms between the potentialities of materials and technical equipment on the one hand and stylistic expression on the other hand, was not limited—as might be imagined—to the esquisses of the now flourishing studios presided over by Robert Atkinson in Bedford Square, but found its incarnation in the fleshy flesh of Adelaide House, and a little later in the Wembley Exhibition. Wembley was all weight and façade; Glasgow, 15 years later, was all sheet and frame. (Only Paris of 1937 was truly modern . . . three-dimensional and non-static.)*

1922

1935

J: *Ships—here was a marvellous field for controversy. The shipping magnates talked like theatre managers. They studied " box-office " and they knew what the public wanted. What the public wanted, or so we were told, was on no account to be aware that they were on a ship when they were on a ship. Mr. George A. Crawley and Messrs. Mewes and Davis found the way. Thus did a seafaring race sail into the West in a series of Ritz-Carltons. We had to wait nearly twenty years before Mr. Brian O'Rorke found something of a solution—all Marion Dorn and Finmar—but we shall have to wait a bit longer yet before we know what Mr. Wornum* might *have given us in gargantuan Cunarder No. 2.*

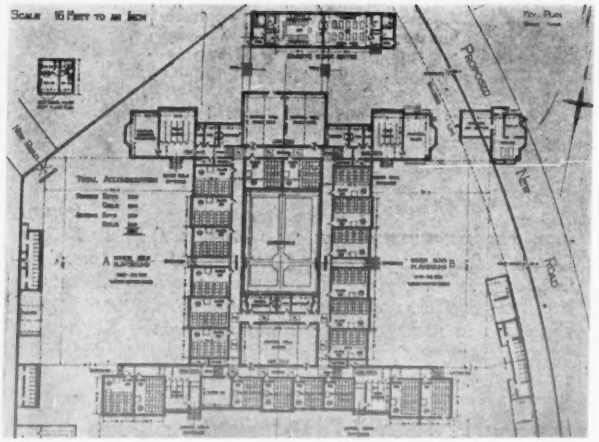
G: The boundaries between architecture and engineering (not only civil but marine and even mechanical) will probably show a tendency to become less definite. This will not necessarily mean only that the engineer will invade the architect's province, though the advance of stark functionalism in steel and concrete threatens it, but also that the special services which the architect should be able to render on quasi-engineering design may be more commonly recognized. We already have as examples the thrilling series of Tube Stations in the Cockfosters and other recent extensions of the L.P.T.B. system, some fine bridges on the Great North Road, and last but not least such really ship-like interiors as *Orion* and *Orcades*. As a contrast to these, and some real encouragement as evidence of the advance achieved in rationality, any example of the floating hotel type of ship popular a few years earlier, and not yet extinct, will serve.

Top: Left, Adelaide House—by Sir John Burnet and Partners. Centre, Grand Salon in S.S. *Empress of France*—by George A. Crawley. Right, S.S. *Orion*—by Brian O'Rorke. Bottom, Liberty's—by Edwin T. and E. Stanley Hall.

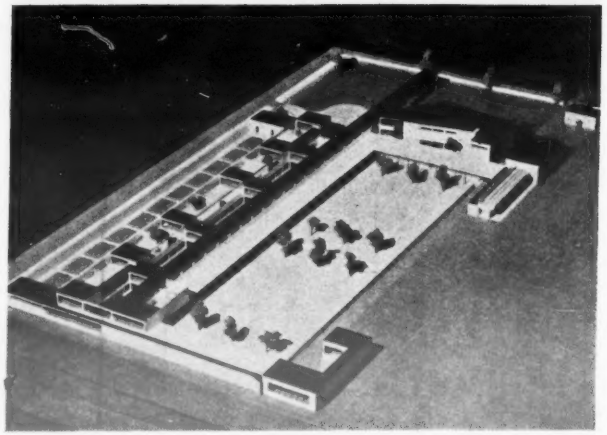
1922

J: *The Lutyens-Morris game of make-believe must not be confused with the mere creation of " period " for commercial purposes. The former was respectable. The Great Marlborough Street façade of Messrs. Liberty, on the other hand, was an enormous success. Far be it from me to explain why it is worse to case your steel in the oak and plaster of King Hal than in the flutes and volutes of Pericles. Anyway, it is still fun to look up and see the twisted stacks of Compton Wynyates reflected in the shiny black facing of the Ideal Radiator Building, that strange touch of a rather sophisticated New York.*

G: Commerce is always inclined to an occasional whimsicality, however, and it does not follow that such exceptional curiosities as the Liberty " Tudor " building, or its opposite neighbour the National Radiator building, may not again arise.



1926



1936

1926

1933

J: *Of schools one might write a great deal. As a reflection of the outlook of the teacher, the child and the architect, no building is so effective as the school. It is no good being vindictive about the symmetrical, asphalted courtyard type. Our education has its roots deep in the monastic system, and we are a conservative people who are unwilling to admit that education is environment and encouragement—not instruction. We merely ask our readers to look at a very recent issue of the "Architectural Review," at the Impington Village College. It may be a swan-song of the creative arts, but, personally, we feel that the era of frustration has not been entirely wasted. The tune is well set when we start work again.*

And in considering schools, we cannot pass over the fact that the "News Chronicle" Competition, even if it was completely ignored by the older men who probably felt that they hadn't an earthly chance, did succeed in setting a new line of thought going and indirectly led to the building of several good schools. The winner definitely achieved a wise and broad and enlightened plan, for he had studied his problem "educationally" and not merely "architecturally."

G: While orderly arrangement remains one of the essentials of architecture, there seems a realization that a forced symmetry is not the only means of procuring it, and this surely is to the good. So many of the (obviously) paper designs of the preceding age took no notice of site or surroundings that it is a pleasure to realize that the study of these controlling factors is seldom neglected by the modern school of designers. On an open and level site symmetry may still often be appropriate, and it is Nature's way with all higher organisms; but on a site conditioned by eccentricities of level or surroundings, a forced symmetry is usually less natural than dynamic symmetry, or even a markedly asymmetric form. Many successful examples, which would have been felt improper in a slightly earlier age, are currently produced—particularly in school-building. That most important class, school buildings, had in general settled into a ruck. Symmetrical lay-out independently of site and a dismal materialism in design with complete lack of "uplift" were not only common but usual, and it is a sad reflection on the unreality of State education that this class is one of the last which showed stirrings from the abyss in which it lay. Far too many schools which were essentially "pre-war" were erected in years following—in fact, the established type plans were almost the only thing which stood a chance of acceptance with most assessors or local authorities, except in one or two instances such as Derbyshire or Staffordshire, where local officials of character and pronounced views broke more or less free. The *News Chronicle* Competition let in a good bit of light on this subject, and tangible results may also be seen in such examples as the Cambridge C.C. Village Colleges.

J: *So, too, there is genuine achievement in the first of Mr. Holden's Underground Stations. They are clean and sound and pleasant in form and contemporary without being aggressive. Yet, oddly enough, they are, in some queer way, a reflection of the Gilbertian social problem created by the ding-dong between Mr. Pick and the Building Societies.*

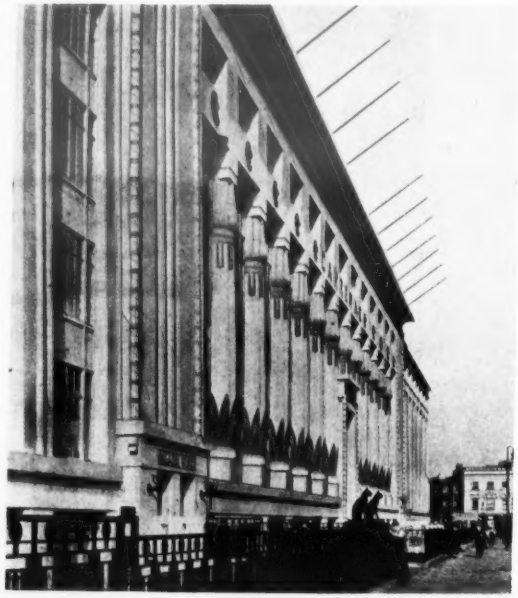
G: Organic in form . . . a point which can most readily be appreciated by study of such examples as the series of stations on the Cockfosters line of the London Underground, in which Mr. Holden produced forms akin to those arising from the processes of crystallization on varying bases of geometrical evolution suggested by the intersections of governing boundaries and directions of rail and road.

Top, left, Winning Design, Oldbury School Competition—by Hobbs and Davis. Centre, Winning Design, *News Chronicle* Competition, by Denis Clarke-Hall.
Right, above, Clapham South Station. Below, Cockfosters Station—by S. A. Heap and Adams, Holden and Pearson.

... Liverpool Cathedral — Sir Edwin Lutyens. Centre, R.I.B.A.—by G. Grey Wornum.

News Chronicle Competition, by Denis Clarke-Hall.
Right, above, Clapham South Station. Below, Cockfosters Station—by S. A. Heap and Adams, Holden and Pearson.

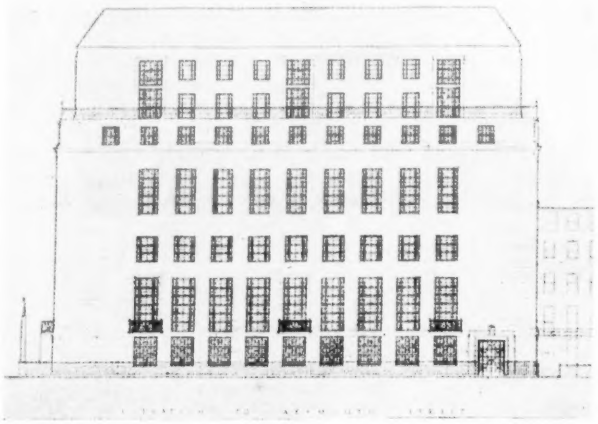
[illegible] Liverpool Cathedral — Sir Edwin Lutyens. Centre, R.I.B.A.—by G. Grey Wornum.



1928

J: *The now familiar things of bye-pass land began, oddly enough, in the Hampstead Road . . . Carreras. Today the Great West Road, Western Avenue and the other bye-passes resemble South American Expositions of the 'nineties at which some King Tut of filmland has performed the opening ceremony. Expositions, however, are temporary.*

G: Industrial buildings, previous to the war, had usually been built on lines falsely thought "strictly utilitarian," which generally appeared to mean that they had been slung together in conformity with a misappropriation of the agricultural motto, "Where there's muck there's money." The factory which should itself act as a standing advertisement for its wares had not been conceived. Starting with Carreras' building in Mornington Crescent, which in effect was a permanent poster as well as a factory, a numerous progeny has since decorated the margins of the Great West Road and other thoroughfares in the vicinity of big towns.



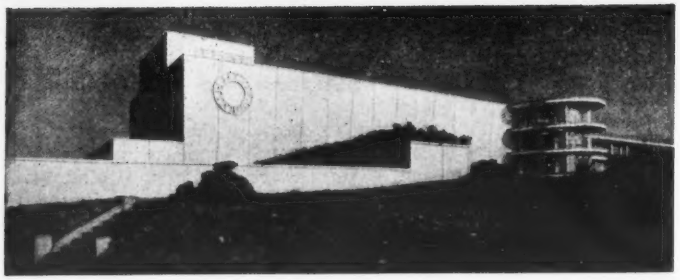
DESIGNED 1933

J: *In 1933 one of the empty floors of the new Thames House on Millbank (which we should not otherwise mention) housed an exhibition of drawings which was measured by the mile or the acre (I am not sure which), and Mr. Wornum was very properly selected by the distinguished jury as the winner. His building still remains a brilliant plan-cum-section on a site that is too short. The brilliance is not invalidated by the rather chi-chi decor which we see rather too often to enable us to be entirely objective about it. Little remains to be said about the other designs submitted. The influence of Ostberg and the Swedish Romantic movement—admirably publicised by Mr. Yerbury—was at its height, and there were, if memory serves me right, rather too many bits of Carl Milles spotted about. This remark does not apply to the drawings sent in from the Empire—the authors of these were satisfied with Gilbert. Let us remember at this point that it is largely to Sir Ian MacAlister that the profession owes its two most substantial achievements—the Registration Act and the new building.*

G: Among exceptional buildings it is impossible to ignore the R.I.B.A., a building which cannot be passed unnoticed, though its primary claim to distinction is its marvellous internal design in three dimensions—a really staggering achievement to which we are too close to pass judgment.

DESIGNED 1937

J: *The biggest building in Europe—an Exhibition Hall at Earls Court—was opened a year or two ago. It doesn't really count, and for sheer size, therefore, the palm goes to Sir Edwin Lutyens' cathedral at Liverpool, for Archbishop Downey. What a long line of memorials, banks, Anglo-Persian Oil Companies and Queen's Dolls' Houses lies between the Mr. Lutyens of the Sussex delphiniums and our Sir Edwin as we know him. Totally out of touch with the world (and why not if you consider the world), benevolent and mischievous, he piles up his intriguing Palladian detail—cornice upon cornice, world without end. Of course, it's all wrong, but he's a better artist than most of the rest of us put together. Mr. Robert Byron's almost purple panegyric on Imperial Delhi should not, perhaps, go unrecorded. Somehow the pukka sahibs didn't like Delhi. They are an unimaginative lot, for one would have thought that it would have been to them a compensation for Ottawa.*



1934

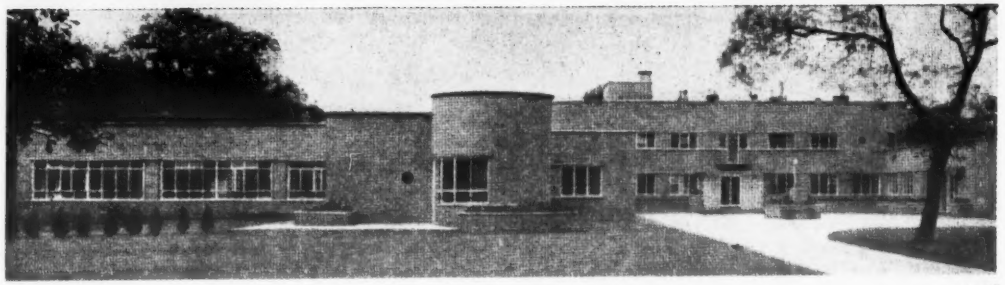
J: *If contrast is the essence of æsthetic pleasure we would turn from Liverpool Cathedral to the Bexhill Pavilion. There was a fuss, it will be remembered, about the architects' nationality—considerably more fuss than there would have been if Bexhill had been landed with a bad building. Most of the plan forms which had been running through the school studios during the previous two years were incorporated with no little skill.*

G: Buildings for amusement and recreation are another important class to which a good deal of attention has been devoted in recent years. The sensation of the Bexhill Competition is fresh in most architects' recollection, and the experiment in design there made might have presaged a new approach to buildings of this type in many future instances. Probably the present war and its consequences will check indulgence in this class of work. Generally, this building is efficient for its purpose and sits well on its site, but it is difficult to understand why its large unbroken wall-surfaces should have been so treated that from a short distance they simulate the familiar shed-structure of asbestos-cement sheets on framing.

COMPLETED 1936

J: *With Messrs. Peter Jones in Sloane Square, Central Europe came to London with a rush. One remembered an early Dudok in Rotterdam and a store in Munich, all of which were more logical than Messrs. Peter Jones' in their internal arrangements merely because they were not hampered by the obsolete L.C.C. fire regulations. Today one cannot but weep for the shareholders; the dividends, surely, will all have to be spent on black-out curtains! About this time, two little houses were built in London which were not noticed very much save by architects. That was their merit. They were full of structural illogicalities, but they were immediately absorbed, in spite of their modernity, into their early nineteenth-century surroundings. I will leave you to guess where they were.*

G: In commercial architecture there has also been a vast change from the bombastic Selfridge store—pre-war American classic continued in instalments—to the suave and almost fluid Peter Jones.



1936

J: *With the Ravenscourt Park Hospital we suddenly come very near our own time. Perhaps the Information Books constantly keep it in mind and make it, therefore, seem very contemporary. Re-visiting it, one is astonished at the luxury which Masonry can run to when it organises itself. The accommodation of all sorts proportionately to the number of patients is amazing, and a small hospital like Surbiton (the result of a competition) is more realistic. Like schools, hospitals are so symptomatic of changes in the technical and scientific outlook that there is no space here to enlarge on the theme. Ravenscourt Park, by the way, is not the only example of Masonic lavishness within our period.*

G: Hospital design, which once was (despite sanitation) stuffy and institutional, has received a humanizing touch, though with a latent tendency to develop into what has been unkindly called " vertical filing-cabinets for sick human beings." Such an example as the Surbiton Hospital presents a real advance on what might have been the solution of a similar problem in 1914, and there is, of course, the Freemasons' Hospital at Ravenscourt Park, perhaps rather exceptional from unusual generosity of funds, but a sterling achievement.

Top, left: Bexhill Pavilion—by Mendelsohn and Chermayeff. Right, Surbiton Hospital—by Wallace Marchment.
Left, Peter Jones—by Crabtree and Slater and Moberley; Prof. Reilly, Consultant. Right, Finsbury Health Centre, by Tecton.

1938

J: *The Finsbury Health Centre brings us right up to date . . . post-Munich and pre-Danzig. It exploited modern materials to the full and planned for accessible services much more rationally than had hitherto been done. Finsbury inevitably calls up A.R.P. problems. Frankly, I haven't the patience to deal with them. There has been too much obstructionism, too much optimism, too much confidence and too much panic. An analysis of the world's petrol supplies shows that this city of ours is unlikely to be completely destroyed, an analysis of raids on Barcelona would suggest that ninety per cent. safety might have been achieved for the crowded East-end if only Authority had been a little less bureaucratic and a little more receptive. Now let us forget A.R.P.*

COMPLETED 1936

G: In commercial architecture there has also been a vast change from the bombastic Selfridge store—pre-war American classic continued in instalments—to the suave and almost fluid Peter Jones.

analysts of raids on Barcelona would suggest that ninety per cent. safety might have been achieved for the crowded East-end if only Authority had been a little less bureaucratic and a little more receptive. Now let us forget A.R.P.

GUNN

Conclusion

FINALLY, what about these "new materials" of which we hear so much? We can hardly call either concrete, glass, or non-ferrous metals of various strangely alloyed compositions essentially "new." We certainly have plastics, wallboards, vitrolite, and sundry other sheet materials which our fathers had not, and numerous strange woods of uncertain behaviour are presented for use. Plastic asphalt and bituminous sheeting in various combinations give facility in flat roofing, and we have learnt (often by bitter experience) that many of these materials present problems in structural adaptation which have as yet been incompletely solved by most of us. We do now realize that both external solar radiation and inner insulation ought to be provided for. We experiment with light-weight concrete.

On the whole, there appears little cause for forsaking old and well-tried building materials in pursuit of strange substitutes. Certain types of building which are quickly out-dated may profitably be devised on less massive and permanent lines than were once customary—both educational and health establishments probably come under this head. Office buildings have long since ceased to be more than "space for division," and there seems little doubt that other classes could follow with advantage.

JORDAN

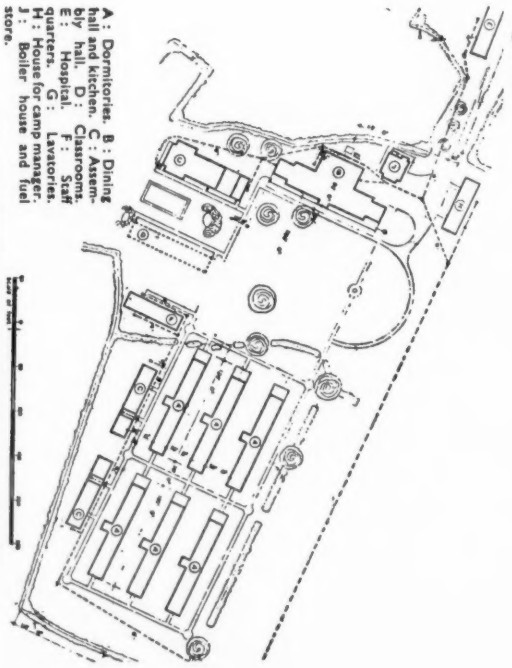
Conclusion

I HAVE been pretty rude about the last twenty years. The new war makes it already, after four months, seem so far away that it drops into perspective a little, and things which seemed so desperately important a year or two ago no longer seem to matter. This distant view does not make for respect. Yet oddly enough I do not feel that the Great Truce (which is, after all, only a little slice of one century) is a thing to be regretted or wept over. If our stupidities were enormous, so were our advances. In twenty years I have seen architecture pass from being academic-professional-æsthetic to the point where it has realized, or begun to realize, its true social function. It is now moving to the plane of scientific humanism. I am convinced that that is as the Greeks and the Renaissance Masters would have had it if they had been alive today. They were always realistic, always contemporary, always experimental, always aware of themselves in the community and always intensely human. It is outside our profession, amongst the sociologists and the scientists and the politicians and the painters that we must go, and amongst the engineers and the building operatives and the inhabitants of ordinary rotten houses, if we are to discover where our profession really stands, and if we are to begin to realize where it might stand. Technically, we are well on the way. There has been more than a vision here and there of what the planner could do if he was given half a chance. In the year nineteen-forty-something-or-other the world may be at our feet again, as we thought it was twenty years ago.

NATIONAL CAMPS

ALTERNATIVE LAYOUTS.

On this and the following six pages are reproduced layout plans of twelve National Camps which have been completed or are nearing completion. One camp in Surrey is fully illustrated and described. The architects for the National Camps Corporation are Sir John Burnet, Tait and Lorne, who were responsible for the design of the building units: the names of the architects for the layouts are printed beneath each plan. For obvious reasons it is impossible to publish the exact position of each site—the county only is given.



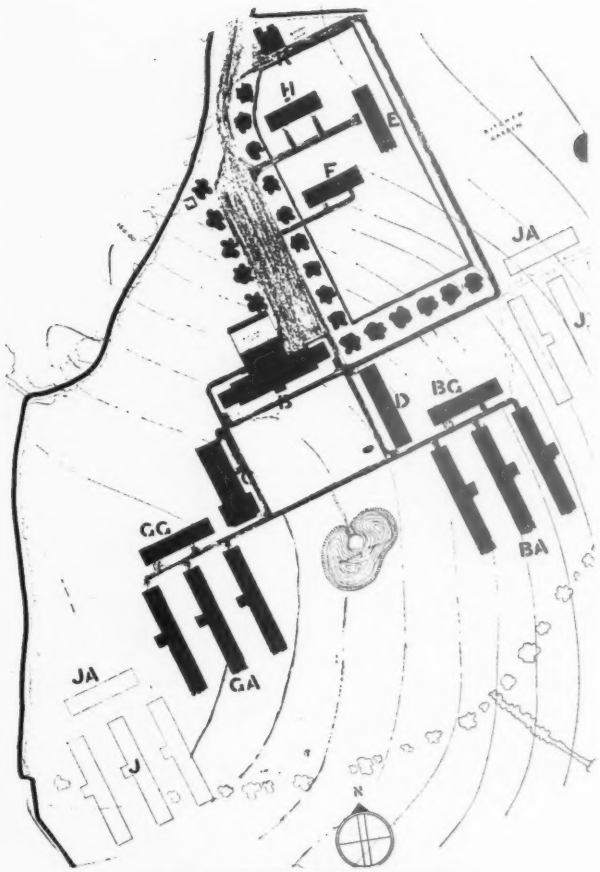
A: Dormitories. B: Dining hall and kitchen. C: Assembly hall. D: Classrooms. E: Hospital. F: Staff quarters. G: Lavatories. H: House for camp manager. J: Boiler house and fuel store.

BUCKINGHAMSHIRE. SIR JOHN BURNET, TAIT AND LORNE

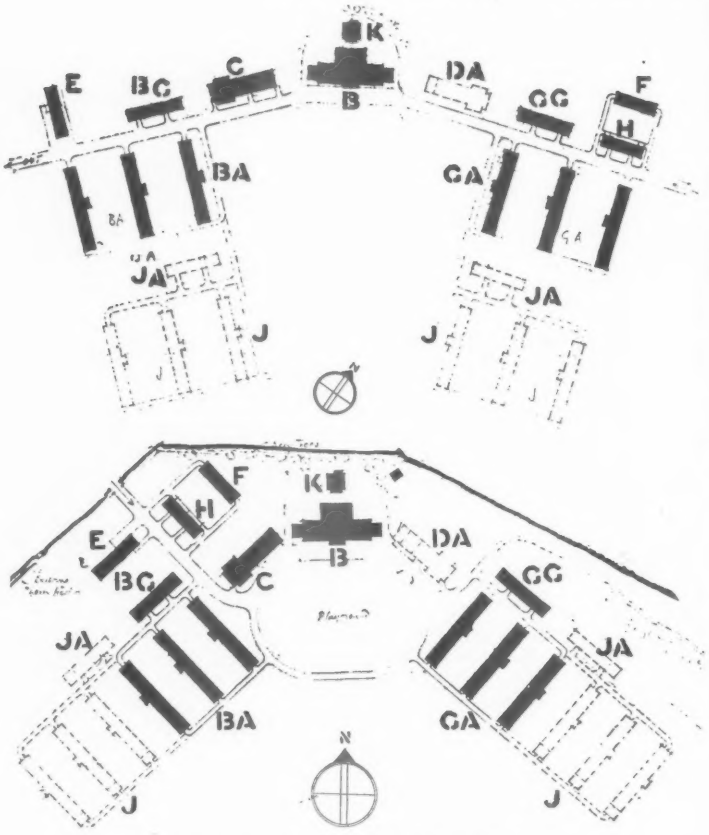
YORKSHIRE. J. MANSELL JENKINSON

Shortly after the Camps Act was placed on the Statute Book at the beginning of last year the National Camps Corporation was formed with the object of providing camps suitable for schooling in peace time and useful for evacuation in war. The first action of the Corporation was to appoint Sir John Burnet, Tait and Lorne as its consulting architects, and subsequently to agree with Mr. Tait on a design which could be used for all the camps. A separate architect, drawn from a panel of architects recommended by the R.I.B.A.,

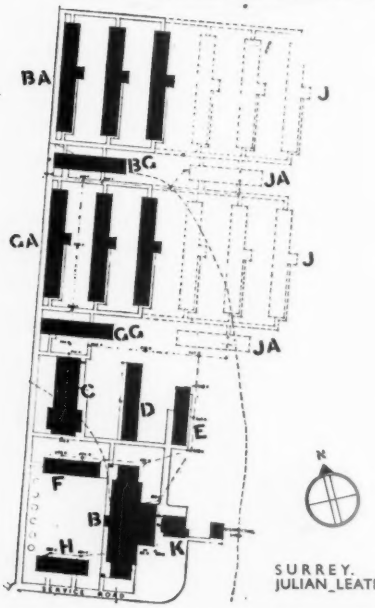
NATIONAL CAMPS:



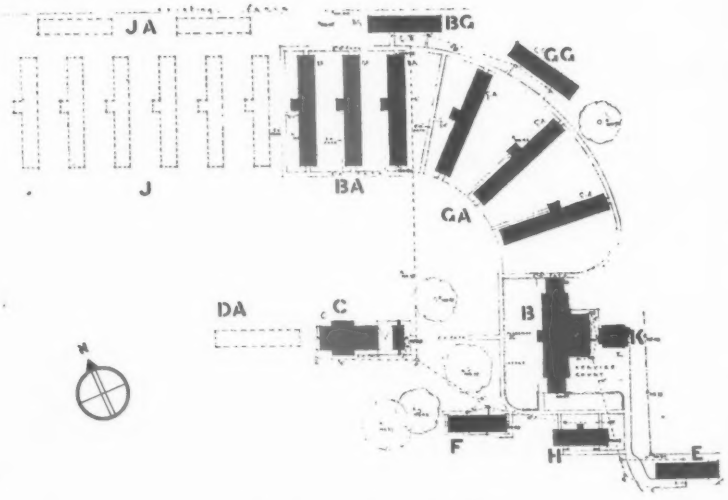
SURREY. MITCHELL AND BRIDGWATER.
ASSISTANTS: PETER SHEPHEARD AND N. G. MEMBERY



TWO CAMPS IN OXFORDSHIRE. JOHN DOWER



SURREY.
JULIAN LEATHART.



CHESHIRE. HALLIDAY AND AGATE

was appointed for each camp, his duties being to lay-out the buildings on the site and to supervise the whole of the work.

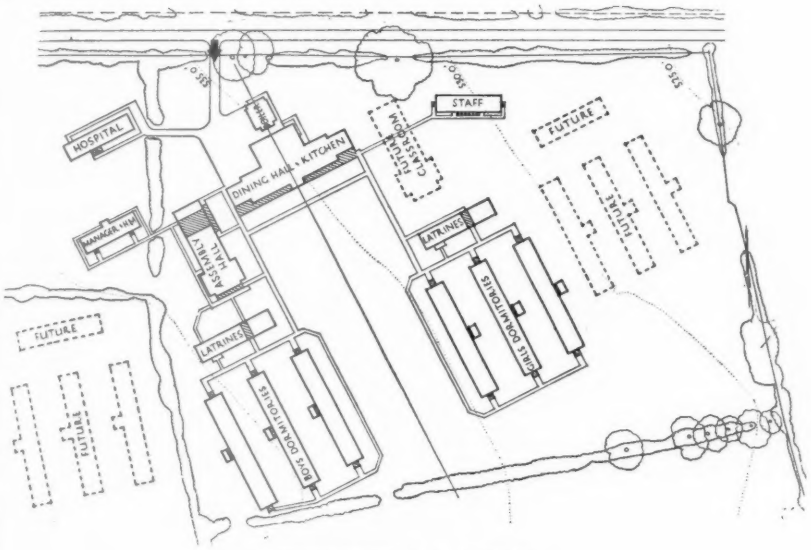
As the camps were to be erected all over the country at short notice in isolated localities, it was evident that standardization was essential for the success of the scheme and that the construction adopted had to be such that factory fabrication could be utilized while the site works were proceeding.

The decision to use red cedar drop siding and cedar shingled roofs was taken on the virtue of pleasant appearance, coupled with low maintenance. To expedite the work 15 expert Canadian shinglers were brought over to this country by W. H. Colt, the firm responsible for the roofing.

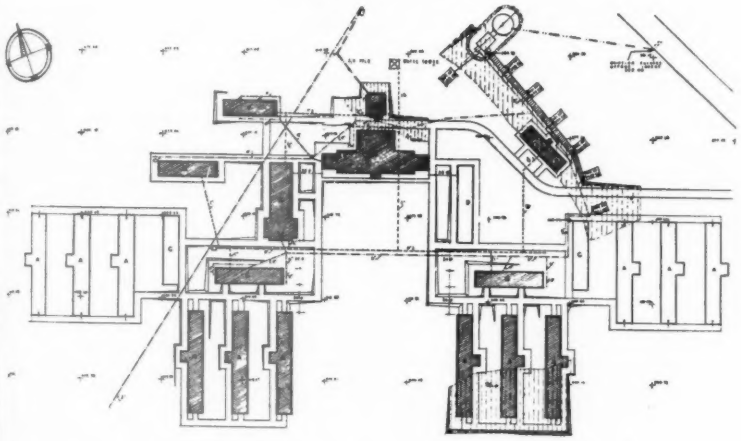
This method of construction is carried through all the buildings, with the exception of the boiler-house, where brick walls and a concrete roof are used on account of the possible fire hazard. Each building is designed on the basis of the standard units of walling; these being prefabricated panels of framework either 8 ft. or 10 ft. high as required by the "cube" and 6 ft. wide. These dimensions were found to be most convenient for handling and erection, and most adaptable for the layout of the doors and windows.

The panel units are wood, mostly 4 ins. by 2 ins. as this satisfied the requirements of strength and lightness, ease of fixing and forming, and because there are all over the country joiners' shops

ALTERNATIVE LAYOUTS

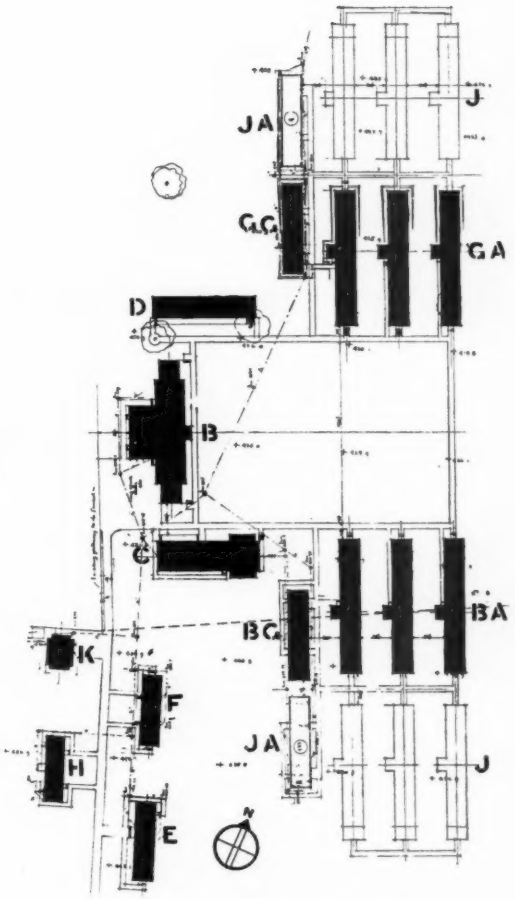


HERTFORDSHIRE. H. P. G. MAULE

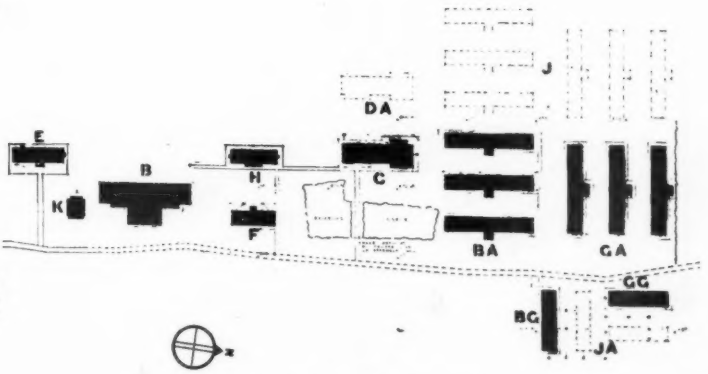


A: Dormitories. B: Dining hall. C: Assembly hall. D: Classrooms. E: Hospital. F: Staff quarters. G: Latrines and lavatories. H: Manager's house. J: Sewage disposal Tanks. K: Boiler House.

NORTHUMBERLAND. W. AND T. R. MILBURN



WARWICKSHIRE. HARVEY AND WICKS



SURREY. ALISTER G. MACDONALD

KEY TO PLANS

BA: Boys' dormitories. GA: Girls' dormitories. B: Dining hall and kitchen. C: Assembly hall. D: Classrooms. DA: Future classrooms. E: Hospital. F: Staff quarters. BG: Boys' lavatories and latrines. GG: Girls' lavatories and latrines. H: Camp manager and headmaster. J: Future dormitories. K: Boiler House.

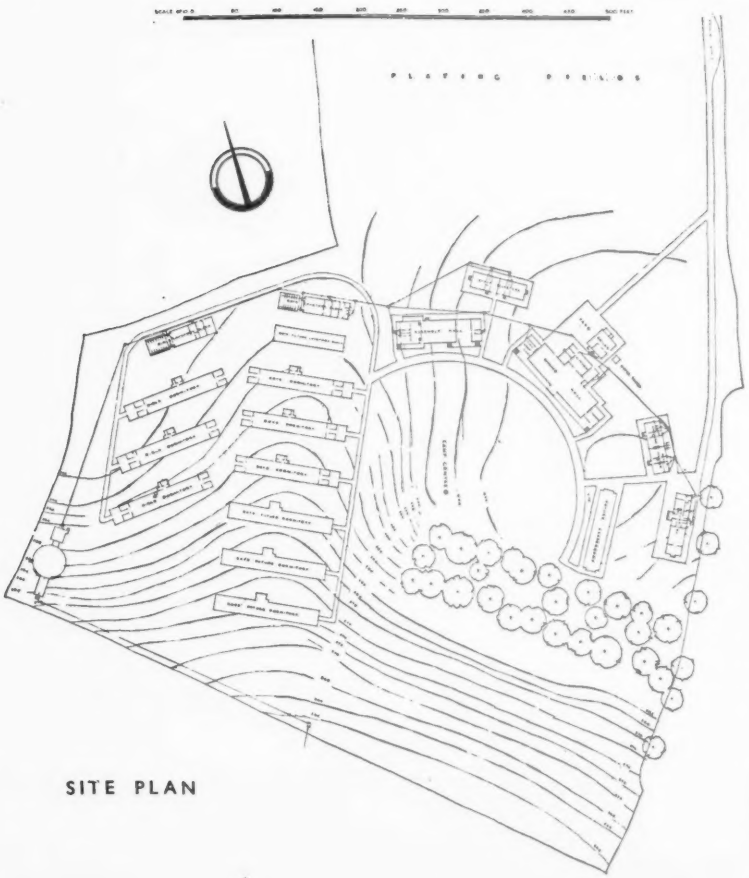
equipped to do such work. From the fabricating works the units and the other shop-made parts are dispatched to the sites by road.

The foundations to receive the superstructure are formed of *in situ* concrete posts of heights to follow the varying contours and of spacing to suit the superstructure grids.

Creosoted bearers rest on the damp-proof post cappings, and in turn support the floor joists upon which stand the cills of the studwork wall units of which the heads form the roof plate.

The roof unit and ceiling members form in the triple unit blocks of 18 ft. width a simple couple close roof, and in the 27-ft. blocks a knee-braced truss. Windows, doors and internal partitions are fixed to the wall units as required, and the units are lettered to indicate their types. Every camp is built up around a nucleus which comprises the essential buildings and consists of the following blocks: Assembly hall, dining hall, boiler house, dormitories, lavatories, class-rooms, hospital, staff quarters and houses.

On January 4, at the annual conference of the Incorporated Association of Assistant Masters in Secondary Schools, held at Oxford, Earl De La Warr, President of the Board of Education, announced that it was proposed to make use of the holiday camps for housing evacuated secondary school children. It is expected that all the 36 camps, which are being built under the Government's £2,000,000 scheme, will be completed next month.



SITE PLAN

NATIONAL C

ARCHITECT FOR LA

ARCHITECTS FOR BUILDING UNITS: SI

GENERAL—A camp for school children planned to avoid regimenting the buildings. Standard huts had to be laid out to suit the site contours and its particular aspects.

SITE—There were no building restrictions. Advantage was taken of the contours and aspect to develop a grouping semi-circular plan around a "campus," thus forming a natural camp centre.

PLAN—Buildings are grouped for their particular functional requirements, bearing in mind the camp life the children have to lead. Dormitories are placed so that every one obtains a view over the roof of the one below.

CAMP IN SURREY

LAYOUT: ALISTER G. MACDONALD

SIR JOHN BURNET, TAIT AND LORNE

Dormitory Block

Although standard buildings had to be employed, the layout plan has been contrived so that each balcony or verandah obtains the view and the sun, without one unit overlooking another.

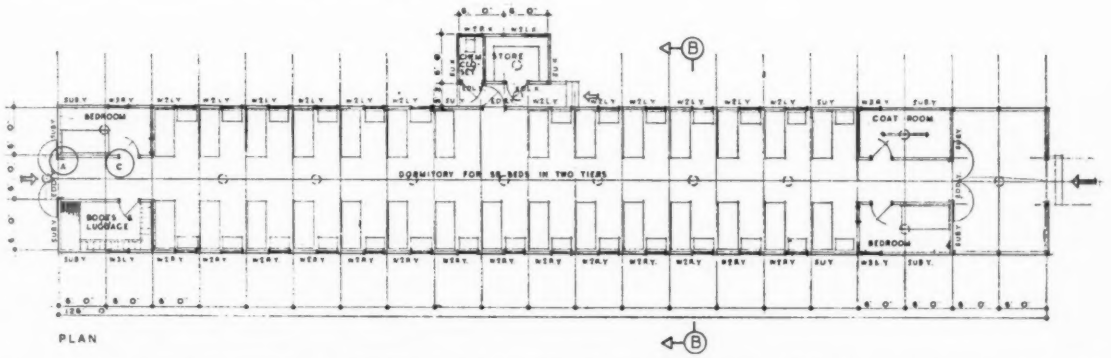
CONSTRUCTION—Timber framed prefabricated sectional units throughout (except brick-built boiler house) supported on concrete posts. Walls are finished with cedar weather-boarding and the roofs with cedar shingles. Windows, doors and floors are wood. Walls, partitions and ceilings are finished internally with a patent wall board. All fireplaces and flues are of brick.

EXTERNAL FINISHES—All blocks are pre-designed in rural "Swiss" type to blend with any type of scenery.

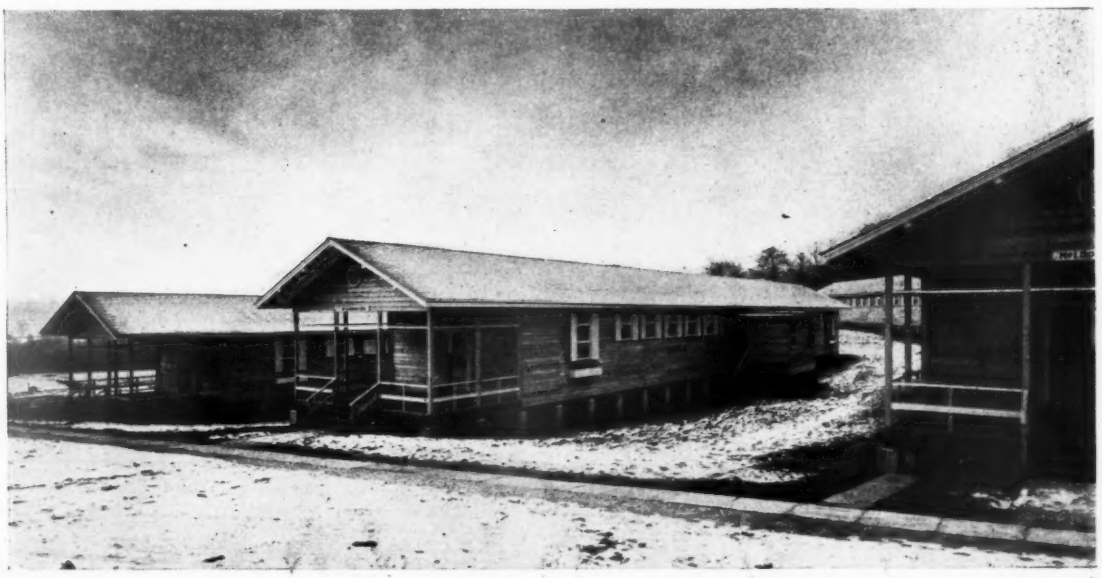
INTERNAL FINISHES—All blocks distempered in simple but gay colours. Each unit has its distinctive internal colour; the whole scheme being blended together by similar external colour treatment to all huts.

SERVICES—The kitchen is equipped with four cookers. The buildings have central heating by radiators and there is hot water to all baths, showers, basins and sinks—all from a central boiler house. The pipes are run in brick ducts in the ground, with access manholes at intervals. These ducts also contain the electric cables. In addition to the central heating, brick fireplaces have been provided in the dining-hall and teachers' room The camp has its own sewage disposal plant, water tower, and incinerator.

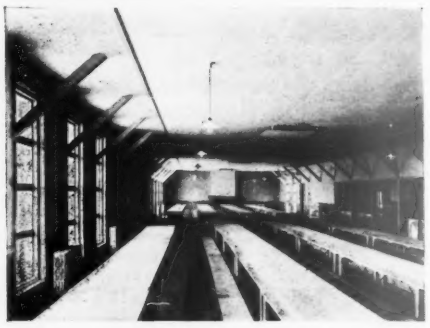
COST—Contract price approximately £25,000, including land and equipment.



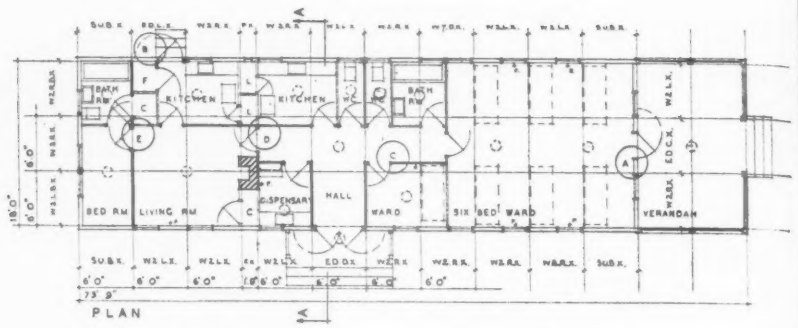
PLAN OF DORMITORY BLOCK



Right and facing page : Dormitory Block

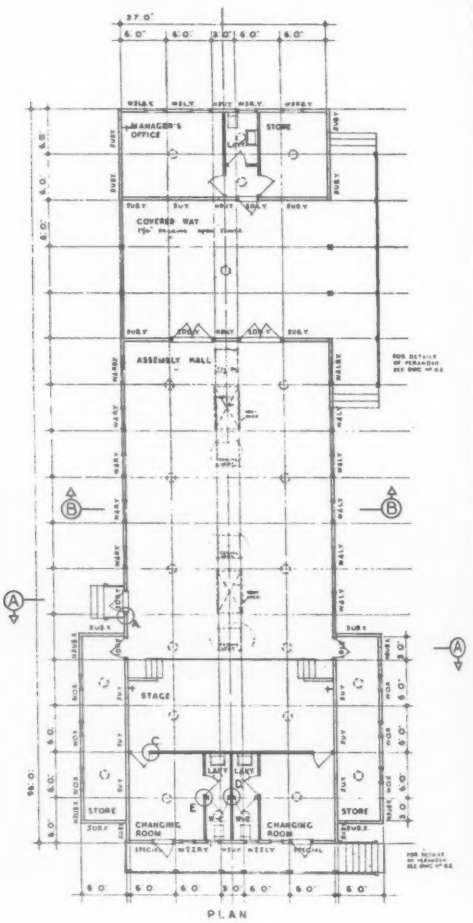


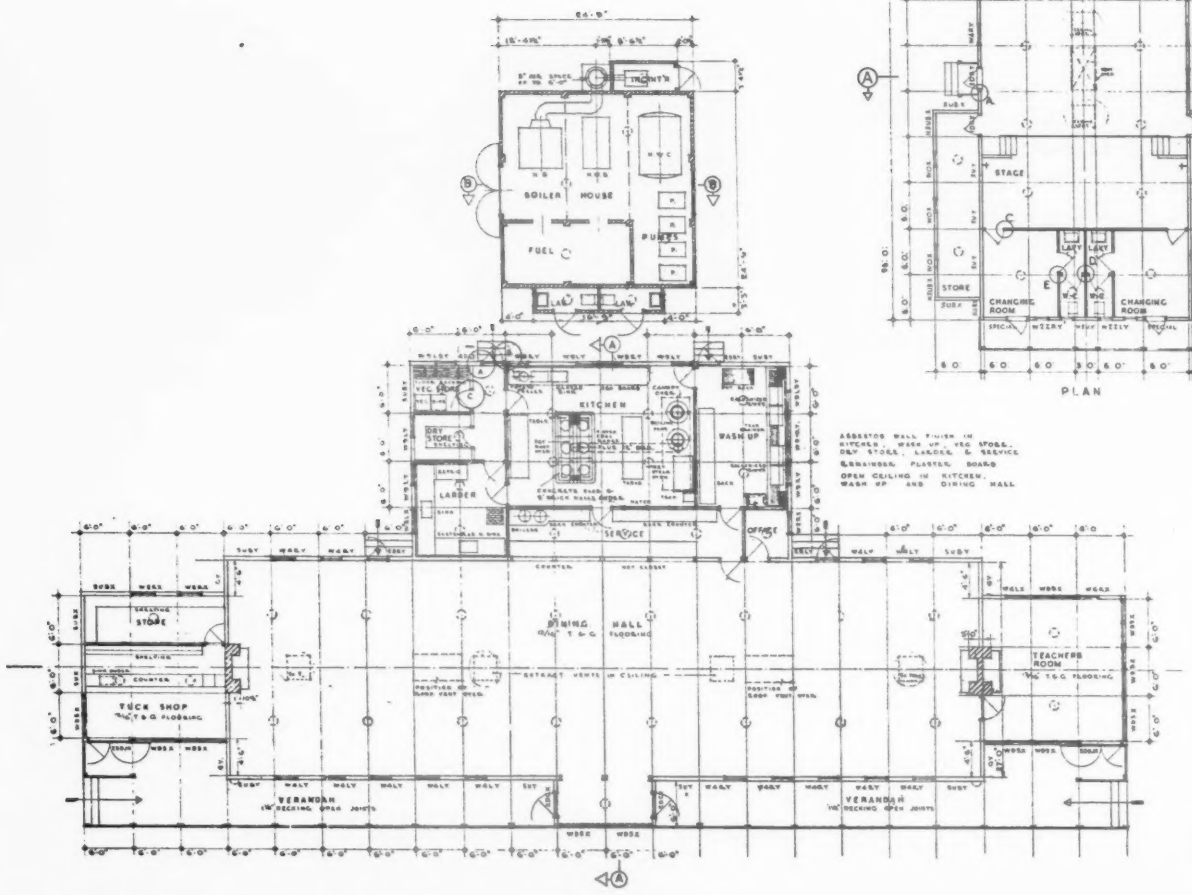
Top, Assembly Hall; above, Dining Hall.



HOSPITAL BLOCK

ASSEMBLY HALL BLOCK





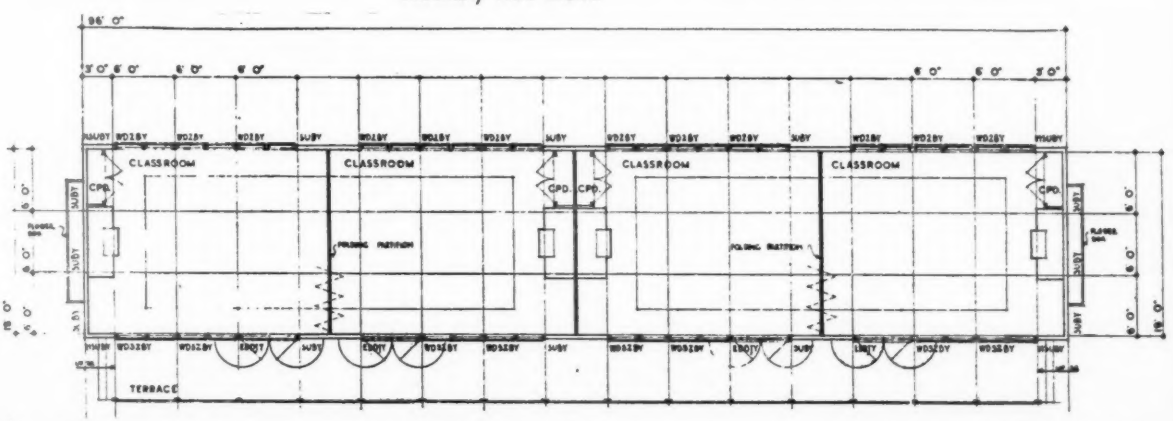
PLAN OF DINING HALL AND BOILER HOUSE

NATIONAL CAMP IN SURREY • ARCHITECT

Dining Hall Block.

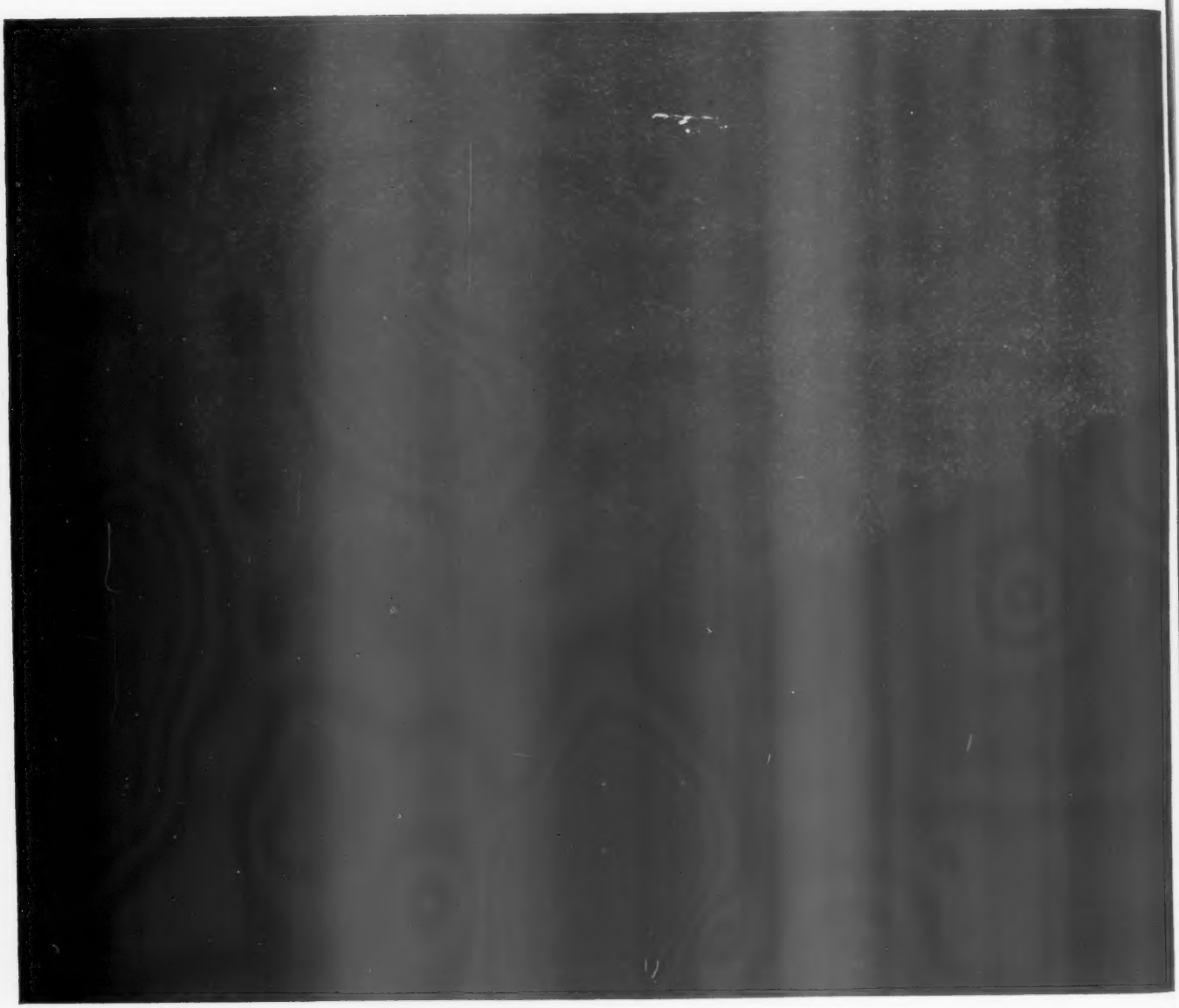
Classroom Block.

Assembly Hall Block.



CLASSROOM BLOCK

FOR LAYOUT: ALISTER G. MACDONALD



THE ART OF THE BLACKOUT

OR

Design for Today

BY G. BRIAN HERBERT

Being a cursory study of the effects of war on the surroundings of the citizen: together with some suggestions.

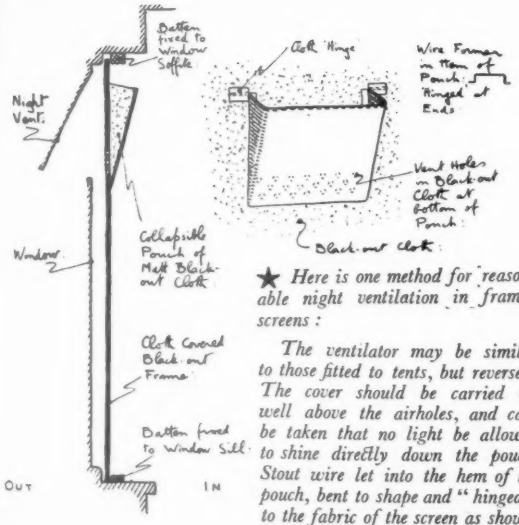
FOR as long as the inhabitants of this country could they hoped for peace. When hope disappeared preparations were made for war.

War—from the citizens' point of view—was expected to mean widespread devastation from the air. And in September—with the example of Warsaw before them—it seemed probable that they were right.

Therefore citizens, being likely to be in the position only experienced by the front line in the last war—did their best to take front line precautions. Shelters—corresponding to dug-outs—appeared indoors and out; trenches were dug; sandbags appeared in millions. We all Blacked Out.

In January, 1940, the dust of the first desperate preparations has settled; we have sufficient calm of mind to look at them, and the reasons for them, objectively: at least for the moment.

The bombing has not come. The first alarm has died down,



★ *Here is one method for reasonable night ventilation in framed screens :*

The ventilator may be similar to those fitted to tents, but reversed. The cover should be carried up well above the airholes, and care be taken that no light be allowed to shine directly down the pouch. Stout wire let into the hem of the pouch, bent to shape and "hinged" to the fabric of the screen as shown, allows the pouch to be collapsed when the frames are stored away.

GUIDE TO VENTILATION

regulations are relaxed, and persons who are wise enough to carry their gasmasks are beginning to look odd. Sandbags are splitting and strips of paper flutter in the wind.

Yet bombing may come at any moment—perhaps not with the universal devastation once feared but certainly with local severity. And if it may come at any moment for the next three years, NOW is the time to look at our surroundings in the light of those three years.

Of necessity our outlook must now be practical. Cost of living has gone up, resources down (sometimes even sunk without trace). But improvements to our war preparations which will make them durable, more easily used, and reasonably seemly in appearance may make just the difference that matters to civic cheerfulness and resolution : if not to civic security.

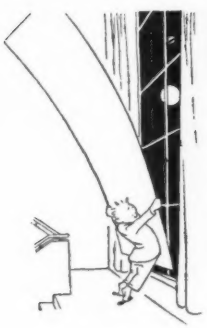
NOW!—while the threat of September has not wholly faded, while we are not entirely accustomed to the squalor of A.R.P. —is the time to look around.

And the following short tour of our surroundings is made with a halt at each corner for a threefold question—

Efficient? . . . .

Cheerful? . . . .

Three Years?



THE HOME

Save in the speeches of politicians, our homes have not been for twenty years so much the centre of our lives as they are now. War in this has been a great leveller : diner-out, bridge player and cinema-goer are all thrown on their own resources and each others' nerves, within their homes; from dusk to bedime.

The ultimate social consequences of this curfew may well be of great moment and beneficial, but these are beyond the legitimate limits of our subject. The immediate consequences are that large numbers are finding unaccustomed self-sufficiency a strain. It is therefore extremely desirable that A.R.P. in the home should give confidence and be unobtrusive, and that routine work connected with it should be reduced to a minimum.

The universal obligation of Home A.R.P. is the Black-Out, and nothing is more regularly annoying than the boring, nightly reminder of war which its routine can entail.

Yet, more than anything, the Black-Out ought to be approached, *now*, with the firm unshrinking query : "Three Years. . . . ?"

Every method of preventing lights showing has certainly been tried by now at least once, and a recapitulation of even the main types has already become unreadable.

But the possibility of a three years' war, the certainty that many family Black-Outs were begun, and are now maintained, in a makeshift manner do justify a restatement of principles and the suggestion of one last, thorough, re-examination. For the Black-Out which calls for expert local knowledge—a separate technique in each room, some lights out and others draped, and constant caution—constitutes a nervous strain on the household of a very real kind.

Black-Out apparatus should be, then :—

LIGHT-PROOF ;

EASY TO PUT UP ;

EASY TO TAKE DOWN ;

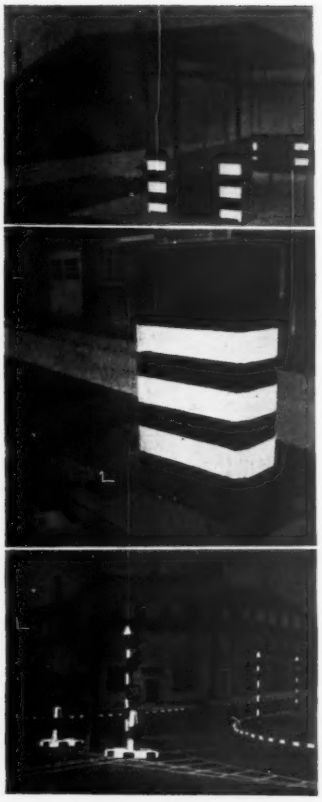
DURABLE ;

—And when once in place should be cheerful from within and call for no further thought.

In few houses are furtiveness, shaded lamps and difficulties with ventilation avoided at night. It would strengthen the nerves of the population infinitely if faults were looked to before habit altogether rots initiative.★

Black-Out is the one defensive measure universally enforceable on the home. Its effect on the citizen and his surroundings is mental.

Its effects are large. But being trifling in the alterations it causes to structure and landscape, simple in its object and easily and comprehensibly tested for success, it occupies a smaller space in the



Black and white chequering is very visible when applied to street furniture and other objects of sharp outline and smooth surface.
It is not so successful when applied to trees and other objects whose form and extent are ill-defined; and where difficulties of application lead to less frequent renewal. This particularly applies to sandbags.

GOOD AND BAD BLACK & WHITE

citizen's thoughts than optional A.R.P.

OPTIONAL A.R.P.

OPTIONAL A.R.P., beset with a multitude of official recommendations and expert bickering, invades the home, and garden, in two principal ways : shelters ; and flying glass protection.

The changes in appearance which these two bring in their train seldom rise from the bad to the whimsical. A close latticework of sticky paper along the twenty-foot window of an *avant-garde* house coaxes a smile from one profession ; but *avant-garde* houses are few.

In average streets some houses have windows fully boarded, more have paper strips, and about a third of the total have either a sandbagged refuge room or a broken garden around a shelter.

A just estimate of the effect of these things on the citizen must, one might suppose, leave out æsthetics. But from the standpoint of *Efficient ? Cheerful ? Three Years ?* this is questionable. Orderliness is a constituent of æsthetics as well as a reinforcement to cheerfulness and so to resolution. And our slogan therefore poses two questions over shelters, splinter paper and the citizen.

Does the real protection, plus the peace of mind of imagined protection, of these things outweigh the depression of their tawdriness and practical inconveniences ?

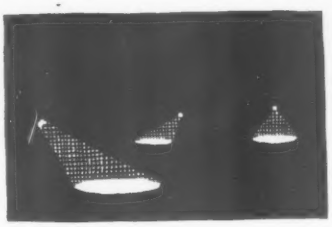
If so, can the citizen afford an expenditure which will improve their appearance ?

The first question must certainly be answered with " Yes." It is certain that any paper *could* stop glass flying which otherwise would fly ; that any shelter *could* prevent an otherwise certain injury.

And this is no time to argue over the theoretically possible and the much more likely.

What is equally certain is that a little thought, some little unskilled work in Black-Out evenings and at week-ends, and a very small outlay of money could improve the appearance of shelters and splinter precautions, and reduce their inconveniences.★

The persuasion of the citizen into doing these things would be to move a little nearer to the end of the war. The B.B.C. might well bear that in mind.



THE STREETS

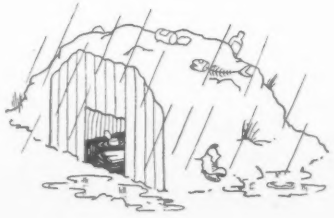
THE effect of war-time streets on the citizen is the effect of Black-Out streets.

In daylight the streets are touched, sometimes splashed, with makeshift shoddiness of A.R.P.—a shoddiness which, unlike that of houses, represents a wasted commercial opportunity—but they remain the old familiar streets.

At night they do not. They become seas and rivers, bounded by unknown coasts—with each citizen a ship.

The citizen has advantages over a ship in that his now permissible torch has reflecting surfaces near enough to be useful ; and he can turn or stop in his own

★ *One example will be enough. Close-mesh wire-netting over batten frames fitted to the windows of main rooms is a cheap device. It is also immeasurably more efficient than paper strips, improves external appearance, gives confidence, and does away with the nightmare irritation of cleaning paper-stripped windows.*
On the other hand, the problem of flooded cheap shelters is almost insoluble.



length. He is also at a disadvantage in that he is infinitely more crowded and without a rule of the road. The strain of street-navigation became at once the greatest result of war-time streets and still remains so.

Mitigation at once followed maritime tradition. The art of the Black-Out became the science of maximum visibility ; and black and white patterns appeared in profusion.

That they have not been more effective is due to the huge number of official obstructions in the streets, phenomenal increase in unofficial hazards and the cost of keeping the patterns fresh and definite.

Just as camouflage aims at breaking up form into shapeless tones, so " anti-camouflage " aims at emphasizing form, preventing shapeless tones.

Street furniture lends itself well to this art ; trees, objects of vague form, and especially private A.R.P. obstructions do not. It would, therefore, seem much better to follow maritime tradition and affix one or more small, standardized, cheap obstruction-plates to all objects above road level, rather than to splash irregular forms with irregular white.

So far, however, the new war-time ship is still in transit. What of coming into harbour ?

That more should not yet have been done to help it is indefensible on the part of local authorities and astounding on the part of shopkeepers.

The inadequate naming of streets was a burning grievance in peace time ; in war it causes the persistent upward flashing of torches.

Pressing and cheap official improvements are : the sign-posting of streets four feet above the pavement at all corners ; the standardization of all A.R.P. notices ; and the substitution for the absurdity of 1 (Right) of the more sensible 2 with other signs at each subsequent corner. The tattered posters and arrows which now start, stop and run up staircases ought to wither at once under the query : *Efficient ? Cheerful ? Three Years ?* Weatherproof standardization must of course mean national standardization and not standardization in Woolwich or Devizes. It would also be cheaper.

Now that restrictions on lighting are somewhat relaxed, private aid to the wayfarer might at least include an illuminated number for houses, and name and business added to the faintly glowing " OPEN " of many shops. Presumably the new low intensity lighting for shop windows will be a help.★

These are the things that matter most to the citizen in war-time streets. They weary his mind, strain his eyes and set pitfalls about his feet ; and thus leave him little inclination to appreciate the credit side of the Black-Out : the restfulness of darkness in a town when darkness does not matter, and the rediscovery (for the first time for half a century) of urban moonlight.

SHOPS

One further result of war on the surroundings of the citizen deserves a place to itself. It concerns shops.

The citizen has far less money in war-time ; he is more careful about how he spends it. To coax him to spend it—to coax him into a shop—requires, first of all, that he should be coaxed into the right mood.

To have this effect on the passer-by a shop front must look cheerful, must look as though it had made its A.R.P. preparations efficiently and come up smiling at the end. A shop draped with messy makeshifts of A.R.P. spreads an air of hopelessness and impending bankruptcy over 50 yards of street.

★ *The allowable lighting fittings are black-painted rectangular tins to contain a 25-watt lamp or its equivalent, the only opening being a 4-in. by ¼-in. slit in the tin, covered by tissue paper for purposes of diffusion. Display-cabinets may be used as an alternative—one cabinet to each shop or each 10 ft. run of window—and these are indirectly-lit boxes with an open front either 1 ft. high by 1 ft. 6 in. wide, 2 ft. 6 in. by 2 ft., or 6 ft. by 3 ft., but in both these and the light fittings the maximum brightness at any point must not exceed 0.02 equivalent foot-candles, and the sign must be inconspicuous at a distance of 100 ft. No flashing signs may be used.*

THE NEW NAVIGATION

A rock and two reefs

What light is that ?

1

FRISTON COUNCIL BOROUGH

NEAREST SHELTER

IS AT

112 COLEY STREET

2

NEAREST SHELTER FOR 200

SECOND RIGHT — FIRST LEFT

FOLLOW THE ARROWS

3

Clear A.R.P. notices are still far too few. 1, above, is useless save to local residents. 2 makes the minimum demand on worried citizens. The best place for subsequent arrows is on the ground (when traffic makes it practicable) as in 3.

★ *Efficient shop-window screens may be of solid or of frame construction. The latter is preferable, being the more readily and economically repairable if partly damaged. The window aperture or apertures should be provided with shutters that may be placed in position at night, or the moment the syrens go. This calls for coverings hinged in place rather than for loose shutters which might become mislaid, and would certainly be hard to fit in an emergency.*
Since the screen must stand some little way away from the shop-front itself returns will be necessary at both ends and on either side of the doorway, which may be fitted with a secondary lockable door in addition. The screen should be sufficiently far away from the shop-front to enable the window to be cleaned and rubbish to be cleared out of the tempting receptacle formed by the space between the two, a small access door being provided in one of the returns for that purpose. The whole should be roofed back from the top of the screen to the face of the building.

Nothing seems more certain than that such a shop will lose custom to more lively neighbours. Nothing debunks the supposed astuteness of the commercial mind more thoroughly than the failure of many shops to appreciate this point.

To be in tune with the citizen's mood in 1940, the shop must take precautions which at least look efficient and strong. It must then make its outward appearance orderly and bright.★

The illustrations on the right will perhaps serve to prove this. Of the typical examples it is " Smith et Cie " which best refuses to be hag-ridden by Goering and best rises to 1940.

There is no financial excuse for the constant assault on citizens' nerves now practised by shops. Canvas on framing costs very little ; brickwork or concrete blocks nothing considerable.

It can be maintained that many other buildings besides shops have contributed to the ragged front line appearance of streets. This is true. Public offices and departments should set a better example. But the official mind moves slowly and will certainly only accept with reluctance a slogan involving efficiency, cheerfulness and three years' foresight : while certain professions appear to require exceptional squalor in their surroundings as part of their stock-in-trade. It is useless to look to these for a lead.

Shops are quite different. Window dressing is for them a necessity and in wartime it is trebly a necessity if they are not to forego the pound which every hoarding asks the citizen to save and which, in any case, he has not got.

One hopes that shopkeepers will flock to the Building Centre's exhibition of what can be done with war-time shop-fronts and realize the pulling power of a twenty-four foot poster, the enticement of a peep-show, the friendliness of a glow at night.

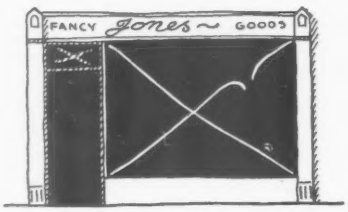
Let them then stand in front of their premises and ask themselves, quietly, firmly—

Efficient? . . .
Cheerful? . . .
Three Years?

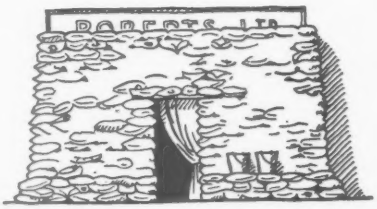
(*The drawings illustrating this article are by the author.*)

. . EMERGENCY

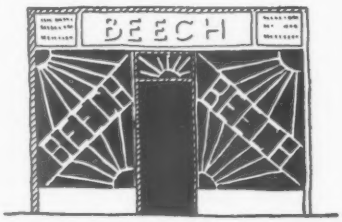
" 50-50, or fair play."



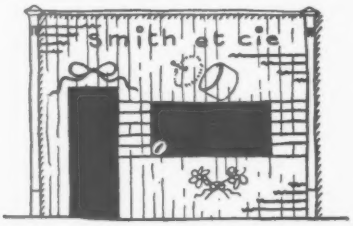
" I suppose we ought to do something."



" Well, look what happened in Spain."



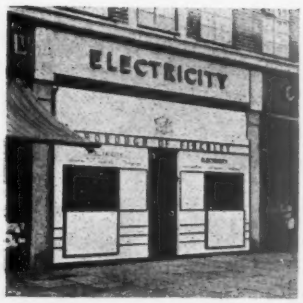
" I wanted to be an artist."



A change for the better.

Typical first thoughts, and (below) more durable solution, of a pressing commercial problem.

THE FACE OF LONDON: DURATION . .



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THE USE OF STEEL SECTIONS AS COLUMS AND STRUTS :

Columns & struts can be carried out in a great variety of sections; examples of the groupings are shown on Sheet N° 11 of this series.

GROUP (4) : struts for trusses or other purposes, consisting of one or two angles or channels.

This Sheet deals with angles only.

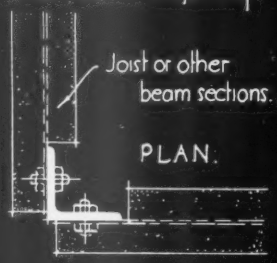

FIG. 1 : Single angle (type (a) section).

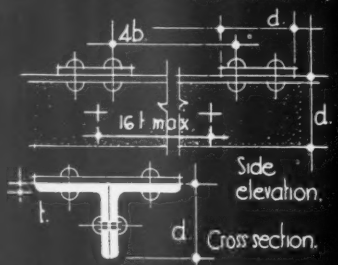

FIG. 2 : two composed angles battened back to back (type (b) section).

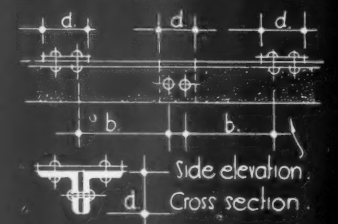

FIG. 3 : two composed angles battened back to back, with space left, (also type (b) section).

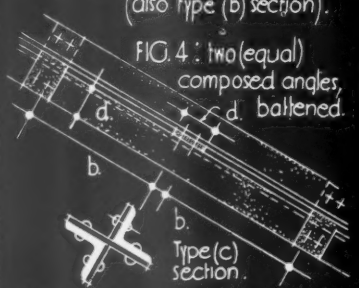

TABLE GIVING EFFICIENCY FACTORS (e) FOR B.S.S. SINGLE & DOUBLE EQUAL ANGLE SECTIONS AS CENTRALLY LOADED COLUMNS (strut

Size of each angle, Ins.	Type* of Section, see diags.	LENGTH OF COLUMN OR STRUT IN FEET.														
		G.	G·5.	7.	7·5.	8.	8·5.	9.	10.	11.	12.	13.	14.	16.	18.	20
2 x 2 x 3/16.	(a)	0·19	0·17	·	·	·	·	·	·	·	·	·	·	·	·	·
	(b)	0·28	0·25	0·22	0·19	0·18	0·15	0·14	0·12	·	·	·	·	·	·	·
	(c)	0·39	0·36	0·32	0·29	0·25	0·24	0·22	0·18	0·15	0·12	·	·	·	·	·
2¼ x 2¼ x 3/16.	(a)	0·24	0·21	0·18	·	·	·	·	·	·	·	·	·	·	·	·
	(b)	0·34	0·30	0·26	0·25	0·22	0·19	0·18	0·15	0·12	·	·	·	·	·	·
	(c)	0·46	0·41	0·38	0·34	0·31	0·28	0·26	0·22	0·18	0·16	0·14	0·12	·	·	·
2½ x 2½ x ¼.	(a)	0·29	0·25	0·22	0·19	0·17	·	·	·	·	·	·	·	·	·	·
	(b)	0·39	0·36	0·32	0·29	0·25	0·24	0·22	0·18	0·15	0·12	·	·	·	·	·
	(c)	0·50	0·47	0·43	0·39	0·36	0·33	0·30	0·25	0·22	0·18	0·17	0·15	·	·	·
3 x 3 x ¼.	(a)	0·39	0·35	0·31	0·27	0·24	0·21	0·19	·	·	·	·	·	·	·	·
	(b)	0·48	0·44	0·40	0·37	0·34	0·31	0·28	0·25	0·21	0·18	0·15	0·13	·	·	·
	(c)	0·56	0·54	0·51	0·49	0·46	0·43	0·40	0·35	0·29	0·26	0·23	0·20	0·16	0·12	·
3½ x 3½ x ¼.	(a)	0·49	0·44	0·39	0·35	0·32	0·29	0·26	0·21	0·18	·	·	·	·	·	·
	(b)	0·54	0·51	0·48	0·46	0·42	0·39	0·36	0·31	0·27	0·24	0·20	0·18	0·14	·	·
	(c)	0·60	0·58	0·56	0·54	0·52	0·50	0·47	0·43	0·38	0·33	0·29	0·26	0·22	0·18	0·15
4 x 4 x 3/8.	(a)	0·59	0·53	0·49	0·42	0·39	0·36	0·32	0·26	0·22	0·19	0·17	·	·	·	·
	(b)	0·58	0·56	0·53	0·50	0·48	0·46	0·43	0·38	0·33	0·29	0·26	0·23	0·18	0·15	0·12
	(c)	0·62	0·61	0·60	0·58	0·57	0·54	0·53	0·49	0·44	0·40	0·36	0·33	0·26	0·22	0·18
4½ x 4½ x 3/8.	(a)	0·67	0·61	0·56	0·51	0·47	0·42	0·39	0·33	0·28	0·24	0·21	0·18	·	·	·
	(b)	0·60	0·58	0·56	0·54	0·52	0·50	0·47	0·43	0·38	0·33	0·29	0·26	0·22	0·18	0·15
	(c)	0·64	0·63	0·61	0·60	0·59	0·58	0·57	0·53	0·50	0·46	0·42	0·39	0·32	0·26	0·23
5 x 5 x 3/8.	(a)	0·73	0·68	0·63	0·59	0·54	0·50	0·46	0·39	0·34	0·29	0·25	0·22	0·17	·	·
	(b)	0·62	0·61	0·60	0·58	0·57	0·54	0·53	0·49	0·44	0·40	0·36	0·33	0·26	0·22	0·18
	(c)	0·65	0·64	0·63	0·62	0·61	0·60	0·59	0·57	0·54	0·50	0·47	0·44	0·38	0·32	0·26
6 x 6 x 3/8.	(a)	0·82	0·78	0·74	0·71	0·67	0·63	0·59	0·51	0·44	0·39	0·35	0·31	0·24	0·19	·
	(b)	0·64	0·64	0·63	0·61	0·60	0·59	0·58	0·55	0·52	0·49	0·46	0·41	0·35	0·29	0·25
	(c)	0·67	0·67	0·66	0·65	0·64	0·63	0·62	0·61	0·59	0·57	0·54	0·52	0·47	0·41	0·36
7 x 7 x ½.	(a)	0·86	0·84	0·82	0·79	0·76	0·72	0·69	0·63	0·56	0·50	0·44	0·39	0·32	0·26	0·21
	(b)	0·67	0·66	0·65	0·64	0·63	0·62	0·61	0·59	0·57	0·54	0·52	0·49	0·43	0·37	0·32
	(c)	0·68	0·68	0·67	0·67	0·66	0·65	0·64	0·63	0·61	0·60	0·58	0·57	0·52	0·47	0·43
8 x 8 x 5/8.	(a)	0·89	0·87	0·85	0·83	0·82	0·79	0·76	0·71	0·65	0·59	0·53	0·48	0·39	0·33	0·27
	(b)	0·67	0·67	0·66	0·66	0·65	0·64	0·63	0·61	0·60	0·58	0·56	0·54	0·49	0·43	0·39
	(c)	0·69	0·68	0·68	0·67	0·67	0·66	0·66	0·65	0·64	0·62	0·61	0·60	0·57	0·53	0·49

* In the table the efficiency coefficients are given for single & double angles (a) referring to single angles, fig. 1; (b) to double angles in accordance with figs. 2 & 3; (c) to double angles in accordance with fig. 4.

The values given to the right of or above the zig-zag line may be applied to secondary compressive members. They should not be applied to main structural columns or struts, for which the values lie to the left of the zig-zag line. The criterion is a slenderness ratio of 150.

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Compiled by C. W. Hamann, Consulting Engineer.

INFORMATION SHEET : STEEL FRAME CONSTRUCTION : N° 10
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INFORMATION SHEET

• 774 •

STRUCTURAL STEELWORK

Subject : Economical Column Sections—6

General :

This series of Sheets on steel construction is not intended to cover the whole field of engineering design in steel, but to deal with those general principles governing economical design which affect or are affected by the general planning of the building. It also deals with a number of details of steel construction which have an important effect upon the design of the steelwork.

Both principles and details are considered in relation to the adjoining masonry or concrete construction, and are intended to serve in the preliminary design of a building, so that a maximum economy can be obtained in the design of the steel framing.

This Sheet is the sixteenth of the series, and sets out in tabular form the comparative economic efficiencies of columns or struts consisting of one or two equal angle sections, centrally loaded. All double angle column types are connected together at intervals by means of riveted batten plates as shown to the left of the Sheet.

Column Groupings :

Where centrally loaded columns consisting of one section only are not desirable (see Group (1) on Sheet No. 11 of this series), composite sections as shown in Groups (2) and (4) may be used. The advantages of composite sections are set out on Sheet No. 12.

Efficiency Coefficients :

For general clauses, see back of Sheet No. 12 of this series. The factors for the single angle (type (a) section) columns shown on this Sheet, can never be greater than 1.00, nor less than 0.17. The factors for double angle columns (types (b) and (c) sections) can never be greater than 0·70, nor less than 0.12. This reduced coefficient allows for material and labour in providing batten plates.

The coefficients are worked out for the smallest standard thickness of every type of angle, but the difference in the case of the coefficients belonging to angles of greater thickness is never more than 1 per cent., and may be neglected.

Angle Columns :

(a) *Single angle columns* :

Sections formed of one angle (Fig. 1) have radii of gyration, and therefore efficiency coefficients, which are superior to those of joists of similar weight. For instance :—

Section	Weight lb./ft.	Minimum radii of gyration
R.S.J. 12″ × 5″	32	1.01
Angle 8″ × 8″ × $\frac{5}{8}$″ ...	32.68	1.57

The angles vary in thickness and in flange length, and it is always advantageous, from the point of view of efficiency, to use the smallest thickness and greatest flange length possible. Some angles with a thickness greater than the minimum are, in fact, inferior in efficiency to the following joists :—

3″ × 3″, 4″ × 3″, 5″ × 4½″.

For several reasons single angles are rarely used as columns :—

1. Owing to their unsymmetrical section, it is difficult to arrange connections so that they are not subject to bending moments, against which their resistance is small.
2. As the loading is limited (see below), they cannot be used for multi-storey buildings.

They may, however, be suitably used for corner columns (Fig. 1), particularly as joists might be connected to them without cleats. In fact, they merit a greater use than is accorded them at present.

Single angles are used often as chords and diagonals for small trusses, but owing to the eccentric connection to the gusset plates, invariably have to withstand large bending moments. They are not recommended for compression members, except where the stresses are negligible.

Equal angles are superior to unequal angles, where they are used singly.

(b) *Double angle columns* :

Two equal angles may be composed : in Fig. 2 they are shown back to back, and in Fig. 3 a distance is left.

The efficiency is the same in both these cases, the distance being decided by constructional considerations. Two angles in this position may be used for columns, but more often for the chords of trusses. They have a greater efficiency coefficient than single angles, and can be arranged so that they take the load concentrically. Two equal angles in this position are generally inferior to unequal angles of the same weight, having the longer flange towards each other (see Sheet No. 17 of this series).

Two equal angles, as shown in Fig. 4, have the greatest efficiency and are, in some cases, superior to two channels of the same weight (see Sheet 11). Angles in this combination are used as diagonals for trusses and sometimes as columns, though the connections to joists are not always easy to arrange.

Loading and Buckling :

See formula and clauses on the back of Sheet No. 11 of this series.

Standardized single angles can transmit concentric loads up to 9.5 tons for a buckling length of 7 ft., and 8.75 tons for a buckling length of 9 ft.

Batten Plates :

For the arrangement shown in Fig. 3, the batten plates should have a width d equal to the flange width of the angles. The distance b between the outer rivets of batten plates should not be less than 40 r where

r = smallest radius of gyration of single angle.

For the arrangement shown in Fig. 2, where batten plates occur only on the flange, their distance apart may be four times as great as in Fig. 3.

For both types (b) and (c) the two different types of batten plates, shown in Figs. 2 and 3, should alternate.

Previous Sheets :

Previous Sheets of this series dealing with structural steel are :—

No. 729 : Basic Steel Sections.
No. 733 : Mechanics of Sections, 1.
No. 736 : ,, ,, 2.
No. 737 : Economical Framing, 1.
No. 741 : ,, ,, 2.
No. 745 : Economical Beam Sections, 1.
No. 751 : ,, ,, ,, 2.
No. 755 : ,, ,, ,, 3.
No. 759 : Riveted Plate Girders.
No. 763 : Fire Resisting Cover to Steel Beams.
No. 765 : Economical Column Sections, 1.
No. 769 : ,, ,, ,, 2.
No. 770 : ,, ,, ,, 3.
No. 772 : ,, ,, ,, 4.
No. 773 : ,, ,, ,, 5.

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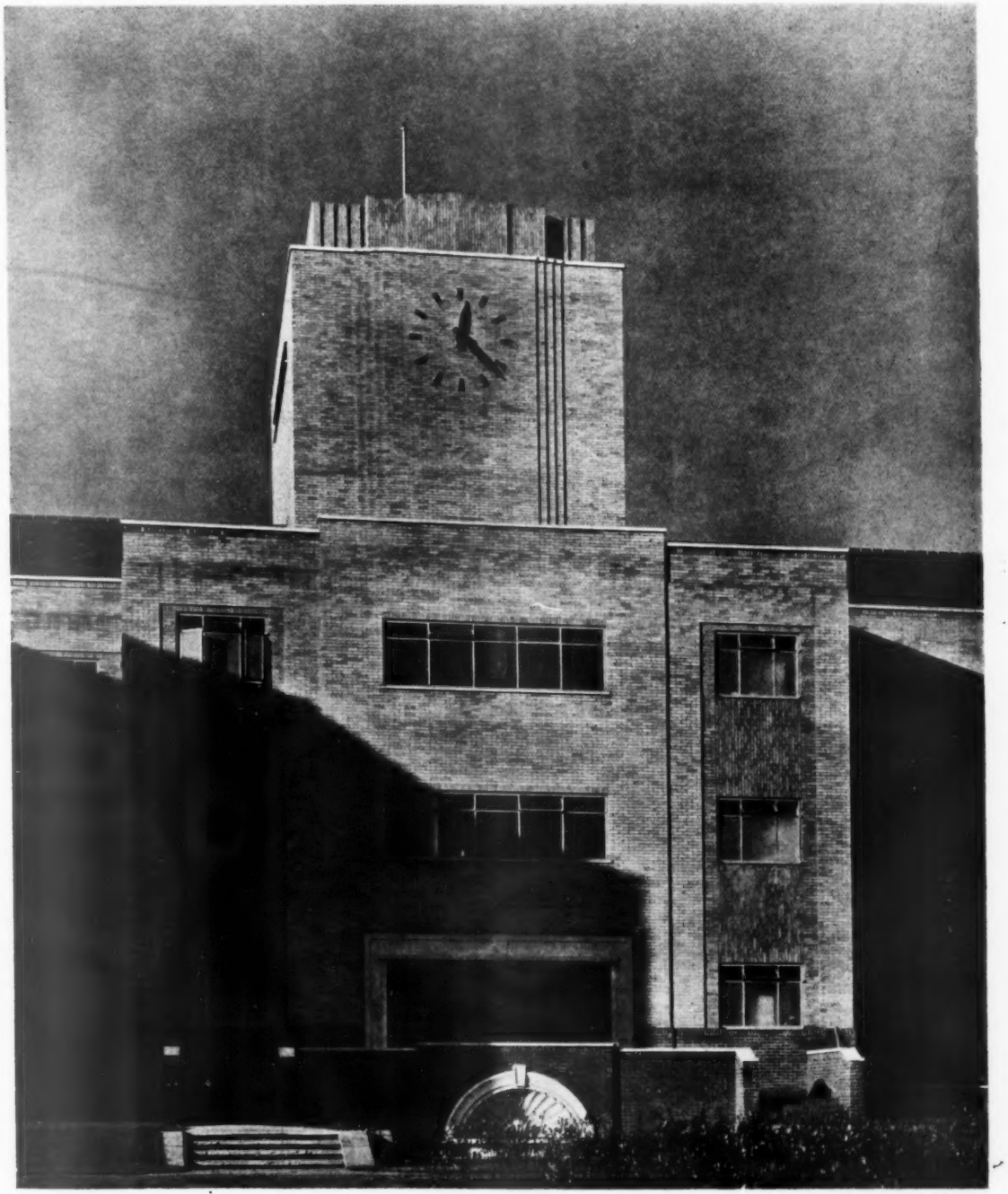
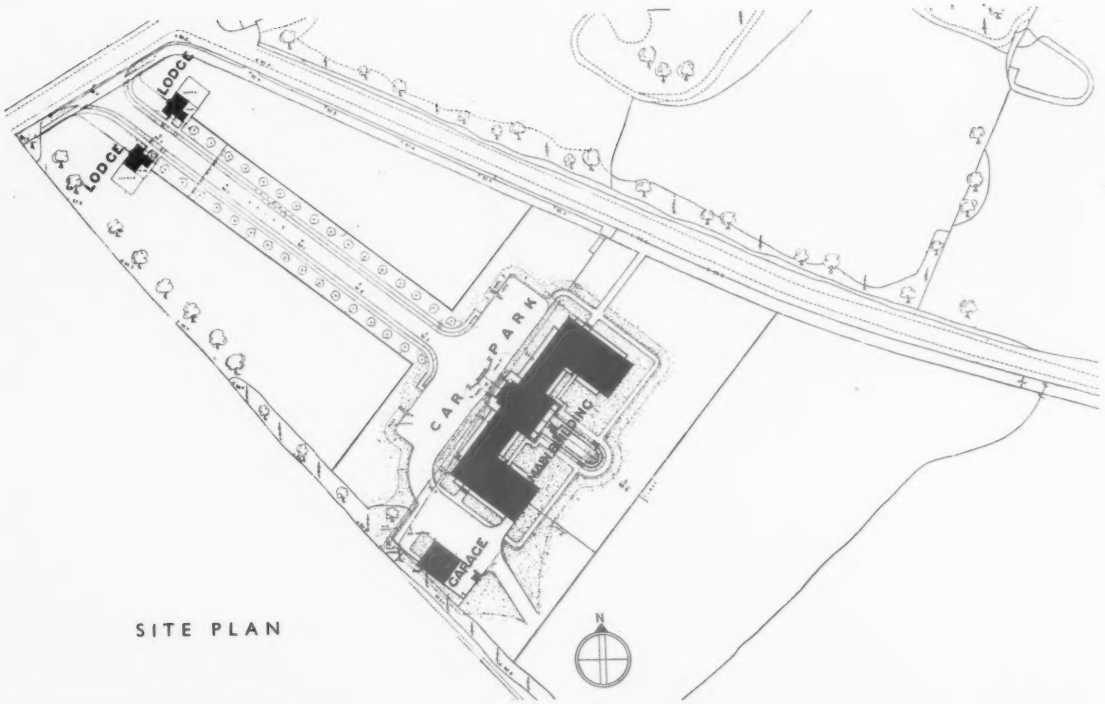
BY O'DONOGHUE AND HALFHIDE



South-east entrance

GENERAL—Chemical laboratories for the production of pharmaceutical drugs. Water is provided from an artesian well, passed through a filter plant and stored in large wooden vats in the tower ; storage capacity, 23,000 gallons. The present building houses the production and administrative staff.

SITE—The site was chosen mainly because of the lack of any other manufactories in the neighbourhood, thus ensuring pure air. Coal is delivered to the basement of the building from a private siding and loading dock by a conveyor housed in a small tunnel.



SITE PLAN

Air view looking east, showing first floor under construction.

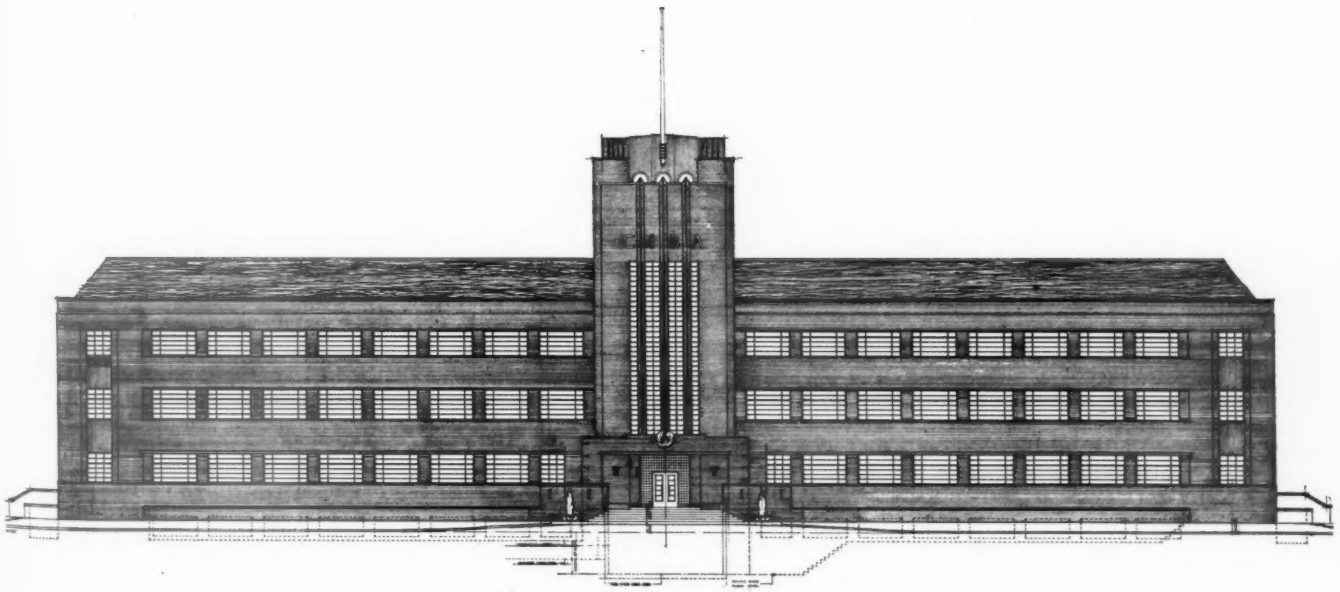
Air view looking north-west, showing first floor under construction.

CHEMICAL LABORATORIES, SUSSEX

CONSTRUCTION AND EXTERNAL FINISHES — R.C., faced with a 4½-in. skin of brickwork ; all work below ground tanked in asphalte. The whole of the outside walls of

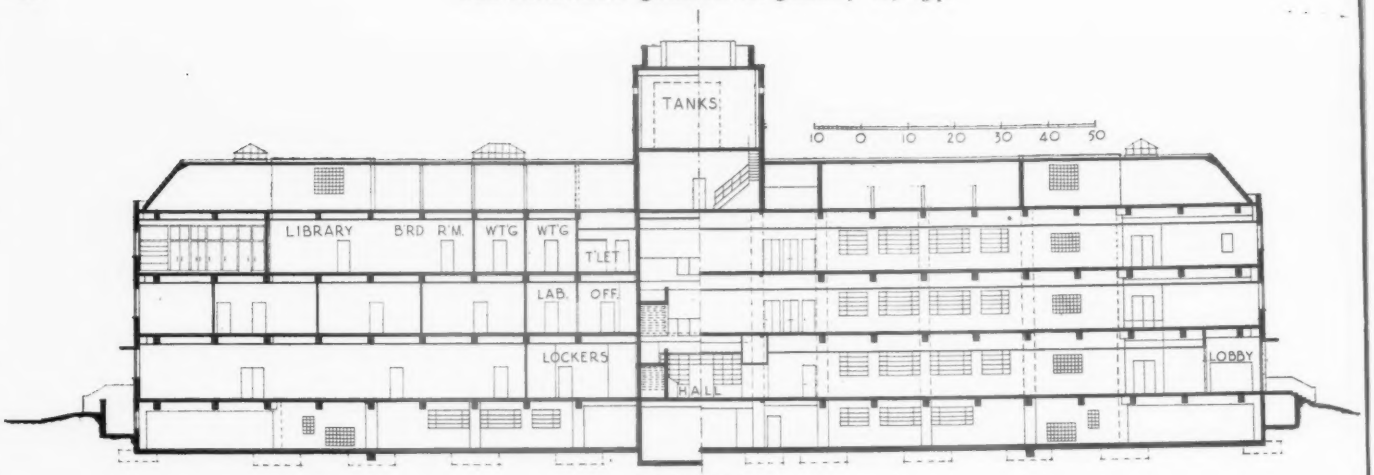
View from the south

the concrete work were sprayed with special liquid before they were faced with brickwork. Multi-coloured bricks were used for the external walls, held back to the R.C. by clips. The steel window frames were manufactured in Switzerland, and fitted by Swiss engineers. Dressings are in artificial stone.

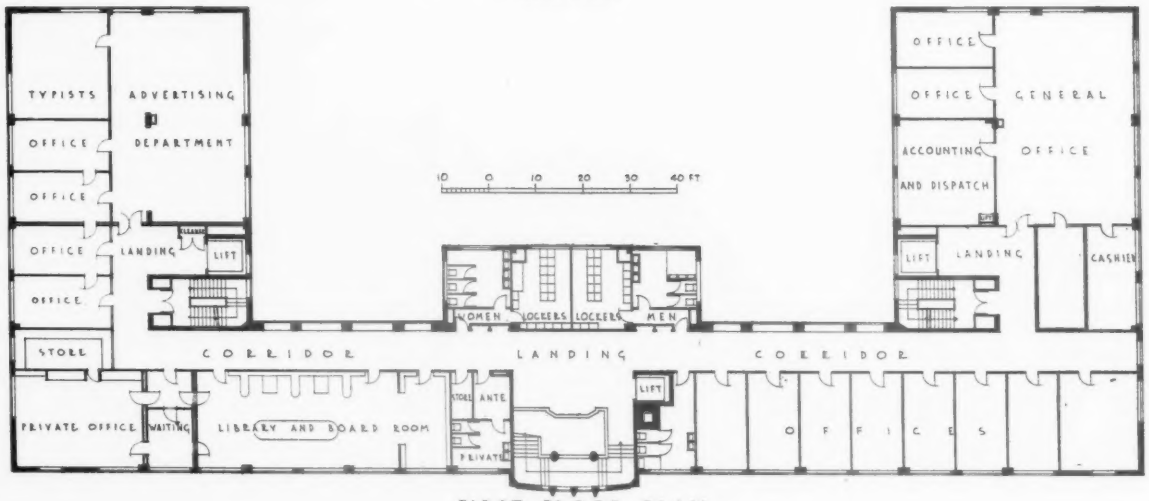


NORTH-WEST ELEVATION

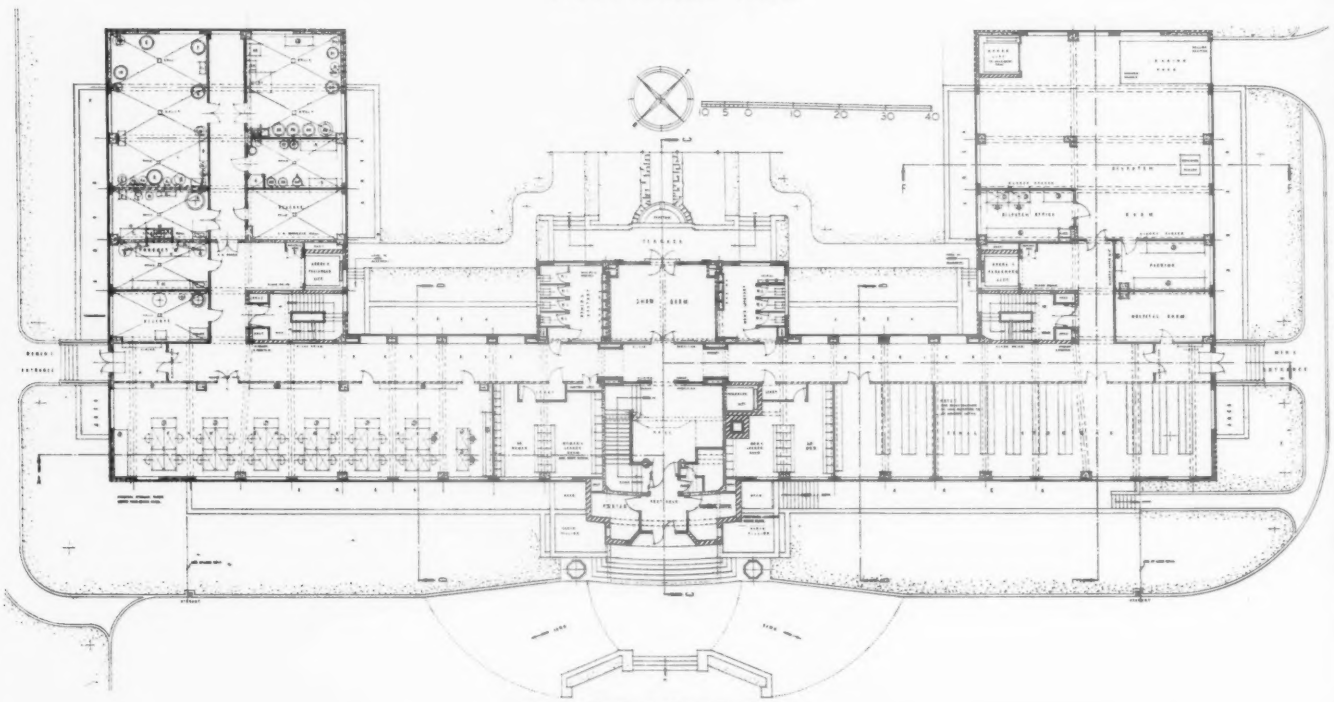
BY O'DONOGHUE AND HALFHIDE



SECTION



FIRST FLOOR PLAN



GROUND FLOOR PLAN

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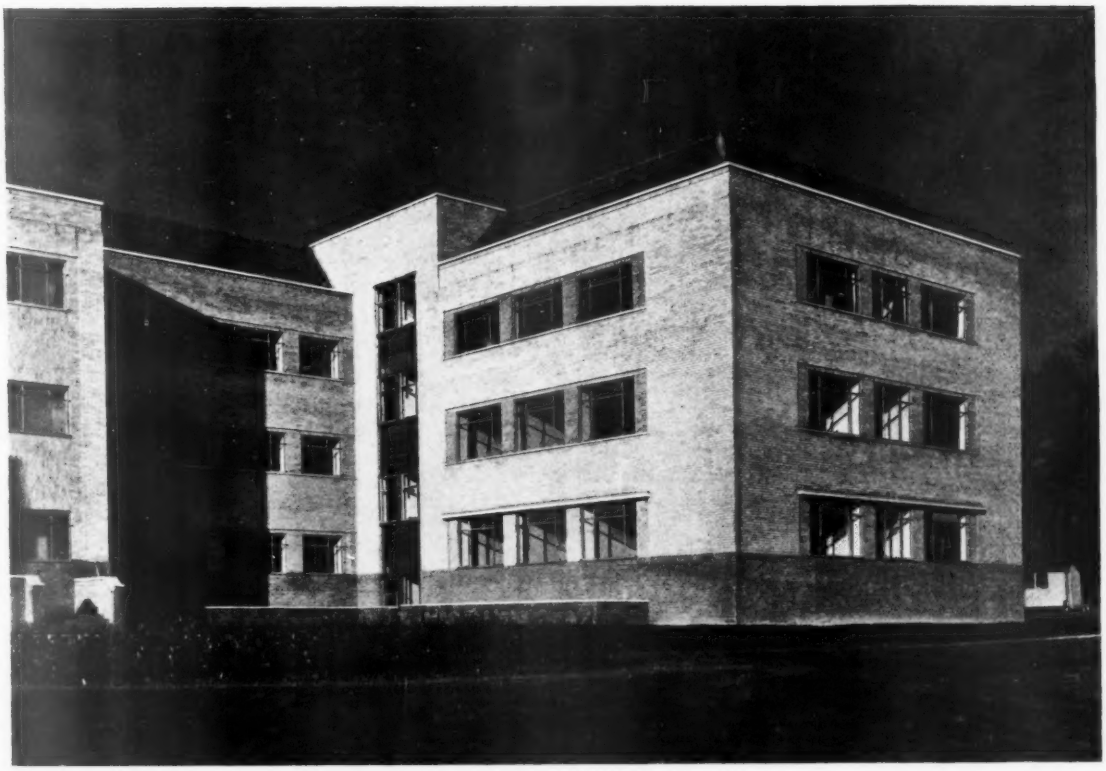
Two v
south.

B Y

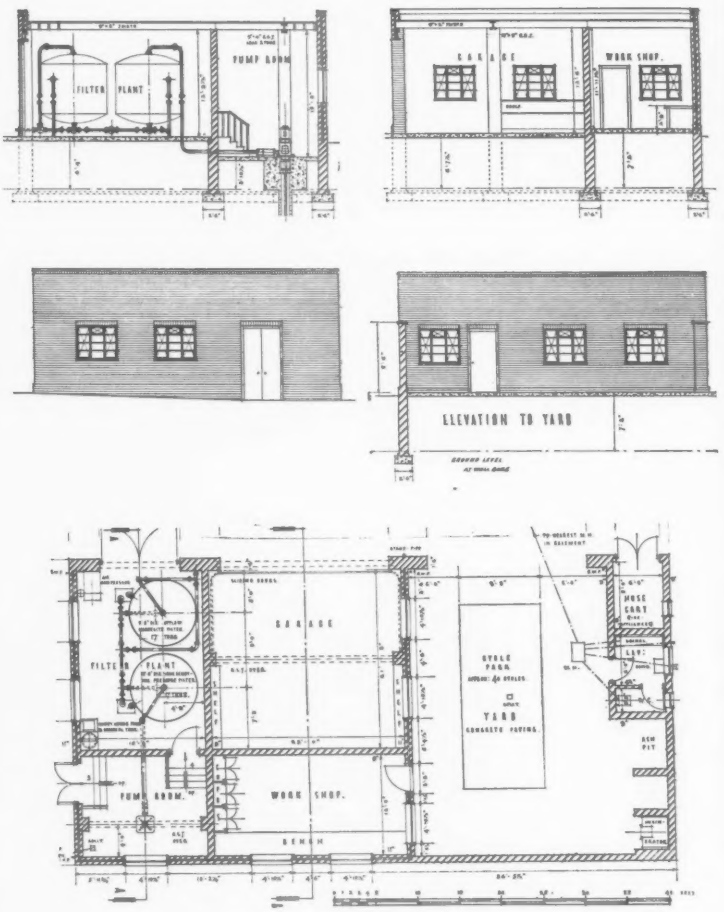


Two views from the south.

PLAN—Raw materials are stored in the basement, and manufacture is confined mainly to the first floor. The second floor contains the financial and advertising departments and the board room.

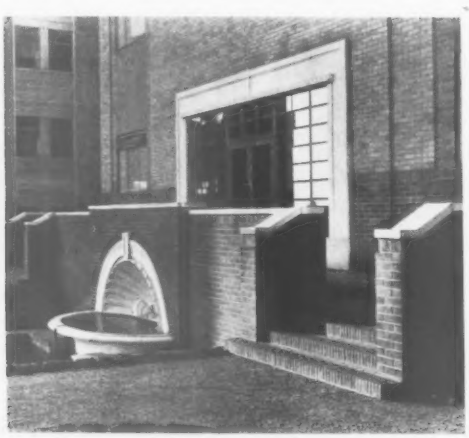
BY O'DONOGHUE AND HALFHIDE

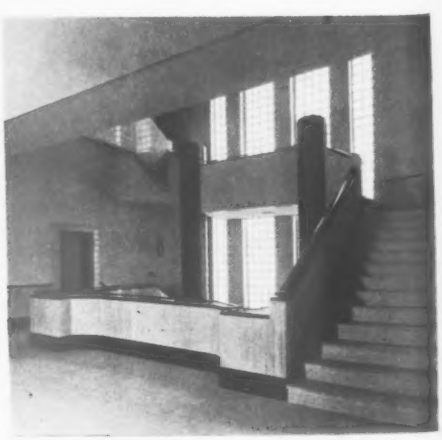
Left : Fire hose and drinking fountain. They are fitted in cupboards and installed side by side in the corridors on each floor. The nozzle of the fire hose is seen in the photograph in the left-hand cupboard. It can, of course, be pulled out to play on a fire some distance away. The cupboard on the right contains the drinking fountain, and beneath it is a chute for the disposal of the paper drinking cups, after they have been used. Below (left), the fountain and terrace to the south-east entrance ; and the main staircase.



GARAGE BLOCK: PLAN, ELEVATIONS AND SECTIONS

INTERNAL FINISHES AND SERVICES—In all the manufacturing rooms the walls have cream 6-in. tiles to a height of 6 ft. from the floor, and many of the rooms have tiled floors. Rubber flooring has been used in the laboratories, and linoleum, cut in 18-in. squares, in the administrative offices. The board-room suite has teak block flooring. The main staircase, main hall, and showroom have travertine marble (unpolished) floors, and are panelled in travertine marble (polished),



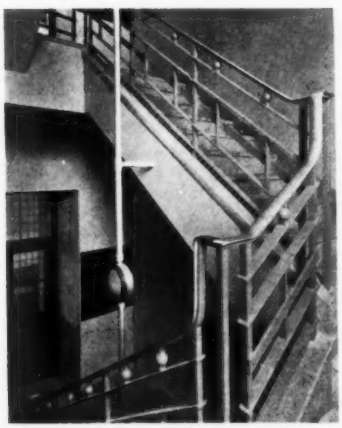


CHEMICAL LABORATORIES, SUSSEX • BY

relieved by Ashburton marble details. There are three goods lifts and one passenger lift.

COST—There were two contracts. First contract, £7,917. Second, £103,000 (approximately).

Above, looking up from the entrance hall towards the main staircase balconies; left, another view of the main staircase, and a subsidiary staircase.

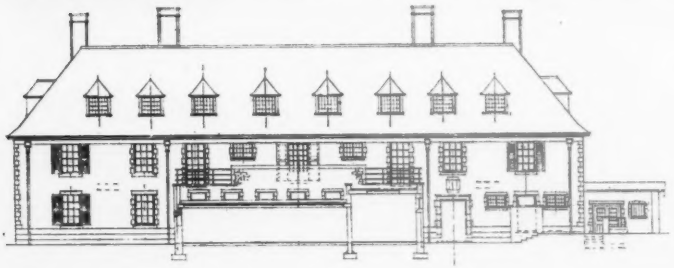


O'DONOGHUE AND HALFHIDE

WORCESTER COLLEGE, O

RESIDENTIAL BLOCK : BY WILLIAM G. N

The main front.



REAR ELEVATION AND SECTION

GENERAL—Residential sets for undergraduates and one Fellow ; also bath-rooms and w.c.'s, available for College generally. The plan is based on staircase access (the traditional College arrangement and most economical of space) modified by through communication on ground and attic floors. For approach from College a long irregular-shaped court takes the place of a confusion of old walls and lavatories.

PLAN—The plan unit is the sitting-room with bedroom opening out of it. On the first floor the sanitary annexe is screened off by a balcony with a solid parapet and stone window-box coping. All sitting-rooms have sun. Those on the south and those towards the east (a noisy road) have louvred shutters.

CONSTRUCTION AND EXTERNAL FINISHES—Solid stone and brick walls ; R.C. floors ; timber roof covered with stone slates. The flat tops of the roof and of the sanitary annexe are finished with asphalt covered with white spar. Sash windows are teak.

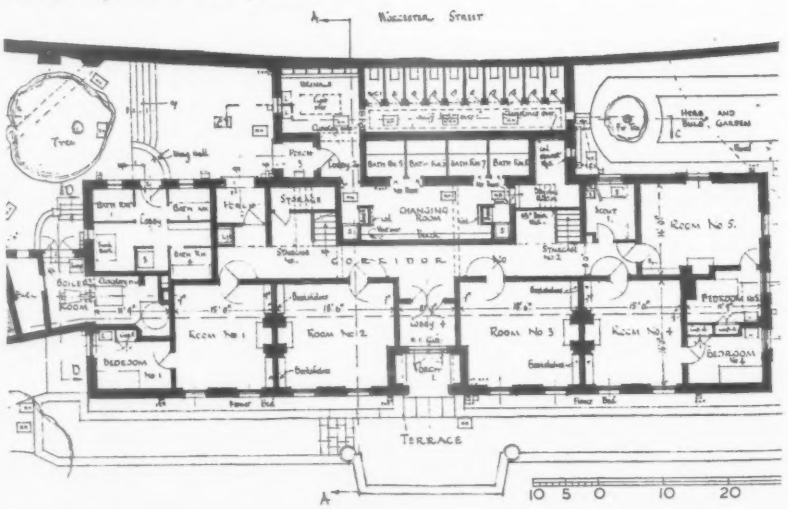
INTERNAL FINISHES—Corridors have wood floors and dadoes, polished. Bath-rooms and w.c.'s have plastic rubber floors. Staircases are in oak with walls lined with vertical ship-lap boarding. The treads can be slid out for repair by undoing a couple of screws in the cover-fillet of the nosing. The oak treads are laid on deal treads with a layer of insulating material to lessen squeaks. Panelling : Fellow's room in cedar ; one other room in oak and two in veneered block-board. Bedrooms have built-in cupboards and chests of drawers. In many cases this fitting, turned two ways, forms partitions between two bedrooms.

SERVICES—Only hot-water (oil fired) ; no heating. Every room has coal fire, and is wired for electric alternative.

General contractors were T. H. Kingerlee and Sons, Ltd. ; for list of sub-contractors, see page liv.

View from porch to sanitary block

Main entrance.

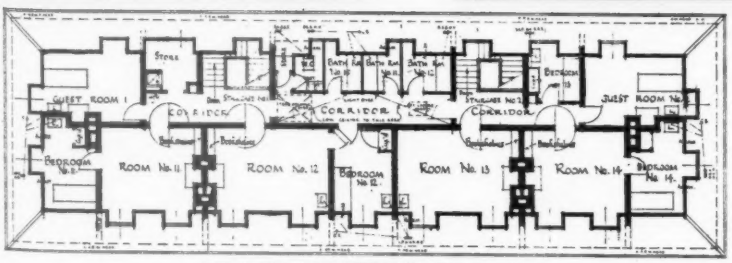


GROUND FLOOR PLAN

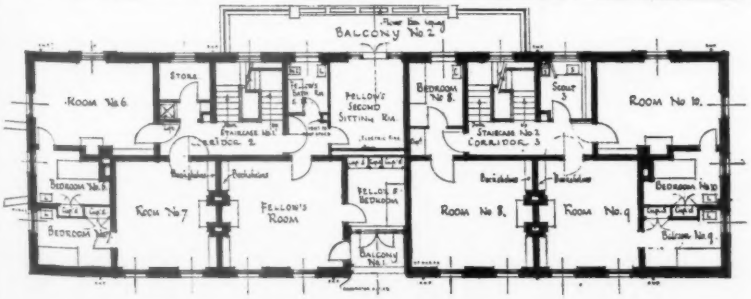
OXFORD

G. NEWTON AND PARTNERS

Left, a bedroom ; above, one of the two staircases.



SECOND FLOOR PLAN

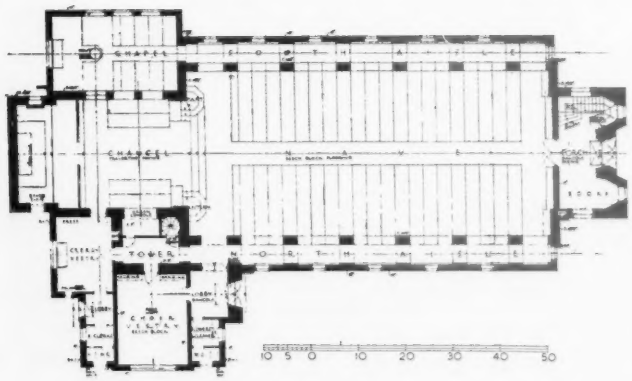


FIRST FLOOR PLAN

CHURCH AT HOVE,

DESIGNED BY

Left, main entrance; below, general view from Holmes Avenue; the chancel (left); right, looking from the chapel across the chancel to the vestry door.



GENERAL—A church (Bishop Hannington Memorial Church), with a future vicarage on the same site, for a new housing district west of Hove. Accommodation was required for 560 persons.

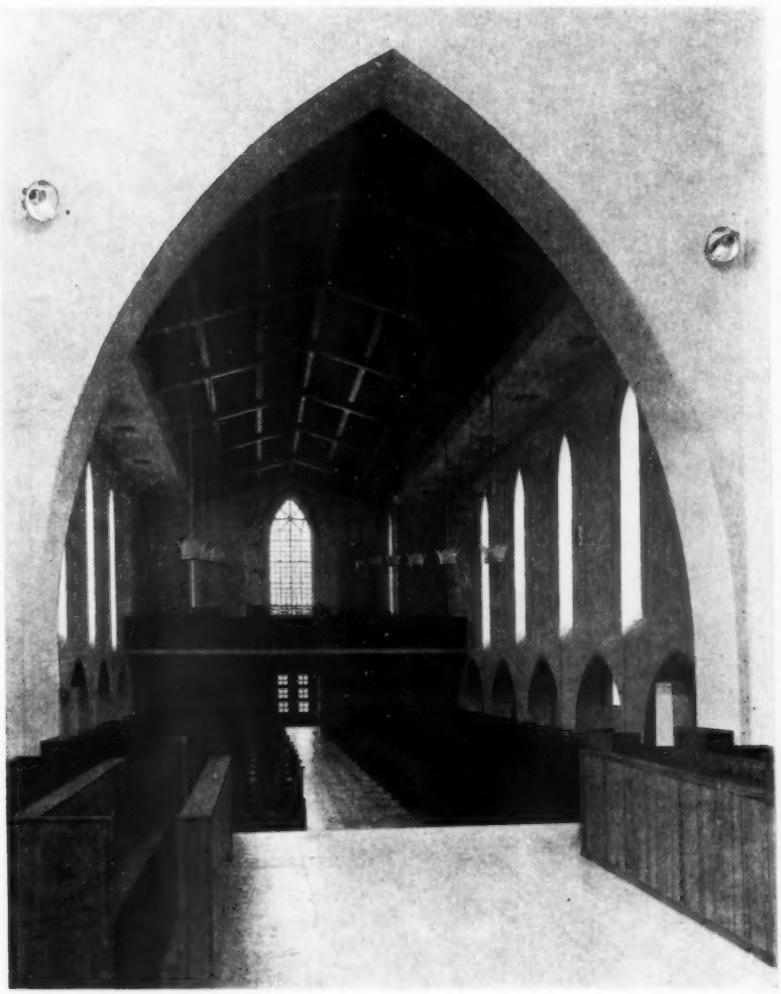
SITE—At the corner of Nevill Avenue and Holmes Avenue. The church is correctly orientated; the west entrance is from Holmes Avenue with the entrance to the proposed vicarage from Nevill Avenue, thus providing the vicarage with a garden to the south.

PLAN—The passage-aisle type was chosen to give the congregation an unimpeded view of the altar, pulpit and lectern. Tower accommodates organ console with organ above, and bell chamber and bells above this. Large space for literature stall at west end.

CONSTRUCTION AND EXTERNAL FINISHES—Brick construction, hollow walls externally. Internal bricks, Lingfield wirecuts; external, 2 in. stone-coloured, five to the foot; roof, chalk-grey tiles. The tower is finished with a gold cross. The metal windows are in Clipsham stone surrounds.

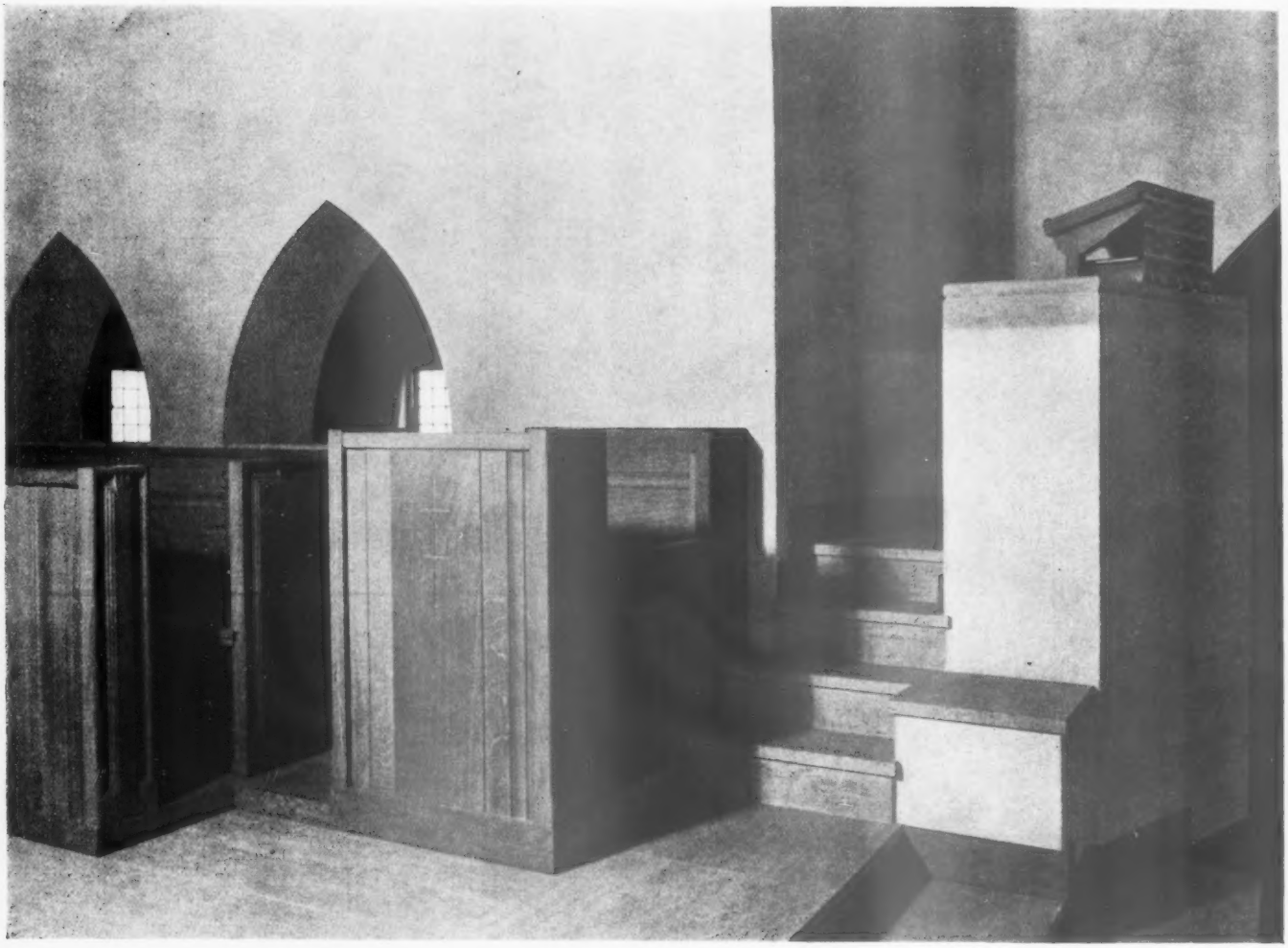
SUSSEX

EDWARD MAUFE



Below, the south aisle, looking towards the font in the chapel.

Top, view from nave towards the altar; above, view from chancel towards the gallery.



CHURCH AT HOVE, SUSSEX

DESIGNED BY EDWARD MAUFE

INTERNAL FINISHES—Walls : plastered from wood float, natural finish. Beech block flooring to nave, aisles and vestries ; travertine paving to chancel ; cream-coloured tiles to porches. Stalls and vestry fittings, English oak. Clipsham stone piscina and credence, with carving by Joseph Cribb. The heraldic altar frontal, pulpit and lectern falls were designed by the architect. Ceilings : chancel, plaster-finished vaulting ; nave, painted and decorated beams with acoustic slabs between, left natural finish.

SERVICES—Pipeless heater under west porch with electric fires in chapel and vestries. Artificial lighting by simple fittings reflected from cream plastered surfaces.

COST—£12,559. 1s. 1d. per ft. cube.

General contractors were James Longley & Co., Ltd. For list of sub-contractors, see page liv.

Top, detail of lectern and choir stalls; left, looking from the north aisle towards the chancel.

Territorial Army Headquarters, Middlesex. By William G. Newton and Partners.

THE YEAR'S WORK

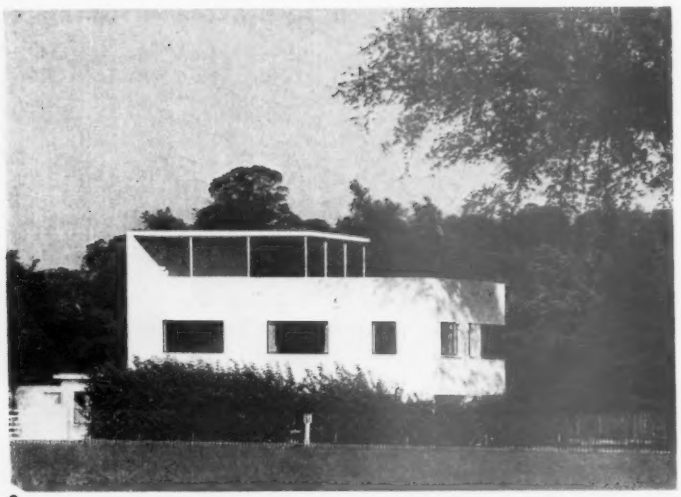
[By PROFESSOR C. H. REILLY]

LET us try to forget the arts of destruction for a little while and turn to our own constructive art. How and what were we doing in 1939 till September with its thunder clap came down upon us and, though reserved for a national emergency, left most of us with nothing to do? In spite of crisis after crisis upsetting work I think, in turning over the pile of illustrations before me, we were doing rather well. Except in the larger blocks of flats, which to judge from results seem to fall mostly to the lesser men, but probably the men with the greater financial genius, the general output of work, at any rate at a first hasty glance, seems to reach a higher standard and to be much more uniform in character. It is almost as if we were once again living in a creative era when no one had any doubt as to the way a problem should be tackled, when no choice of style, whether one should be Elizabethan today and Georgian tomorrow, troubled anyone. Indeed, but for this damnable war, it really looks as if the golden age had already started for architects, whether capitalism was at its last gasp or not.

This unity of outlook means anyhow that the battle between the traditionalists and the contemporary folk—I like that term better than "modernists"—which has been the main feature of each of the last ten years' output has now been finally settled. The traditionalists have apparently left the field or are too shy or too disgusted to exhibit their work. I am sure, nevertheless, some of them must have been doing something somewhere. Indeed, I am told there is a fine new piece of scenery in Fleet Street for Reuters by that prince of them all, the President of the Royal Academy. Scenery hung on a steel frame is the traditionalist's *métier* today. That does not mean that in the hands of a master it cannot be fine operatic stuff even if it remains scenery, or, on the other hand, that picturesque effects are not possible to the "Kerosene-tin School of Architects," as Sir Edwin loves to call the modern purists. In my pile of illustrations is the new Casino at Blackpool, and nothing could be more strikingly dramatic and picturesque, yet Joseph Emberton is a very Sir Galahad among the puritans. I like to think of him as Sir Galahad for valour and high ideals and old Ulysses for convincing talk to entrap clients—a powerful combination that!

I suppose one ought to begin today with buildings for the Army, but there are very few of them in my pile. I am told, nevertheless, there are many millions of pounds' worth being put up all over the country at the present time, but, because most of them are of a temporary nature and in wood, they are not considered appropriate to architects and are given to the Royal Engineers. Major-General Beith, the Director of Publicity to the War Office, has stated so in *The Times* in reply to a letter of my own. It was clear that for him, and I suppose for his distinguished colleagues, architecture still meant some applied decoration to be put on after the engineers had done their worst. Lay-out, designing for function, detailing for economy and effect, proportion, colour and texture and all such things, still meant nothing to them. If the heads of the War Office remain today in the Victorian era, shall we really win the war?

Thank goodness, the Territorial Associations appear to have some liberty of action and can not only employ architects but choose them. The architects, too, under the compulsion of the present times seem to do their severest and their best. Here is W. G. Newton, moving away from the Royal Academy tradition into which he was born and bred and putting up a fine straightforward brick building, retaining, nevertheless, that sense of real style which one must admit his family environment may have helped to give him. There is a pleasant contrast between his ranges of small and large windows, a delicacy in his balcony railings and a contrast in the surfaces of his brickwork which are charming whether they are due to innate good taste or to the old school tie of academical upbringing. There is a rhythm in all good architecture of any period the appreciation of which is, I think, as necessary a part of

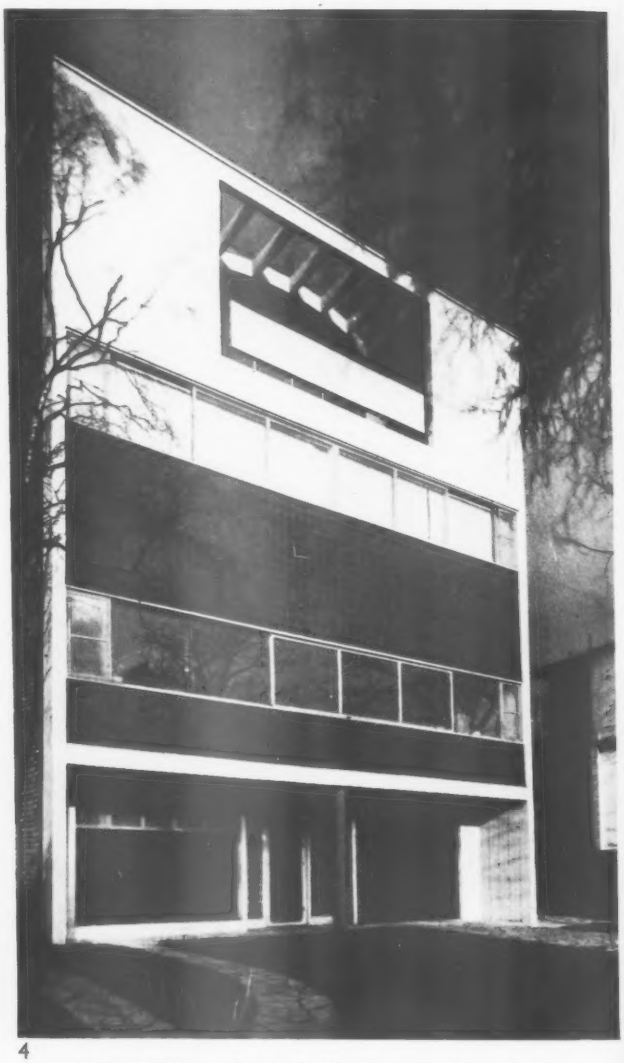


2

House in Wilberforce Road, Cambridge. By D. Cosens.

3

House at Hampstead. By Oliver Hill.



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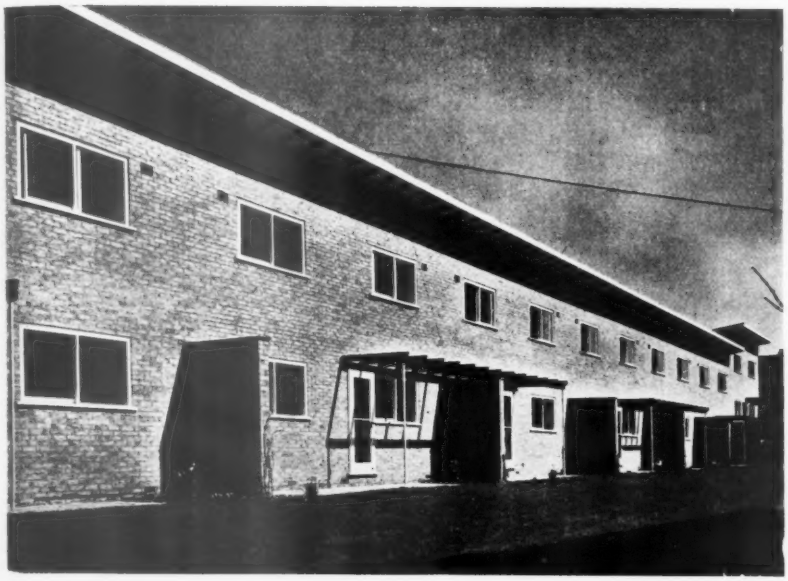
House in Newton Road, Paddington. By Denys Lasdun.

5

House near Halland, Sussex. By Serge Chermayeff.



6

Terrace of Houses at Stratford-on-Avon. By F. W. B. and F. R. S. Yorke.

7

House at Esher. By Patrick Gwynne and Wells Coates.

architectural education as ever, and when a corresponding rhythm appears in a modern building, as here, it gives an air of distinction.

HOUSES

1939 was a good year for the medium-sized house and even for the house of the rich man wisely not wanting to make too great a display against the unknown future. No one today, for instance, would think of building a house with a lodge and lodge gates, yet in my youth that was the common problem upon which to start a pupil.

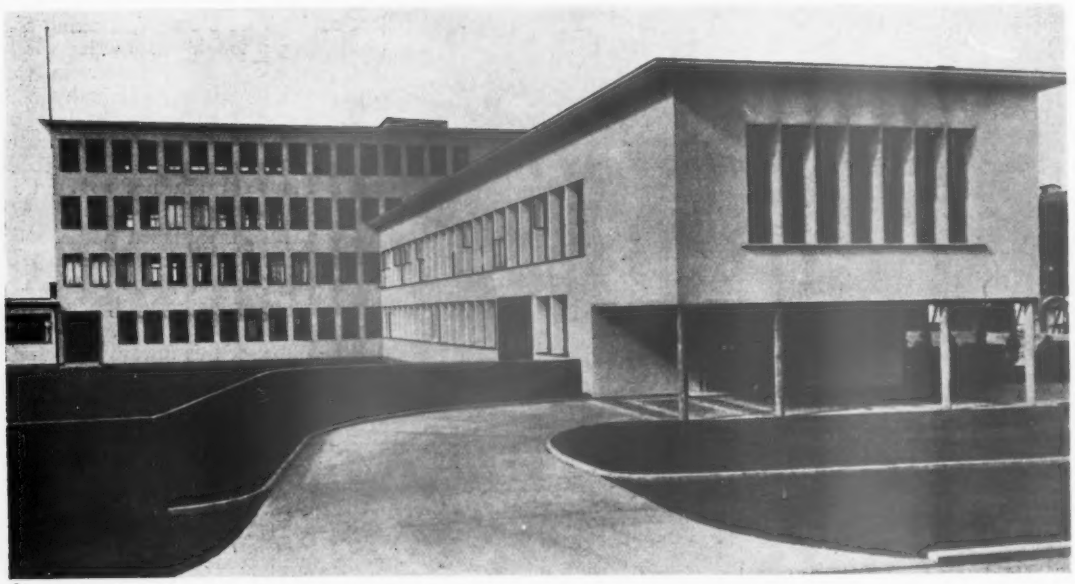
Let us begin with a small house by D. Cosens at Cambridge, chiefly because it is the kind of house which has become the standard type today among—I am afraid one must use the term—the intelligentsia. It is unpretentious, that goes without saying, and if conspicuous is only so because it is more direct in its expression of modern needs than its neighbours and is smooth and white instead of unshaven and grey or pink. It has its accommodation conveniently arranged on two floors, with the now standard roof terrace for sun-bathing. The living rooms get all the sun and the best views, and the bedrooms are just cubicles for sleeping, dressing and undressing, though the owner wisely does himself a little better in this respect. I have every sympathy with that. There is something still to be said for the eighteenth-century idea of receiving one's friends in one's bedroom, though I am not so fond of chatting to them while I dress.

Oliver Hill's brick-faced house, with long stretches of bricks on end to give contrasting texture, which crowns the highest point at Hampstead, where was the old semaphore station, is a noteworthy effort of this always interesting artist. Here it is the curved ends to the long mass of his building and that to the lofty brick terrace composing together which give the distinction. As one climbs up the steep approach to the house the lofty piers of the entrance loggia, lit from behind, are very impressive, yet without any trimmings save a stone lining to their sides to give delicacy. The interior of the house, which I happen to have seen, is full of fine shapes and good colour and texture, a very nicely lined kerosene tin, Sir Edwin !

The Patrick Gwynne and Wells Coates house at Esher, replacing a Victorian one in the same grounds, is one of those exciting modern houses which look so thrilling when photographed at night, especially when they have as this a curved staircase showing through a wall of glass and reflected in a pool outside. One feels some strange creatures from another planet should soon appear. It is part of a new world which takes a good deal of understanding in the photographs and drawings but repays study. If the client has been able to readjust himself to his new surroundings, I have no doubt he will be rewarded too, but his whole habit of life must have been changed. I cannot help feeling one must be under forty with a good figure and no bad habits to enjoy oneself thoroughly in this plate-glass world.

A less complicated but equally highly-finished product, and all the more suited to its particular landscape from its simple form, is the fine house Serge Chermayeff built for himself near Halland in Sussex looking towards the South Downs. It is a happy house, very skilfully planned and constructed, in which even an old fellow like myself could be comfortable. I should enjoy not only its glorious sunny rooms with their view, the foreground of which has been carefully modelled by the architect, but the Rolls Royce finish throughout and the really civilized life one could live in it after a little practice in dressing the part. Of all the modern country houses I have seen, this is one of the best as a machine for living. One of Oliver Hill's I know is a little better for parading about, down the curved stairs and through the curved vista of rooms, but then few today would feel parading as a modern need.

There is a contemporary house in Newton Road, Paddington, with fine



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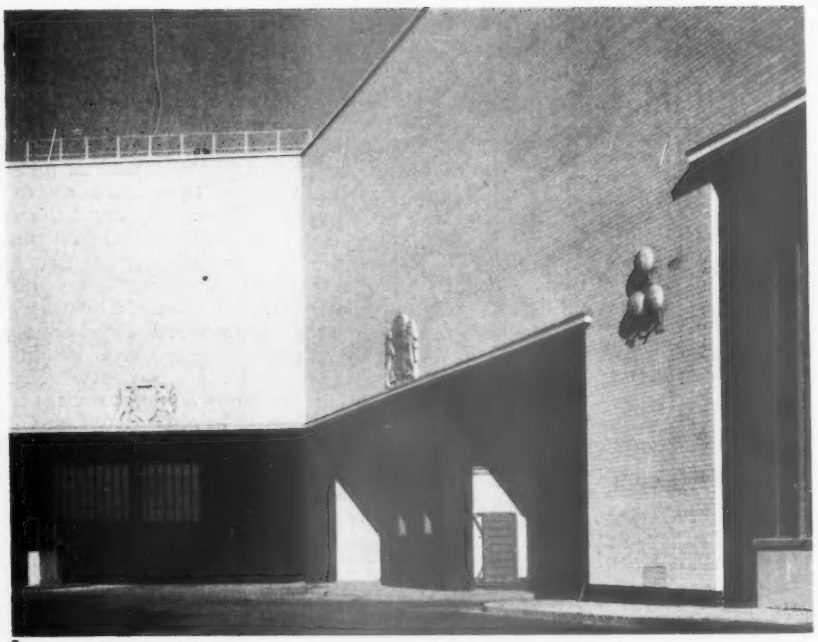

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8 : Factory in Hertfordshire. By Professor O. R. Salvisberg in association with C. Stanley Brown.

9 : City of Westminster Central Depot. By G. Grey Wornum. Assistant : Lionel Smith.

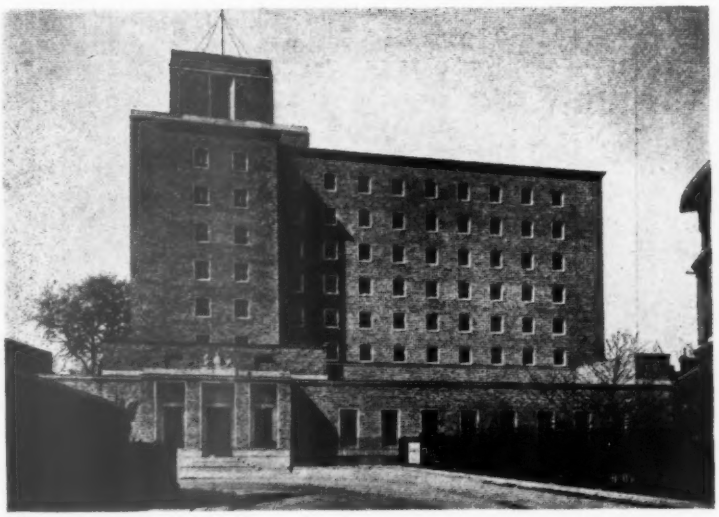
suites of rooms, designed curiously enough for showing off old furniture, which I cannot forgive, clever as it is. Newton Road was a little oasis of tiny, well-proportioned Regency houses till this tall, elegantly dressed affair in glass and tiles from some outer suburb came along and spoilt it, bringing, too—and this is the real suburban touch—crazy pavement with it. It also seems a little inconsistent for a contemporary house to have a definite highly-finished front and, six inches away, rough brick flanks.

Perhaps the bravest thing of the year, without being foolhardy like the last, and showing the confidence our contemporary architects have in themselves, is a terrace of small houses by F. R. S. Yorke at Stratford-on-Avon. Here is a town which, except for its new theatre standing like a fortress for commonsense on its outskirts, is a little old but largely "ye olde." Instead of picturesque imitation cottages for working men, Yorke has built this sensible terrace and made it so decent and honest and clean-looking that it might well stand next the birthplace itself. Indeed, it would enhance the latter if it did. I have seen this architect's modern and plate-glass addition to a couple of old cottages knocked into one in a Sussex village for the Editor of the *News-Chronicle*, and was very struck with the result and how one part of the building seemed, with its honesty and directness, to enhance the other, which in its way was equally so. Here he has done the same with an addition to a medieval town.

FACTORIES

The common jibe against contemporary architecture by the sentimentalists is that all such buildings look like factories. In a sense that such people would not appreciate, this is a compliment ; for a factory should be an honest building serving directly a definite well-defined purpose. To be like a factory should be therefore to be honest and truthful. That being honest and truthful does not prevent a factory from making a high, almost cathedral-like, appeal to the imagination, the interior of the great Boots factory at Beeston proved a few years back. Now we have Professor Salvisberg's one in Herts., to prove that a factory can also be as elegant and highly refined as almost any other structure. I remember, having seen it about this time last year, I was anxious to acclaim it as the building of the year, but no illustrations were then available. I think, however, I can still say that, though I want now to bracket it in the first place with Grey Wornum's building for the collection and disposal of the dust of the City of Westminster.

Salvisberg's building is thoroughly modern in that from its masses and fenestration it could only be a ferro-concrete structure directly serving a definite purpose, yet it gives to that material a finish and an elegancy to which we are not accustomed in this country. As you walk round it and through it you feel its beauty everywhere, in the steel-framed outbuilding at the back as well as in the highly-finished offices. A very fine mind has been at work here. Though I have not had the same physical contact with Grey



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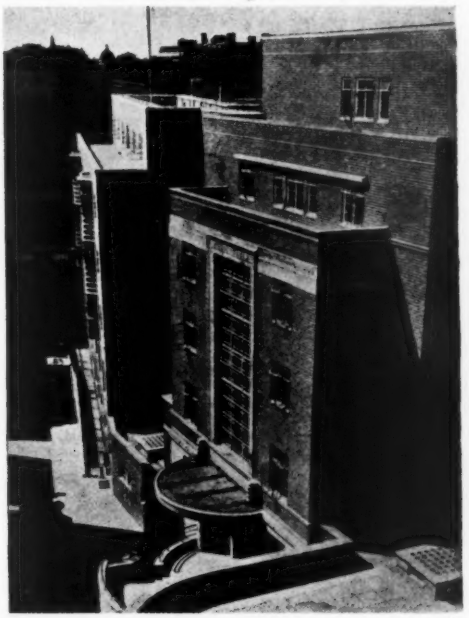
Section House, Blackheath By Horace Farquharson and Donald H. McMorran.



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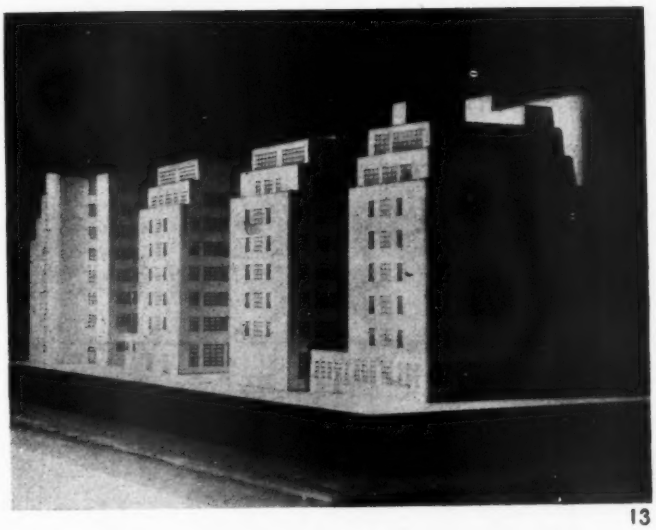
Wornum's building, from the illustrations I feel the same. In his case the elegance is given largely by the contrast of fields of fine brickwork with the rich effect of large mullioned windows set in deep tiled reveals. I am told, and I can well believe it, the colour scheme of Wornum's building is delightful now it is new. May it be kept clean and remain so! The shapes are clearly good, such as the curved ones round the dock and the canted exterior faces. It may be said these are given by the site, but Wornum has made the most of them. He is the Golden Dustman. I can even imagine this building being more permanently satisfying than his R.I.B.A. headquarters.

I have remarked before in these articles how good the new buildings of the Wholesale Co-operative Society are becoming under W. A. Johnson. Before his time they were among the worst buildings in the country. I wish his influence would spread to the local retail co-operative buildings which still are, whereas in Sweden, with the Crown Prince, an artist himself, leading the Co-operative movement, they are all first-rate and by first-rate architects. Johnson's latest are the new departments at Manchester. He must, too, be a nice man, for he was one of the first architects to introduce the excellent practice of giving the names of his assistants when he illustrated his buildings, a practice I notice Grey Wornum and all the really first-class people are now adopting.

11 : Police Section House, Compton Place, W.C.1. By G. Mackenzie Trench. Assistants : D. T. Edwards and A. L. Luke.

12

12 : Police Station and Section House, Tooting. By G. Mackenzie Trench.



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13 : Police Headquarters, Bishopsgate. By Vine and Vine.

POLICE BUILDINGS

Are we developing a Gestapo in this country ready for a Fascist revolution? What is the explanation otherwise of the enormous new police buildings, some called Section Houses, unpleasantly suggestive of Brown Houses, some merely called Headquarters? Of five vast ones built last year in London alone, the biggest eventually, when it extends over several contemplated blocks like a series of model dwellings, is the Headquarters in Bishopsgate by Messrs. Vine and Vine. The best by far, good in every way except in not being entirely contemporary in spirit, is the great Section House in Blackheath Road, S.E., by Farquharson and McMorran. This has a slightly Italian Fascist appearance, but it is a dignified, elegant building.

14

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16

14: Middlesex House, Vauxhall Bridge Road, S.W. By E. Shaufelberg in collaboration with H. E. Mendelssohn.

15: Office Building, High Holborn, W.C. By Welch and Lander. Assistant: E. L. Cathery.

16: Finsbury Square House, Finsbury Square, E.C. By Messrs. Joseph.

I am told by an authority I rely on it is as good inside as out. The Tooting Section House by G. Mackenzie Trench is too crude, its masses jutting out at all angles with a star-shaped plan in front of the other blocks. On the main front a heavy entrance mass stands very uncomfortably between two arms of the star. The whole seems to suggest an asylum or hospital with a prison behind it. It is altogether a rather grim affair, which I do not think it fanciful to suggest, when one remembers its purpose, is a little too Nazified for this country. Compare the gentle elegance of the Swiss Professor's factory in Herts, comparable in size to a single block of these great structures, to see what I mean. The Section House in Compton Place, W.1, by the same architect, appears in some respects even more frightening.

OFFICE BUILDINGS

This apparently has not been a good year, in spite of its general excellence, for office buildings.

17 *Cleland House, Westminster, S.W. By T. P. Bennett and Son.*

The best-looking office building of the year, to judge from the exterior only, turned up in another pile on the back of another illustration. It is called Middlesex House, Vauxhall Bridge Road, by E. Shaufelberg and H. E. Mendelssohn. This is not the Eric Mendelsohn we all know, but the building in its refinement nevertheless shows, I feel, some of his influence.

Cleland House, by T. P. Bennett and Son, has some interesting features, such as the circular little building serving as an entrance hall between the two lift towers, themselves very frankly expressive of their purpose but in their massiveness and simplicity making the great office blocks behind each look rather flimsy. It is a great scheme, and the accommodation within is sure to be well-planned and appears well-lit, but it is a pity the *ensemble* has not been more carefully considered. The pleasant little circular building, with its columns, the great strong lift towers with their square prison holes for windows, and the building proper, do not seem to be in friendly relations to one another.

Finsbury Square House, a solid stone building in the City by Messrs. Joseph, is not so adventurous as the last. It does not appear to offer the same amount of window area to floor space, but its more traditional lines are no doubt more suited to the ideas of our old-fashioned bankers and City men. In a top-hatted area an open-necked shirt may be more comfortable but rather conspicuous. This building in its manner appears well and carefully detailed.

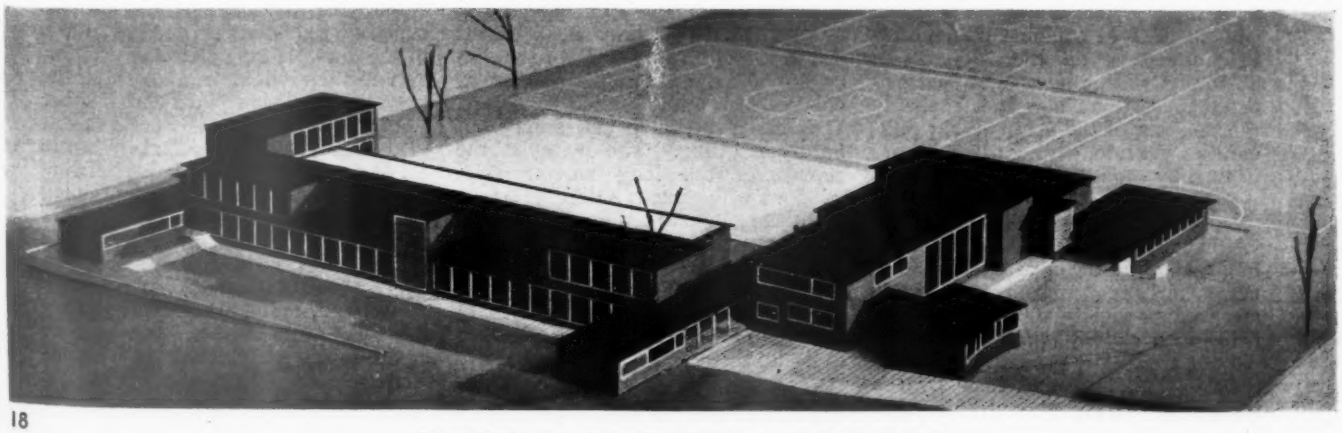
The big office building in High Holborn by Messrs. Welch and Lander is the reverse of the above. It has layer upon layer of continuous windows in the modern way giving the maximum light, but as this type of logical building is apt to do, unless very delicately detailed or given an interesting form by the shape of its site, it may quickly become dead and dull looking. An attempt has been made in this case to give the building more expression by projecting the sill lines, but this does not seem quite sufficient. However, one has only to compare it with the building next door on the right to see what an advance it is as a place to work in to what we were accustomed to twenty years ago.

SCHOOLS

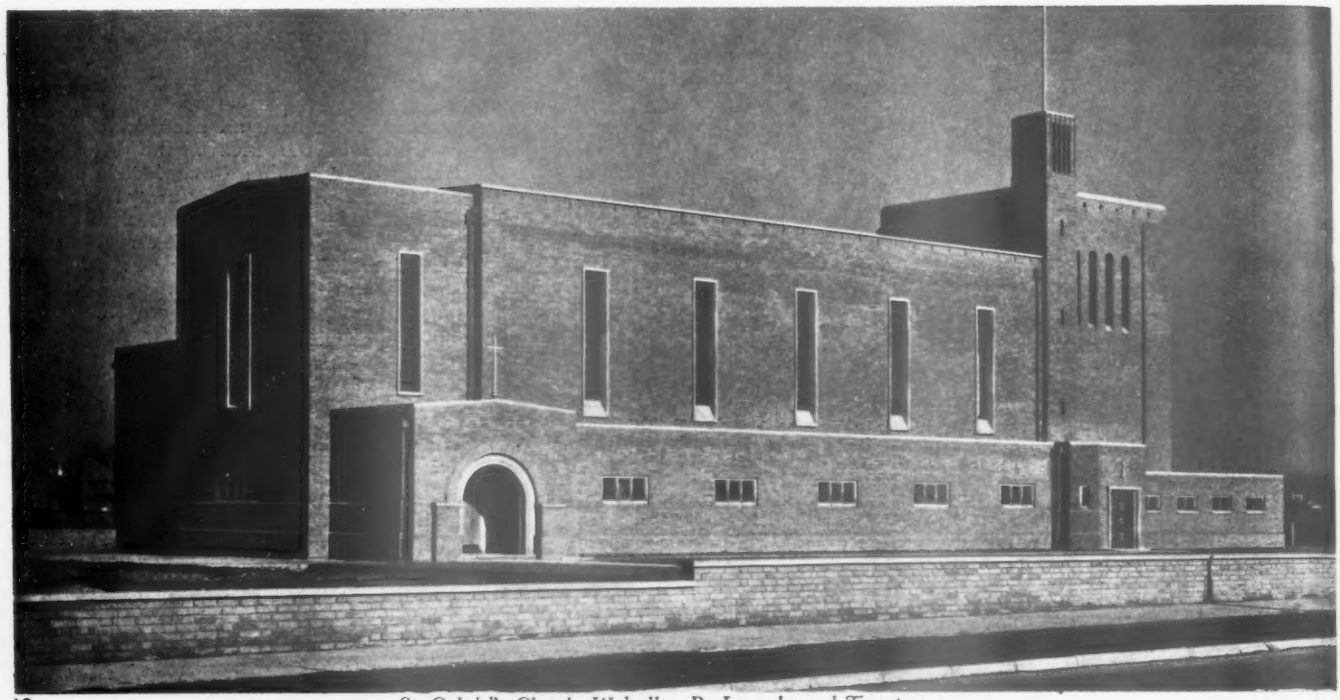
Although we have all heard of the enterprise of the L.C.C., the West Riding of Yorkshire, Cambridgeshire and other places, in breaking away from their routine and giving schools to distinguished outside architects like Oliver Hill, Maxwell Fry, F. X. Velarde and the winner of the *News-Chronicle* competition, I can only find among my illustrations this year a Velarde one, and that in the model stage. It is the Mixed Senior School at Scalby, Yorkshire, and the bird's-eye view of the model shows well this artist's delicacy of perception and sense of form. It may be said modern buildings always look better in models than in reality, and I dare say this is true, but everyone knows now that Velarde, in his schools as well as in his churches, manages to achieve a rare distinction. The charm of this building, therefore, so expressive of its purpose and in so economical a manner, is not likely to be behind that of the model when it is built.

There are two schools at Sutton Coldfield, one a mixed one won in a competition by Messrs. Nicol, Nicol and Thomas which looks good and suitable, and one by Messrs. Armstrong and Gardner which has not the same unity. The big Technical School at Shrewsbury is one of the few pedimented and flèched buildings in a Georgian manner among the year's work. A few years ago we should have been rather excited about it. I can still see its sterling solid qualities and the dignity of the convention in which it is designed. The building, however, seems a little too big for that convention, like an overgrown schoolgirl.

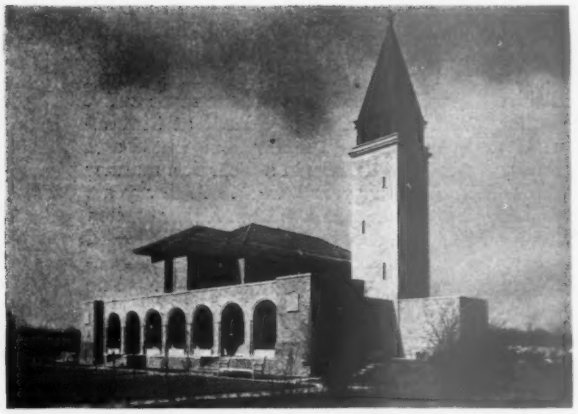
Another has been put in my Schools pile and shall remain there, although it is really a different type of building, and that is the School of Anatomy at Cambridge, by Messrs. Stanley Hall and Easton and Robertson. I would welcome it anywhere, as it is the only building I have found this year by this fine firm. It is strong in its square



18 *Mixed Senior School, Scalby, Yorkshire. By F. X. Velarde.*



19 *St. Gabriel's Church, Walsall. By Lavender and Twentyman.*



20 *Honor Oak Crematorium. By William Bell. Consulting Architect: the late Maurice E. Webb.*

21 *St. Mary's Church, Nottingham. By T. Cecil Howitt.*

masses, handsome in its fine fields of plain brickwork, romantic and modern at the same time. I cannot tell from the illustrations how it serves its purpose, but I am sure it does so excellently with these logical, sensible architects, who manage to combine reason with imagination in all they do. It is obviously beautifully and cleanly detailed. I think now it is probably the building of the year. What difficulties I get into, getting carried away in turn by each good thing!

CHURCHES

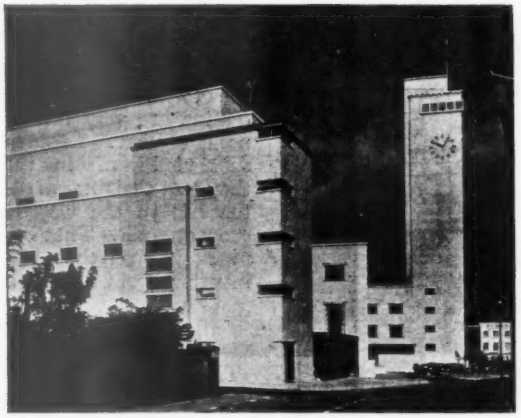
Although, with three cathedrals building, and with the new churches the new suburbs require being put up, we are perhaps rightly told that we are living in a church-building age, 1939 did not apparently produce very many religious buildings, and none by the recognized leaders such as Sir Giles Scott, Edward Maufe, F. X. Velarde, B. A. Miller or Cachemaille-Day. Maufe, I know, has a fine new church in Hove*, but I suppose it has not yet been photographed. The chief one in my pile is a new church at Walsall, by Messrs. Lavender and Twentyman. It is a very simple brick building, strong and sturdy, with a low wide tower at the west end. Internally, it has a flat ceiling of dark beams, a circular chancel arch and a well-lit sanctuary. It is all very simple and sedate but hardly inspiring. The lining of the reveals of the long narrow nave windows with stone is a delicate touch, and these windows certainly well set off the massiveness of the building. Massiveness in a church is a good monumental quality to start with, but it needs relief by others. The main object of a religious building is, after all, to lift up the heart, not to depress it.

St. Mary's Church, Nottingham, by T. Cecil Howitt, follows more conventional lines with its high-pitched roof, moulded gables and mullioned windows. Externally, the building has a slight resemblance to Sir Giles Scott's chapel for Charterhouse School, a fine prototype. The interior, however, with its elaborate semi-circular barrel vault, is to me disappointing after the exterior, and does not indeed seem to exhibit the same spirit. This architect has another smaller church, that of St. Barnabas, in another Nottingham suburb. Whereas St. Mary's is monumental, this building is almost domestic with its long sloping roof—I thought at first glance it was a school or church hall. It is rightly designed to accord with the buildings of a new housing estate, but a church should lead, not follow, and I should say this follows too closely. The interior, again, is not as good as the exterior, having a large east window in the form of a cross which is a striking feature but not a restful one.

The new Crematorium with its cloisters

* Illustrated on pages 86–88 of this issue.

22 *Municipal Buildings, Watford. By C. Cowles-Voysey. Assistants: R. Ashton and J. Brandon-Jones.*



23 *Greenwich Town Hall. By Culpin and Son.*

24 *Government Buildings, Edinburgh. By Thomas S. Tait.*

at Honor Oak, by William Bell, with the late Maurice Webb as consulting architect, makes an interesting group and has some rather charming Italianate detail, but I find the great projection of the eaves of the roof a little clumsy, and the campanile, which is really a chimney, not very satisfactory. Messrs. Mitchell and Bridgwater have done a charming little chapel of rest at the Golders Green Crematorium. They are restful architects who should get more church work.

The new church of St. Chad's at Bolton by Richard Nickson has a fine campanile, but it is too early to judge the exterior, as it is part of a group of buildings, some not yet erected. The very lofty sanctuary, almost a tower in itself, must give a dramatic effect in the interior seen through the chancel arch, but does not appear to have been led up to sufficiently, so that the interior lacks unity.

MUNICIPAL AND GOVERNMENT BUILDINGS

Somehow public buildings, which twenty years ago seemed the most interesting and exciting of all types and the kind of thing one would most like to build, seem today almost the reverse. I suppose it is that no one practising in the contemporary manner has yet made an entirely satisfactory job of one. The Hornsey Town Hall is perhaps the best. I think, however, the new Greenwich one by Messrs. Culpin and Son is going to run it very close. The exterior is a little prison-like, but the stretches of plain brickwork, plane behind plane, of the Assembly Hall wing are very effective, and so is the tower. The interiors of the various committee rooms lined with veneers are charming. That is where the modern school always scores. The plan follows precedent, but it is a precedent well established and found to work. There is no illustration of the interior of the great Assembly Hall. That would be a test, but I think from the other illustrations the architects would come out of it very well.

Turning from this building, which, whatever its defects on closer inspection may be, belongs to our era and offers some hope, to the group of suppressed, inhibited neo-Georgian buildings, clever as they are and by well-known men, they seem, nevertheless, in comparison to lead nowhere. The best, and very charming of its kind with its stately old-world appeal, is the Watford Municipal Buildings by Cowles-Voysey. The curved front with its flèche is very attractive. I begin to feel sentimental at once on seeing it. Then I turn round the corner and find this front has a terrific rear behind it all in the same manner, and my sentiment dries up at once. One cannot be domestically Georgian on such a scale, however much the detail is suppressed. Fancy dress is all very well occasionally, but rather conspicuous on a giant.

Percy Thomas's Swinton Municipal Buildings are more monumental and with less appeal to sentiment, but do not achieve the vividness of a modern building. The long thin tower over a monumental entrance, flanked with long Georgian wings on either side, does not seem one of his happiest efforts. Tunbridge Wells—in conjunction with his old friend Ernest Prestwich—with its interesting sculpture, is less ambitious and more attractive, but as an extension to existing buildings it is a different problem. Cowles-Voysey at his Bromley buildings has some fine interiors in which the stigmata of the eighteenth century are less in evidence.

The new Government Buildings on Calton Hill, Edinburgh, by Thomas Tait, are in a different category. These stand on this famous hill overlooking

25

25: Municipal Buildings, Swinton. By Percy E. Thomas.

26: Flats in Palace Gate, Kensington. By Wells Coates.

27: Portland Court, New Brighton. By H. Thearle in association with H. Silcock.

26

27

the town, and their character and outline are very important from that point of view. I think Tait will have succeeded in making them seem, when they lose their newness, almost part of the hill in the way they appear to grow out of it. That is a great achievement, but on the whole I think the interiors again are the better part.

FLATS

The pile of illustrations of blocks of flats is still one of the biggest. If, however, the bomber is allowed to exist after the war, in future years I fancy it will be one of the smallest. It is impossible, of course, to go into any detail of these great blocks. One can only point to main characteristics. One or two are of complete ferro-concrete construction, and therefore I suppose likely to offer a little greater resistance to shock than the majority which are constructed on a steel frame with infillings. The most conspicuous of the former, and indeed the most interesting of all, is the Wells Coates block in Palace Gate, Kensington. This is interesting as a very complete expression of a ferro-concrete building, simple, direct and homogeneous, and with that curiously tough appearance which all well-designed concrete buildings have, given largely, I think, by the great overhang of balconies and roofs which this form of construction not only allows but encourages. It is interesting, too, in its planning. On the two-three principle, which allows certain rooms to be reasonably higher than the others without having to be double the height as in the duplex system. It seems to me this is a great advance, getting over as it does in an economical way the monotony of height in an ordinary flat, the same whether one is in a tiny bedroom or in a large reception room. We should all be very grateful to Wells Coates for being

28

Working-class flats, Liverpool. By L. H. Keay. Assistant : F. H. Morley.

first to demonstrate its possibilities on a good scale in this country.

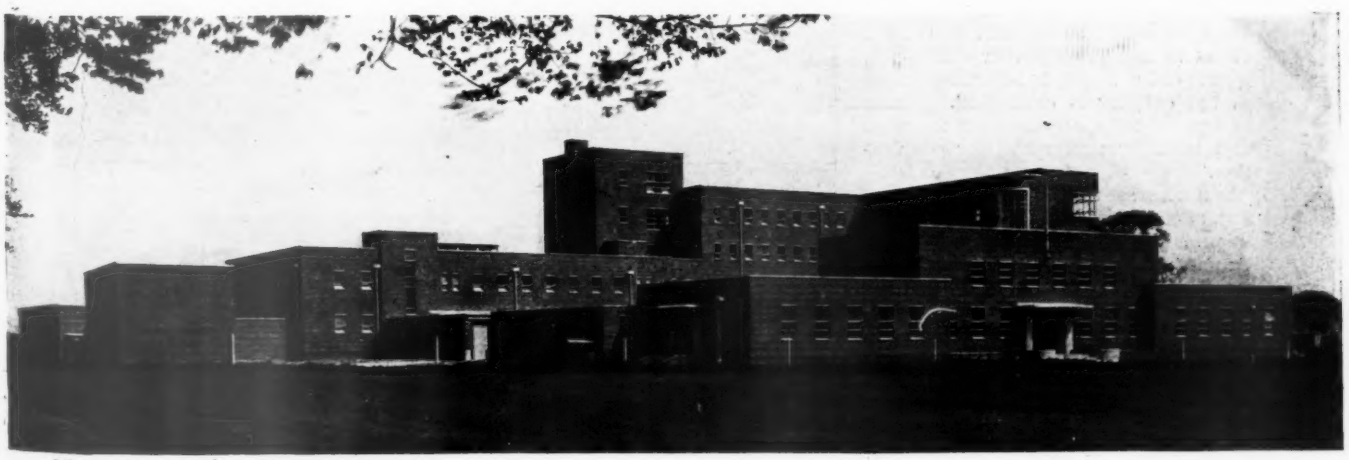
Of the ordinary steel-frame construction type, I choose Messrs. Thearle and Silcock's blocks on the shore of the Mersey at New Brighton (called Portland Place, perhaps out of compliment to the R.I.B.A., for I cannot think of any local reason). These two blocks are on the supposed ideal rectangular oblong sites with the supposed ideal orientation and with endless air space round them. Their long flanks look suitable and straightforward, but I have to admit (being both old students of mine of whom I am very fond, they will not mind a criticism) that the heavy-looking concrete balconies on the shorter faces seem as wrong with a slight steel-framed brick-lined building as they would seem right with the equally slight ferro-concrete one like that of Wells Coates. The plan is very straightforward, as such a site would imply, and there is an interesting mural painting in one of the public rooms.

Liverpool, in L. H. Keay's work, provides as in other years the most interesting schemes for working-class tenements, or indeed on the outside for any type of flats. These schemes of his are never on the lines of the modern mechanical German or Swedish lay-out of a series of similarly-shaped blocks one behind the other, like a set of suitcases on end, all facing the same way, such as I see is to be adopted by Acton. They are externally much more interesting. They include such things as great quadrangles, great circular and semi-circular courts, and in the present case great semi-circular bastions taking the stairs. Whatever loss of sunlight these arrangements may mean to certain rooms, for myself I would sooner live in a Keay tenement, looking at his shapes and enjoying the play of light and shade upon them, than in one of the modern ideally-lit suitcases ; but then I have still a good many old-fashioned feelings left. If he still uses small panes to his windows and steeply-pitched tile roofs, as well as interesting shapes in his lay-out and other similar supposedly outmoded things, he is nevertheless an artist and one of the best among the fortunate official class.

The rest seem mostly great blocks of flats of which today we should be thoroughly ashamed and no doubt mostly are. We have all noticed what much better architecture the little municipal house generally is than its speculative neighbour. Now the same thing is being demonstrated in all directions with the tenement block [and the block of so-called luxury flats.

HOSPITALS

The first third of the big hospital for 432 beds has been built at Chichester by C. G. Stillman. It is a plain brick building in rectangular flat-roofed masses, very solid-looking except the three-storey ward block facing south, which has large areas of glass. These brick masses already compose very well one against the other, and should look even better when the other two-thirds are built. It is a good example of the fine effects to be obtained by the composition of rectangular masses alone, and shows how much money great hospitals have wasted in the past by applied decoration. C. G. Stillman is, I believe, the County Architect for Sussex. If so, he is clearly a man to watch, one day perhaps to be another L. H. Keay of Liverpool or J. H. Forshaw, late of the pit baths fame and now second in command at the L.C.C. It is time, I suggest, we all began to watch more carefully and with more interest the great official section of the profession and single out the leaders among them, just as we have been long accustomed to do with the private practitioners. It should be remembered that Dudok, of Hilversum, the Dutchman to whom the Gold Medal



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Hospital at Chichester. By C. G. Stillman.

30

St. Dunstan's Home, Brighton. By Francis Lorne (Sir John Burnet, Tait and Lorne).

was given a few years ago, is one, and probably the first one to receive it. I hope an Englishman in the same class will soon be so honoured.

St. Dunstan's Home, by Francis Lorne of Messrs. Tait and Lorne, is the very reverse of the Chichester Hospital in that it is a single lofty isolated mass on the Downs between Brighton and Rottingdean, instead of a collection of low masses on a plain. Clean and elegant in its lines and detail as the building is, I am not sure that its shape is right for the rolling Downs landscape around it. A lower building or a series of buildings like the groups of grey farm ones such as one sees so often and almost welcomes on the Downs, would have been less obtrusive. It is a little as if the Hotel Metropole or some similar building from the Brighton front had put on a clean new dress and taken a walk into the country. When one goes round to the back and finds that it is not merely a single oblong block with a terrace or two in front looking out to sea, but has another wing at right angles as well, it looks much better, but I still feel it is too tall. From the front it looks as if a good south-westerly gale would blow it over.

SHOPS

His Master's Voice shop in Oxford Street by Joseph Emberton is full of interesting ideas like all this architect's work, but the great advertisement over the facia board, destroying not only the building but that part of Oxford Street (if it can be further destroyed), puts it out of court, to my mind, as far as the exterior is concerned. Inside and under the great facia are all kinds of interesting things inviting exploration.

As a contrast to the above, and as an appeal to sentiment instead of wonder, there is a little new shop in an old manner at 116 Heath Street, Hampstead, by those modernists, Messrs. Welch and Lander, taking a day off. I am glad to have caught them at it.

Finally, there is the new Peter Jones section in Sloane Square which received the most votes in the competition among the supposed intelligentsia for the best-modern-building in London, so it must, I suppose, be mentioned.

LIBRARIES

There is one charming little library in this pile. It is a small branch one at Seaforth of a simple asymmetrical design which makes a good plan. It is by J. R. Fothergill, Borough Engineer; G. R. Mason, Architectural Assistant.

CINEMAS

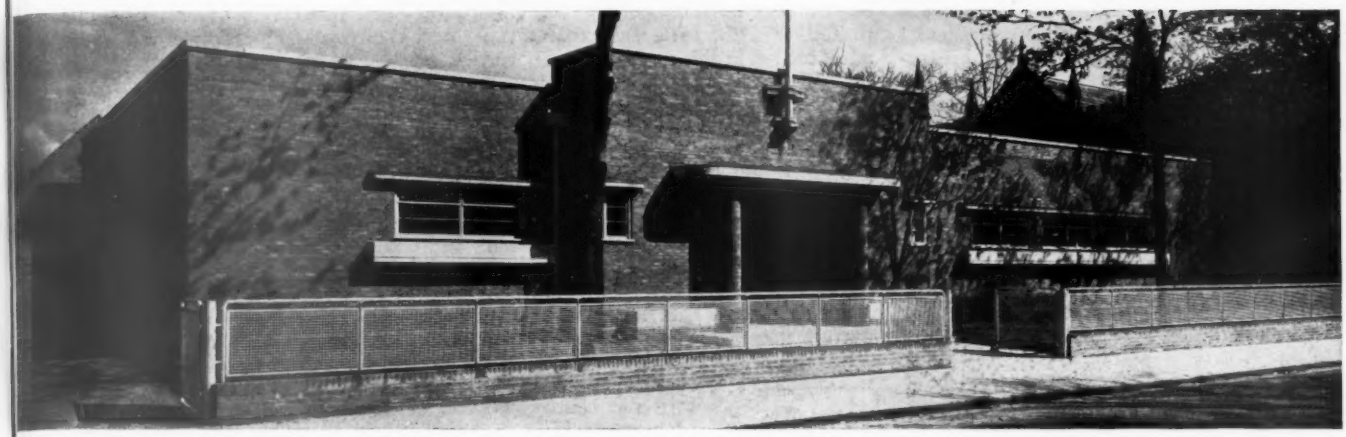
Again there is only one, the Paris Cinema, Regent Street, by R. Cromie. Its chief interest is that it is in a basement under a new block of offices, as if the war had been foreseen when the building was designed. Having a heavy building above has led the architect to a sort of mushroom construction and finish which certainly gives the auditorium a character very preferable to that of most cinemas above ground.

RECREATION BUILDINGS

Let us end in these depressing days on a happy note. Clearly a new type of holiday was in process of being evolved for vast masses of people when the war descended upon us. The two chief seaside recreational buildings of the year are the Prestatyn Holiday Camp designed for the L.M.S. by their architect, W. H. Hamlyn—

31

Shop, Heath Street, Hampstead. By Welch and Lander.



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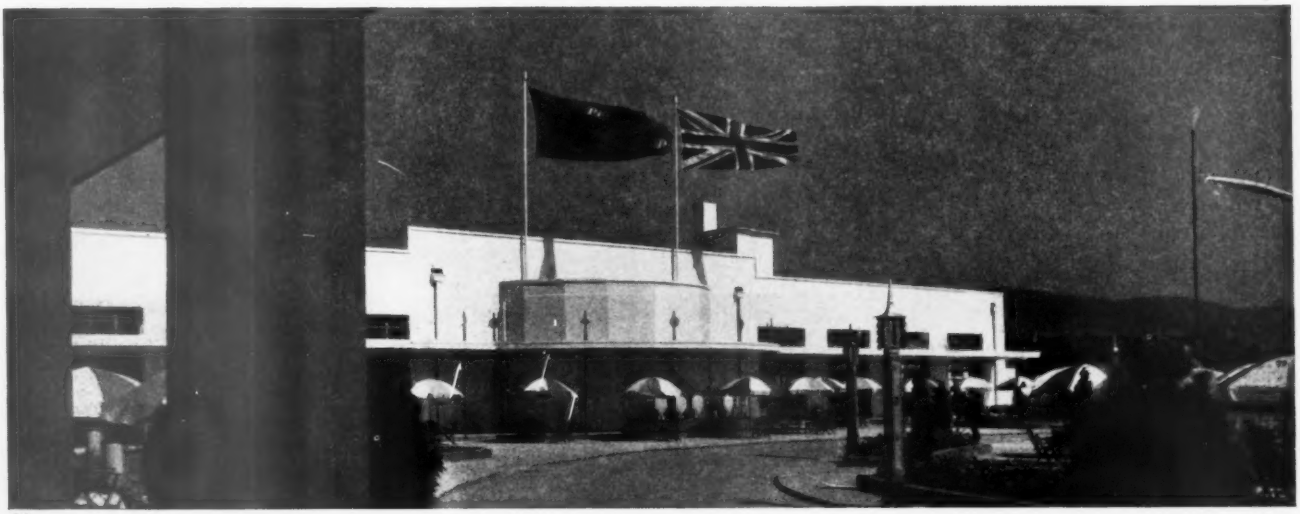

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another official architect to be remembered, and Joseph Emberton's Casino at Blackpool.

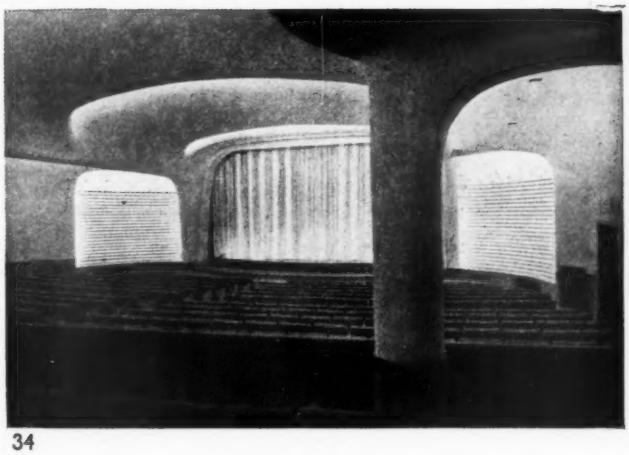
The first is a happy collection of one-storied white wooden buildings, though I am not very keen about the one in imitation of the games deck of a liner set in a sea of grass. There are hundreds of neat little chalets for families for two members and upwards, set out in broad avenues, with ball-rooms, restaurants and lakes, all rather like an exhibition with sleeping accommodation added. If there are today people young enough to like that sort of life, this is obviously the sort of thing for them. It might have been a nightmare of vulgarity. Mr. Hamlyn has managed its gay and happy spirit without making it so. It is a great achievement.

The new Casino at Blackpool is a large circular, two-storied structure with a flat roof for sun-bathing and for viewing others doing the same on the pleasure beaches and I suppose even the distant sea, and there is an exciting tower with an outside corkscrew staircase. Inside there are restaurants, banqueting halls, bars and games rooms, but no mention of dancing. I am sure dancing rather than banqueting is in the spirit of the building, which is one of Joseph Emberton's happiest efforts in making this most unattractive resort really attractive. If only the Corporation would hand the whole town over to him, and especially let him design their famous, but really rather infamous, illuminations, what a really happy place it might be instead of what it is, a piece of excellent seaside spoilt by the ugliest buildings in England, built in the hardest red brick. That masses of working people in the Midlands and North think it something else shows what harm advertising can do to the natural good taste of Englishmen.

32 : Public Library, Seaforth. By J. R. Fothergill, Borough Engineer. G. R. Mason, Architectural Assistant.

33 : Prestatyn Holiday Camp. By W. H. Hamlyn.

34 : Paris Cinema, Regent Street, S.W. By Robert Cromie.



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POSTSCRIPT (1)

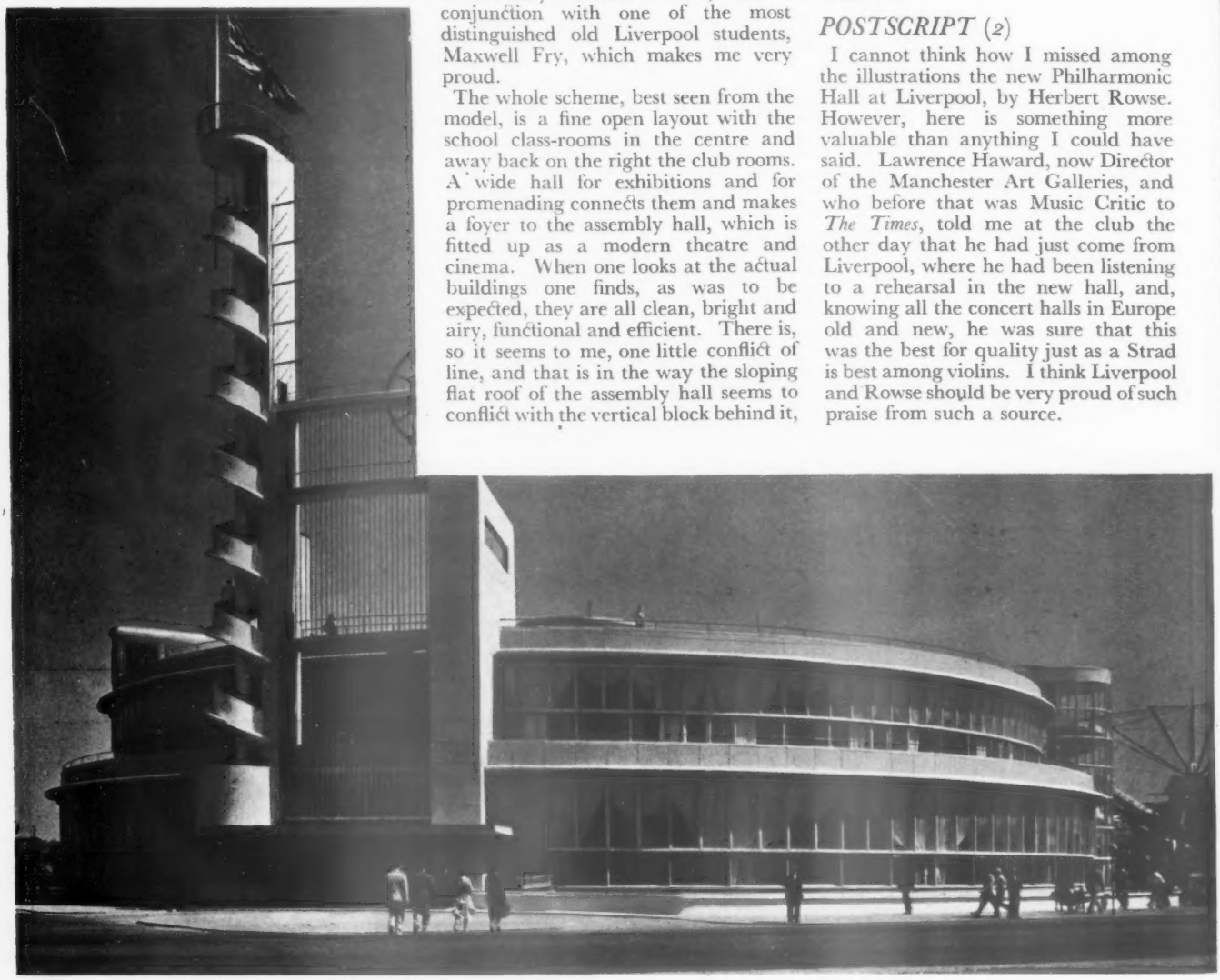
Since writing the above the long-talked-about Impington Village College in Cambridgeshire, by Professor Walter Gropius and E. Maxwell Fry, has been illustrated. It will be remembered that

these country colleges were invented by Henry Morris, the enlightened Director of Education in Cambridgeshire, to form cultural centres for groups of villages. This is the fourth such college. Each consists of a senior school with added club rooms and library for the adults who use the institution in the evenings. The assembly hall and the science and craft rooms are common to both sections. The extra cost of the adult section in this case has been borne by generous outside donors who believed in the scheme, and the fees of the architects have been provided in the same way and to a considerable extent, it is interesting to note, by brother architects who wanted to see a work of the great Gropius put up in this country. Here it is then, done in conjunction with one of the most distinguished old Liverpool students, Maxwell Fry, which makes me very proud.

The whole scheme, best seen from the model, is a fine open layout with the school class-rooms in the centre and away back on the right the club rooms. A wide hall for exhibitions and for promenading connects them and makes a foyer to the assembly hall, which is fitted up as a modern theatre and cinema. When one looks at the actual buildings one finds, as was to be expected, they are all clean, bright and airy, functional and efficient. There is, so it seems to me, one little conflict of line, and that is in the way the sloping flat roof of the assembly hall seems to conflict with the vertical block behind it, and—and this rather amuses me—the way the regular elevation of the main science class-room crosses that of the adjacent winter garden and absorbs it without batting an eyelid. The general spaciousness of the plan and the beauty of the individual rooms and halls from sheer effective usefulness is not to be denied. It is a great thing that the building has been erected. Its influence is assured.

POSTSCRIPT (2)

I cannot think how I missed among the illustrations the new Philharmonic Hall at Liverpool, by Herbert Rowse. However, here is something more valuable than anything I could have said. Lawrence Haward, now Director of the Manchester Art Galleries, and who before that was Music Critic to *The Times*, told me at the club the other day that he had just come from Liverpool, where he had been listening to a rehearsal in the new hall, and, knowing all the concert halls in Europe old and new, he was sure that this was the best for quality just as a Strad is best among violins. I think Liverpool and Rowse should be very proud of such praise from such a source.



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New Casino, Blackpool. By Joseph Emberton.

THE BUILDINGS ILLUSTRATED

NATIONAL HOLIDAY CAMP, SURREY (pages 68–71). Architect, Alister G. MacDonald. General contractors, Commercial Structures, Ltd. Sub-contractors and suppliers included: James Longley & Co., Ltd., prefabricated timber building units; Sussex Brick Co., Ltd., bricks; W. H. Colt (London), Ltd., cedar shingles; Matthew Hall & Co., Ltd., central heating; Aga Heat, Ltd., Aga cookers and stoves; Interoven Stove Co., Ltd., stoves; Falkirk Iron Co., Ltd., installation of cooking apparatus and service fittings; Avamore Engineering Co., Ltd., mixing, bread-cutting and buttering, and dish-washing machines; Frigidaire, Ltd., cold storage cabinet; Hobart Manufacturing Co., Ltd., potato peeler; Gravity Feed Slicing Machine Co., slicing machine; Hartley and Sugden, Ltd., and Ideal Boiler and Radiator Co., Ltd., boilers; Walker, Crosweller & Co., Ltd., Leonard thermostatic water-mixing valves; Edison Swan Electric Co., Ltd., cables; Powell and Lee, Ltd., electric wiring; G. A. Harvey & Co., Ltd., roof ventilators; Commercial Structures, Ltd., plumbing; Broad & Co., Ltd., sanitary fittings; Waring and Gillow (1932), Ltd., textiles; Nettlefold and Sons, Ltd., and A. Oakdean and Sons, Ltd., cloakroom fittings and ironmongery; W. E. Farrer, Ltd., sewage disposal.

CHEMICAL LABORATORIES, SUSSEX (pages 77–83). Architects, O'Donoghue and

Halfhide. General contractors, Dove Bros., Ltd. Sub-contractors and suppliers included : General Asphalte Co., Ltd., dampcourses and asphalt ; Liversedge Reinforced Concrete Engineering Co., Ltd., reinforced concrete; Finnis and Ruault, bricks ; Blocrete, Ltd., artificial stone ; Matthew T. Shaw & Co., Ltd., structural steel ; Moler Products, Ltd., flue linings ; A. H. Herbert & Co., Ltd., tiles ; Kleine Co., Ltd., special roofings ; Lenscrete, Ltd., glass bricks ; A. Goslett & Co., Ltd., glass ; Luxfer, Ltd., and Haywards, Ltd., patent glazing ; Sika-Francois, Ltd., waterproofing materials ; Hope's Heating and Lighting, Ltd., vacuum compressor and ventilation ; Redler Conveyors, Ltd., fuel conveyor ; Wm. Freer & Co., Ltd., gas fixtures ; Horsham Gas Co., gasfitting ; Spanner Thimble Tube Boilers, Ltd., and Ideal Boiler Co., Ltd., boilers ; Rashleigh, Phipps & Co., Ltd., electric wiring and heating ; Troughton and Young, Ltd., and S. L. R. Electric, Ltd., electric light fixtures ; Dent and Hellyer (Sanitation), Ltd., sanitary fittings and plumbing ; Walter W. Jenkins & Co., Ltd., stair treads and stonework ; Walter Cassey, Ltd., door furniture ; Metallbau Koller, casements and window furniture ; Reliance Telephone Co., Ltd., telephones ; Caston & Co., Ltd., gates ; E.S.A., Esavian sliding doors ; A. L. Gibson & Co., Ltd., rolling shutters ; Chatwood Safe Co., Ltd., fireproof doors ; Piggott & Co., Ltd., flagstaff and lightning conductor ; Kaymat, Ltd., road paving and paths ; Honeywill and Stein, Ltd., and W. A. Telling, Ltd., plaster ; William Pickford, Ltd., and Morris Singer Co., Ltd., metalwork ; Samuel Elliott and Sons, Ltd., joinery ; Maple & Co., curtains and carpets ; C. W. Cave & Co., Ltd., and Maple & Co., Ltd., furniture ; J. Cheal and Sons, Ltd., shrubs and trees ; Baird and Tatlock, Ltd., laboratory fittings ; Sulzer Bros., Ltd., pump ; Constructors, Ltd., cloakroom fittings ; Pickerings, Ltd., lifts ; Carty and Son, Ltd., wooden vats ; Magneta Time Co., Ltd., clocks ; Le Grand, Sutcliffe and Gell, Ltd., artesian well ; Candy Filter Co., Ltd., water-softening plant.

RESIDENTIAL BLOCK, WORCESTER COLLEGE, OXFORD (pages 84-85). Architects : W. G. Newton and Partners. General contractors, T. H. Kingerlee and Sons, Ltd. Sub-contractors and suppliers included : Limmer and Trinidad Co., asphalt ; Trussed Concrete Steel Co., Ltd., reinforced concrete ; Finnis and Ruault, bricks and slates ; Hollis Bros. & Co., Ltd., woodblock flooring ; Granwood Flooring Co., patent flooring ; Semtex, Ltd., plastic rubber floors ; William Briggs and Sons, Ltd., waterproofing materials ; J. H. Nicholson & Co., Ltd., hot water supply ; Conway & Co. and Matthews, and William Smith, grates ; Fred. G. Alden, Ltd., electric lighting and power installation ; Joseph Chater and Sons, Ltd., sanitary fittings ; Walter Cassey, Ltd., door and window furniture ; Wenham and Fowler, and Crittall Manufacturing Co., Ltd., casements ; Galsworthy, Ltd., wrought iron gates ; Modern Surfaces, Ltd., Muroglaze ; Esmond Burton, Esq., carved stone coat of arms ; Aldous and Campbell, Ltd., lifts ; Gradidge Construction Co., Ltd., fives court.

BISHOP HANNINGTON MEMORIAL CHURCH, HOVE (pages 86-88). Architect : Edward Maufe, A.R.A. General contractors, James Longley & Co., Ltd., who were also responsible for the excavations and foundations. Sub-contractors and suppliers included : Sussex Brick Co., bricks ; R. Y. Ames, facing bricks ; Roberts, Adlard & Co., Ltd., tiles ; D. Anderson and Son, Ltd., Thermotile flat roofing ; Wainwright and Waring, Ltd., glass ; Stoner and Saunders, Ltd., cast lead ; Hollis Bros. & Co., Ltd., woodblock flooring ; Ariel Chase, central heating ; Page and Miles, Ltd., electric wiring ; Heal and Son, Ltd., electric light fixtures ; Hall & Co., sanitary fittings ; James Gibbons, Ltd., door furniture ; Haywards, Ltd., iron staircases ; John B. Over, plaster ; Thermacoust Products, Ltd., acoustic materials ; J. Starkie Gardner, Ltd., metalwork ; Field and Cox, Ltd., stalls ; Fenning & Co., Ltd., paving ; Eric Munday, foundation stone ; Joseph Cribb, stone carving ; Mealing Bros. & Co., Ltd., chairs ; Plashett Saw Mills, gates ; Gent & Co., Ltd., clocks.

As a result of the necessity of economizing paper in war-time, newsagents will be unable to keep a stock of journals and periodicals for casual sale. If you wish to make sure of receiving your copy of this JOURNAL *in future, you should either place a definite order with your newsagent or subscribe direct to*

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BASIC (PRE-WAR)

SCHEDULE OF PRICES

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

THE shortage of paper has compelled the JOURNAL, *like other periodicals, to reduce the number of its pages; and it has therefore decided to publish, for the next six months, a reduced Prices Section in the form shown on the left.*

In order to establish a firm basis for war-time price comparisons, and to enable the reduced Prices Section to be the more fully used, the JOURNAL *re-publishes on the following pages the LAST FULL PRE-WAR LIST OF MARKET PRICES AND MEASURED RATES.*

This Pre-War BASIC LIST will be frequently referred to in the reduced Prices Section, and therefore all those who are likely to be concerned with war-time building prices are advised to

KEEP THIS SUPPLEMENT CAREFULLY

For the next six months the Prices Section will appear in the following form:

1. In the first issue each month Messrs. Davis and Belfield will sum up principal price changes during the preceding month.
2. On April 4 and July 4 *Market Prices of Materials only* will be published.

FOR obvious reasons the outbreak of war made the publication of correct current prices more difficult, and the usefulness of the Pricing Section as a whole has declined as the war has continued. Now that all building, apart from that required for official purposes, is very nearly at a standstill, there are considerably fewer people interested, and, owing to the difficult conditions prevailing there is always the danger that published prices may be misleading, rather than helpful, to anyone who is not aware of all the conditions.

Prices for work executed complete (Measured Work) are more likely to be misleading than prices for materials (Market Prices) as, in the former, cost of transport, keenness in tendering and other variable factors have to be taken into account.

The cost of timber serves to illustrate other difficulties. The basic prices in the control order do not appear to be different from pre-war rates, but apart from other considerations, 10 per cent. extra (plus repiling charges) is charged for selected lengths, and orders for less than £15 in value, *for any one size and quality*, cost 20 per cent. more, per foot cube, than orders for larger quantities; thus, certain sizes of timber ordered even for a large job may have to be purchased at the higher rate. Moreover, Builders may not be able to obtain the exact sizes and grades they require and, therefore, may have to purchase larger sizes or better grades than are specified.

Although the cost of timber can be shown relatively easily in the section devoted to Market Prices, it is obviously difficult to present representative items of "Measured Work" which are really typical and indicate the probable cost of Carpenters' and Joiners' work.

The JOURNAL, like other papers and periodicals, has been compelled to reduce in size, and owing to the difficulties of publishing prices for Measured Work and App. Est., for the use of experienced and inexperienced Estimators alike, these sections will be omitted from future publications.

Until the publication of prices for Measured Work seems justified again, Market Prices of Materials will be published at quarterly intervals—one on April 4 and the next on July 4—and notes will appear on important changes in the price of basic materials, monthly. Alterations to rates of wages will be similarly noted.

It is difficult to say to what extent prices have been affected by the War as they are more than ever influenced by local conditions. There are certain facts, however, which can be given.

Rates of Wages have been increased, as from December 1, 1939, by ½d. per hour for both Craftsmen and Labourers, making the rates for Central London 1s. 9½d. and 1s. 4½d. respectively. This means a percentage increase, for Central London, of 2.38 per cent. for craftsmen and 3.18 per cent. for labourers since pre-war days.

Road Transport charges have been increased chiefly due to petrol rationing and the rise in wages.

Materials have not risen consistently in price, and a table is given below showing the approximate percentage difference between the prices published in August and present day prices for some of the basic materials.

Portland cement	+ 9·8%	Roofing tiles	No change
2-in. unscreened ballast	+ 17·5%	Steel joists	+ 3·0%
Fletton bricks at station	No change	Lime greystone	+ 14·3%
Stoneware drainpipes (British standard) 2 tons and over	+ 9·4%	Sheet lead	+ 50%
		Iron rainwater goods	+ 3¾%
		Iron soil pipes	+ 3¾%
		Copper tubes	+ 23·4%
		White lead paint	+ 21·2%

These percentages include the increased cost of delivery in London, except for steel joists, which are priced ex mills, and Fletton bricks, which are priced delivered to King's Cross Station. Although timber may be regarded as a "basic" material it has not been included in the above list, owing to the complications already explained and to the fact that the difference in cost for the various sizes and grades is not consistent.

War Risk Insurance for building products was for some time rather an unknown factor, but it has now been established at the rate of ¼ per cent. per month. The majority of ordinary materials, however, such as ballast, bricks, roofing tiles and slates, cement, plaster, concrete products of all descriptions, iron and steel sections, etc., are not insurable and it is obvious that this insurance should not affect costs substantially.

This loose supplement containing the last pre-war list of Market Prices and Prices for Measured Work, will be referred to as "Basic Prices" for the purpose of

comparison with war-time prices. Although prices for Measured Work will no longer be published, anyone interested and willing to take a little trouble can learn a good deal about the current cost of work executed complete, by studying the information published in future issues in conjunction with these "Basic Prices."

Here is a simple example to show how an up-to-date price for 4″ × 3″ fir plates, fixed complete, could be worked out :—

Reference to this Schedule of Basic Prices (*Market Prices Section*) shows that 4″ × 3″ carcassing timber cost 2s. 8d. per foot cube and carpenters' wages at that time were 1s. 9d. per hour.

Reference to a future issue of the JOURNAL may show that the cost of 4″ × 3″ has risen to 3s. and that carpenters' wages have risen to 1s. 10d.—an increase of approximately 12½ per cent. on materials and 5 per cent. on labour.

Reference to this Schedule of Basic Prices (*Measured Work*) shows that the cost of 4″ × 3″ plates *fixed* was 3s. 10d. of which 3s. was for the materials—leaving 10d. for labour.

Add the percentage increase on materials and labour—12½ per cent. on 3s. and 5 per cent. on 10d. and you have the answer, 4s. 3d. per foot cube.

It must be emphasized that a price so worked out can only be used as a rather approximate guide unless local conditions are also taken into account. As has already been mentioned, cost of transport and keenness in tendering should not be ignored. Further, it must be admitted that the example given is an easy one and that items such as concrete and brickwork, which consist not of one material, but of several, present greater difficulties. Even so, if the same process is followed, some useful information should be gained, as the increase in labour costs can be determined reasonably accurately, and it must be obvious, for instance, that a 5 per cent. increase in the cost of cement will affect a relatively small proportion of the materials used for brickwork, whereas a 5 per cent. increase in the cost of bricks will affect a relatively large proportion.

As much help as possible will be given in the JOURNAL from time to time by showing as a percentage the increased cost of labour and of materials since pre-war days. It has already been made clear, however, that it is not always safe to generalize and in many cases readers will have to compare Market Prices with this schedule of Basic Prices to determine the percentage increases for themselves.

O. A. DAVIS

RATES OF WAGES :

Wages for London, within 12 miles of Charing Cross : Craftsmen, 1/9d. per hour ; Labourers, 1/3¾d.

N.B. These were the rates of wages used when compiling prices for Measured Work.

BASIC MARKET PRICES OF MATERIALS

Prices vary according to quality and the quantity ordered. Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profits for the General Contractor.

CONCRETOR

Cements

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

		4 Tons and over	In 80-ton freights F.A.S. Safe Wharf in River Thames, London Area.
Portland	per ton	41/–	38/6
Rapid hardening	per ton	47/–	44/6
Water repellent	per ton	71/–	—
Atlas White (1 barrel 376 lbs.)			per barrel 44/–

	1 ton	10 tons upwards and over
Colorcrete rapid hardening, Buff and red	per ton 68/–	—
Colorcrete Rapid hardening khaki	per ton 89/–	69/–
Colorcrete Rapid hardening blue	per ton 112/–	102/–
Colorcrete non rapid hardening	per ton from 139/– to 309/–	
Snowcrete	per ton 175/–	

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

Aggregate and Sands (*Full Loads*)

2″ Unscreened ballast	per yard cube 5/9
¼″ (Down) Washed, crushed and graded shingle	per yard cube 6/–
¼″ (Down) Ditto	per yard cube 7/3
2″ Broken brick	per yard cube 10/6
¾″ Ditto	per yard cube 11/9
Washed pan breeze	per yard cube 5/3
Coke breeze 1″ to dust	per yard cube 12/6
⅛″ Sharp washed sand	per yard cube 8/–
White Silver Sand for white cement (one ton lots)	per ton 25/–

(For Sands for Bricklaying and Plastering *see* respective trades)

Pavings

Brick hardcore	per yard cube 2/9
Concrete ditto	per yard cube 3/9
Clean furnace clinker and boiler ashes	per yard cube 3/3
Coarse gravel for paths	per yard cube 6/9
Fine ditto	per yard cube 9/6
Clean granite chippings	per ton 18/6
Red quarry tiles, 6″ × 6″ × ⅞″	per yard super 6/–
Ditto 6″ × 6″ × ⅝″	per yard super 5/–
Buff ditto, 6″ × 6″ × ⅞″	per yard super 6/6
Ditto 6″ × 6″ × ⅝″	per yard super 5/6
Hard red paving bricks,	per 1,000 150/–

CONCRETOR—(*continued*)

Reinforcement

Basis price for mild steel rods, ⅜″ diameter and upwards, from London stocks	per ton £12 15 0
Extras for :—	
⅛″ and ¼″ diameter	per ton 10/–
⅛″ diameter	per ton 15/–
⅜″ diameter	per ton 20/–
⅛″ diameter	per ton 30/–
½″ diameter	per ton 40/–
⅝″ diameter	per ton 60/–
Lengths of 40 ft. to 45 ft.	per ton 10/–
Lengths of 45 ft. to 50 ft.	per ton 15/–

Sundries

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

BRICKLAYER

Common Bricks

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

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

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000 85/–
Sand Limes, No. 2	per 1,000 70/–
* Phorpres rustic Flettons	per 1,000 66/3
Midhurst Whites	per 1,000 75/–
Hard stocks, firsts	per 1,000 93/–
Hard stocks, seconds	per 1,000 86/–
Sand-faced, hand-made reds	per 1,000 from 115/–
Sand-faced, machine-made reds	per 1,000 from 110/–
Red rubbers (9¾-in.)	per 1,000 300/–
Uxbridge Flints (white)	per 1,000 67/6
Uxbridge Flints (creams, light greys, etc.) per 1,000	from 85/– to 100/–
Dunbricks (concrete), multi reds, ex works	per 1,000 72/–

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

BRICKLAYER—(*continued*)

Facing and Engineering Bricks—(continued)

Dunbricks (concrete), multi lavender, ex works	per 1,000	75/–
Southwater engineering No. 1 (first quality red pressed)	per 1,000	145/–
Southwater engineering No. 2 (second quality red pressed)	per 1,000	125/–
Blue pressed	per 1,000	180/–

White, Salt and Coloured Glazed Bricks (9″ × 4½″ × 2½″)

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

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

Limes and Sand

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

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

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

Sundries

Wall ties, self coloured	per cwt.	19/–
Wall ties, galvanized	per cwt.	24/6
Hoop iron, black	per cwt.	25/–
D.P.C. slates, size 18″ × 9″	per 1,000	150/–
D.P.C. slates, size 14″ × 9″	per 1,000	117/6
D.P.C. slates, size 14″ × 4½″	per 1,000	59/–
*Ledkore D.P.C. Grade A	per foot super	5d.
*Ledkore D.P.C. Grade B	per foot super	6½d.
*Ledkore D.P.C. Grade C	per foot super	8d.

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

	9″×3″	9″×6″	9″×9″	12″×9″	14″×9″
Earthenware airbricks: red, blue, vitrified and buff terra cotta each	–/8	1/4	2/4	4/–	6/8
	9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
Black cast iron, School Board pattern airbricks per doz.	3/–	5/6	11/–	11/–	20/–
Galvanized ditto per doz.	5/6	11/–	22/–	22/–	40/–
Black hit and miss cast iron ventilators per doz.	12/–	15/–	21/–	21/–	36/–
Galvanized ditto per doz.	24/–	30/–	42/–	42/–	72/–
	1′ 0″	1′ 6″	2′ 0″	2′ 6″	3′ 6″	5′ 0″
Buff terra cotta chimney pots each	2/6	3/–	4/4	5/9	13/4	22/6
Fireclay per ton	45/–					

Wall reinforcement supplied in standard rolls containing 25 yards lin.
2″ wide black japanned per roll 2/1
2″ wide galvanized per roll 3/2
2½″ wide black japanned per roll 2/7½
2½″ wide galvanized per roll 3/10½
Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.

Partitions

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

BRICKLAYER—(*continued*)

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

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

Gas Flue Blocks

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

DRAINLAYER

Agricultural Pipes

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

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

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

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

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

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

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size		9 fts.	6 fts.	4 fts. each	3 fts. each
1.1. 8	4″ per yard		6/2	6/11	11/–	8/4
1.1.20	4″ per yard		6/5	7/1	11/3	8/7
2.0. 6	6″ per yard		9/6	11/4	18/3	14/7
4.0. 2	9″ per yard		17/3	22/7	39/2	29/10

DRAINLAYER—(*continued*)

Cast Iron Drain Pipes and Fittings—continued.

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size	2 fts.	18 ins.	12 ins.	9 ins.
1.1. 8	4″ each	6/11	6/2	5/5	4/11
1.1.20	4″ each	7/–	—	—	—
2.0. 6	6″ each	10/11	—	—	—
4.0. 2	9″ each	—	—	—	—

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

		4″	6″	9″
Bends	each	6/1	12/8	39/–
Single junctions	each	10/9	21/11	67/3
Intercepting traps	each	36/7	46/10	121/11
Gulleys ordinary trapped	each	14/2	—	—
Extra for inlet 4″	each	3/8	—	—
Grease Gulley trap	each	117/6	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet	each	18/7	44/10	—

Cast Iron Inspection Chambers

	The larger figures below refer to the main pipes and the smaller figures to the branches				
	4″×4″	6″×4″	6″×6″	9″×6″	9″×9″
	each	each	each	each	each
Straight chambers with one branch one side	36/1	46/10	51/8	109/8	124/4
Straight chambers with two branches one side	55/7	65/4	77/–	148/8	185/3
Straight chambers with three branches in all	65/4	75/1	89/2	162/10	—
Straight chambers with four branches in all	75/1	84/10	101/4	173/5	—
Straight chambers with three branches one side	69/3	84/10	98/6	—	—
Straight chambers with five branches in all	88/9	104/4	122/10	—	—
Straight chambers with six branches in all	98/6	114/1	135/–	—	—
Straight chambers with four branches one side	92/8	108/9	131/2	—	—
Straight chambers with five branches In all	102/4	118/3	143/4	—	—
Straight chambers with six branches in all	112/2	128/–	155/6	—	—
Straight chambers with seven branches in all	121/10	137/9	167/8	—	—
Straight chambers with eight branches in all	131/8	147/6	179/10	—	—

The branches to the above are at 135°

		4″	6″
Extra for branches between 135° and 180°	each	7/4	7/4
Extra for branches between 90° and 135° other than standard angles	each	5/10½	5/10½

	4″×4″	6″×4″	6″×6″
Curved chambers, no branch 90°–112½° each	26/10	—	37/1
Curved chambers, no branch 135° each	26/10	—	37/1
Curved chambers, one branch 135° each	33/2	46/9	52/8
Curved chambers, two branches 135° each	39/–	63/5	74/1

Channels in White Glazed Ware (Unselected Quality)

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

		6″×4″	9″×6″
Half round taper channels 24″ long	each	7/10	11/3
Half round taper channel bends	each	10/8	17/9

These prices are subject to 20% discount.

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long	each	1/8	1/10½	3/4½
Half round straight channels 30″ long	each	—	—	4/2½
Ditto, short lengths	each	1/8	1/10½	—
Half round ordinary channel bends	each	1/10½	2/9½	5/0½
Ditto, short	each	1/10½	2/9½	—
Ditto, long	each	3/9	5/7½	10/1½

DRAINLAYER—(*continued*)

Channels in Brown Glazed Ware—continued.

		4″	6″	9″
Three-quarter round branch bends	each	5/–	7/6	—

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

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

Manhole Covers

	Black	Galvanized
24″ × 18″ single seal for foot traffic. (Weight 0.3.0 in lots of 24) each	14/6	25/9
24″ × 18″ single seal for light car traffic. (Weight 2 cwt. in lots of 24) each	38/9	65/3
24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.) each	Coated 63/–	

	Fine Cast	Galv.
Cast step irons, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lbs. each per dozen	14/9	25/6

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

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

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

Ancaster Stone

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

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

White Mansfield Stone

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

Bath Stone

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

Portland Stone

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

¾″ Thick Plain Marble Wall Linings

Roman Travertine per foot super	5/–
Golden Travertine per foot super	6/3
Roman stone per foot super	4/6
Hopton-wood stone per foot super	5/–
Second statuary per foot super	4/6
Sicilian per foot super	4/–

Artificial Stone

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

Reconstructed Stone to match Natural Stone

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

MASON—(*continued*)

Slate Slabs, cut to size and Planed

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

Combined Slate cills and Window Boards for Metal Windows

Window Width	Straight cills Wall thickness 9″	11″	13½″	Circular cills for C.O.P. Frames Radius	External reveals 2″	4½″
1′ 8″ ..	4/–	4/8	5/8	2′ 4¼″ ..	21/–	24/–
3′ 3¼″ ..	7/4	8/7	10/4	2′ 7¼″ ..	25/6	28/6
4′ 10½″ ..	10/6	12/3	14/10	2′ 10¼″ ..	30/–	33/3

SLATER, TILER AND ROOFER

Best Bangor Slates

	£	s.	d.
24″ × 12″ .. .. per 1,000 actual	33	10	0
22″ × 12″ .. .. per 1,000 actual	27	19	0
22″ × 11″ .. .. per 1,000 actual	25	4	9
20″ × 12″ .. .. per 1,000 actual	24	14	6
20″ × 10″ .. .. per 1,000 actual	21	15	5
18″ × 12″ .. .. per 1,000 actual	20	19	3
18″ × 10″ .. .. per 1,000 actual	17	7	6
18″ × 9″ .. .. per 1,000 actual	15	11	9
16″ × 12″ .. .. per 1,000 actual	17	14	9
16″ × 10″ .. .. per 1,000 actual	15	11	9
16″ × 9″ .. .. per 1,000 actual	13	19	6
16″ × 8″ .. .. per 1,000 actual	12	1	11

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

Old Delabole Slates (f.o.r.)

Standard sizes.

Prices and computed weights per 1,200.

		20″ × 10″	16″ × 10″
Grey medium gradings	per 1,200	558/–	366/–
	cwts.	38	30
Unselected greens (V.M.S.) ..	per 1,200	628/–	418/–
	cwts.	44	36

Random sizes.

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

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

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

Tiles

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

Westmorland Green Slates

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

SLATER, TILER AND ROOFER—(*continued*)

Westmorland Green Slates—(continued)

	Bests, 24″ to 12″ long. Proportionate widths Price per ton	Computed cover in sq. yds. per ton
Broughton Moor, light sea green, olive green, silver grey green, and mixed shades	237/–	27

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

Asbestos-cement

6″ corrugated sheets, grey .. .. .. per yard super	3/0¾		
Standard 3″ corrugated sheets, grey .. per yard super	2/9¼		
Slates :—			
15½″ × 7⅞″ grey .. .. per 1,000	£6	3	9
15½″ × 15¾″ diagonal, grey .. .. per 1,000	£11	15	0
15½″ × 15¾″ diagonal, russet or brindled per 1,000	£14	16	9
Pantiles.			
Large russet brown .. .. .. per 1,000	£19	8	6

Prices are for minimum two-ton loads, and are subject to 5% trade discount.

Cedar Wood Tiles

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

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

CARPENTER

Carcassing Timber

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

	Per standard £ s. d.	Per foot cube
4″ × 11″ Scantling	25 5 0	3/0¾
4″ × 9″ ,, ...	24 15 0	3/–
3″ × 11″ ,, ...	23 10 0	2/10¼
2″ × 11″ ,, ...	24 0 0	2/11
3″ × 9″ ,, ...	23 0 0	2/9½
2″ × 9″ ,, ...	23 10 0	2/10¼
3″ × 8″ ,, ...	22 0 0	2/8
2″ × 8″ ,, ...	22 0 0	2/8
3″ × 7″ ,, ...	21 0 0	2/6½
2″ × 7″ ,, ...	21 0 0	2/6½
4″ × 6″ ,, ...	25 0 0	3/0½
3″ × 6″ ,, ...	22 0 0	2/8
2″ × 6″ ,, ...	21 0 0	2/6½
3″ × 5″ ,, ...	22 10 0	2/8¾
3″ × 4″ ,, ...	22 0 0	2/8
2″ × 5″ ,, ...	20 0 0	2/5½
2″ × 4″ ,, ...	20 10 0	2/6
1½″ × 11″ ,, (20 ft. lengths and over)	per ft. run	–/4½
1½″ × 9″ ,, (20 ft. lengths and over)	per ft. run	–/3¾
1½″ × 7″ ,, (20 ft. lengths and over)	per ft. run	–/2¾

Yellow Deal Battens

¾″ × 1″ .. .. per 100 feet run	1/5	
¾″ × 1½″ .. .. per 100 feet run	2/6	
¾″ × 2″ .. .. per 100 feet run	3/–	
1″ × 2″ .. .. per 100 feet run	4/9	
1½″ × 2″ .. .. per 100 feet run	6/–	

Weather Boarding

Deal :—	
¾″ × ¼″ × 6″ Feather edge .. .. .. per square	12/–
¾″ × ¼″ × 4″ Feather edge .. .. .. per square	9/6
Western red cedar :—	
1″ × 6″ Drop sidings.. .. .. .. per square	38/–
11/16″ × 3/16″ × 6″ Feather edge .. .. per square	13/–
¾″ × ¼″ × 4″ Feather edge .. .. .. per square	13/6

Roof Boarding

Deal :—	
¾″ × 6″ .. .. per square	16/6
1″ × 6″ .. .. per square	21/–

JOINER

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

Joinery Timber

			Per standard £ s. d.	Per foot cube s d.
3″ × 9″ Scantling	2nd	Archangel	43 0 0	5 2½
3″ × 9″ ,,	3rd	,, ...	30 0 0	3 7¾
2″ × 9″ ,,	2nd	,, ...	50 0 0	6 0¾
2″ × 9″ ,,	3rd	,, ...	30 10 0	3 8½
3″ × 8″ ,,	2nd	,, ...	36 10 0	4 5¼
3″ × 8″ ,,	3rd	,, ...	25 10 0	3 1½
2″ × 8″ ,,	2nd	,, ...	40 0 0	4 10½
2″ × 8″ ,,	3rd	,, ...	25 10 0	3 1¼
3″ × 7″ ,,	2nd	,, ...	37 10 0	4 6¾
3″ × 7″ ,,	3rd	,, ...	25 0 0	3 0½
2″ × 7″ ,,	2nd	,, ...	39 10 0	4 9½

JOINER—(*continued*)

Joinery Timber—continued.

		Per Standard £ s. d.	Per foot cube s. d.
2″ × 7″ Scantling	3rd Archangel	24 0 0	2 11
2″ × 6″ „	u/s „	23 0 0	2 9½
1½″ × 11″ „	3rd „	38 10 0	4 8¼
1½″ × 9″ „	u/s „	35 0 0	4 3
1″ × 9″ „	2nd „	47 10 0	5 9¼
1″ × 9″ „	3rd „	35 0 0	4 3
1″ × 11″ „	2nd „	53 0 0	6 5¼
1″ × 11″ „	3rd „	40 0 0	4 10½
1¼″ × 9″ „	2nd „	47 10 0	5 9¼
1¼″ × 9″ „	3rd „	36 0 0	4 4½
1¼″ × 11″ „	2nd „	51 0 0	6 2¼
1¼″ × 11″ „	3rd „	41 0 0	4 11¾

Flooring

		⅞″	1″	1¼″
Yellow deal, plain edge in batten widths ..	per square	20/6	24/–	30/6
Ditto, T. & G.	per square	21/–	24/6	31/–
Ditto, T. & G. narrow widths	per square		23/6	28/–
T. & G. rift sawn B.C. pine in 4″ widths ..	per square		32/6	42/6
T. & G. random grain, in 4″ widths	per square		19/6	

Wall Linings

Deal Match Boarding :—		
1″ × 6″ T.G.B.	per square	26/6
1″ × 4½″ T.G.V.	per square	25/–
¾″ × 6″ T.G.B.	per square	19/–
¾″ × 4½″ T.G.V.	per square	18/6
⅝″ × 6″ T.G.B.	per square	15/9
⅝″ × 4½″ T.G.V.	per square	15/6
½″ × 4½″ T.G.V.	per square	12/–
Asbestos-Cement :—		
5/32″ Semi-compressed flat building sheets, grey	per yard super	1/3½
3/16″ Ditto	per yard super	1/4
¼″ Ditto	per yard super	1/11
¼″ Metal reinforced flat building sheets	per yard super	3/2¾

Prices are for orders of two tons and over and are subject to 5% trade discount.

Wall Boards :—

¼″ Asbestos wallboard (in sheets 8′ 0″ × 4′ 0″, 10′ 0″ × 4′ 0″ and 12′ 0″ × 4′ 0″) under 5,000 feet super	per foot super				–/2¾
3/16″ Ditto	per foot super				–/2¼
The following prices are subject to 10 per cent. trade discount :—					
Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ..	per yard super				6/6
Ditto, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super				8/6
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ..	per yard super				7/–
	300 yards	300–1,000 yards	1,000–2,000 yards	Over 2,000 yards	
½″ Fibre board per yard super ..	2/–	1/10	1/8	1/6	

		25-75 yards	150–300 yards	Over 600 yards
⅛″ Fireproof plaster board	per yard super	2/2	1/10	1/6
¼″ Ditto	per yard super	2/–	1/8	1/4
Joint tape (approx. 250 feet run)	per roll ..		..	1/6
Joint filler	per lb. ..		..	–/4

Plywoods :—

		4 m/m	5 m/m	6 m/m	9 m/m	15 m/m
Birch (A)	per square	18/9	23/6	—	37/–	—
„ (B)	per square	15/6	—	21/–	30/6	43/–
Japanese figured oak (A.A.)	per square	33/6	—	39/3	65/–	—
Austrian oak, figured one side, plain oak reverse (A.A.) per square		—	—	86/3	92/6	—
Australian walnut, finely figured one side (boards 72″ × 36″) per square				¼″ 67/6	⅜″ 85/–	
Sycamore, figured one side (ditto) per square				75/–	85/–	
Honduras mahogany, figured one side (ditto) per square				75/–	—	
Honduras mahogany, finely figured (boards 84″ × 36″) per square				125/–	—	

Prices are for complete bundles.

JOINER—(*continued*)

Blockboards :—

Alder :— Thickness		Boards 60″ × 183″	Boards 72″ × 183″
½″	per square	59/3	59/3
⅝″	per square	66/3	66/3
¾″	per square	72/6	72/6
⅞″	per square	79/–	79/–
1″	per square	85/6	85/6
1¼″	per square	99/6	99/6
1½″	per square	114/6	114/6
1¾″	per square	128/–	128/–

Birch :— Thickness		Boards 60″ × 84″ & 54″ × 72″	Boards 60″ × 140″
½″	per square	43/9	47/3
⅝″	per square	50/–	54/–
¾″	per square	55/3	59/6
⅞″	per square	60/–	64/–
1″	per square	67/6	72/3

Prices are for complete bundles.

Hardwoods

Joinery Quality.

English oak	per foot cube	15/–
American oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Australian Silky Oak (plain) ..	per foot cube	11/–
„ „ „ (quartered) ..	per foot cube	12/6
Walnut, European	per foot cube	18/–
Teak, Rangoon	per foot cube	15/–
Iroko	per foot cube	12/–
Mahogany, Honduras	per foot cube	13/6
„ „ Cuban	per foot cube	18/–
American whitewood	per foot cube	9/–
Birch	per foot cube	8/–
Cedar (aromatic)	per foot cube	16/–
Japanese oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Austrian oak (plain)	per foot cube	10/6
„ „ (quartered)	per foot cube	14/–

Sundries

Slaters or sarking felt	per yard run	–/6
Roofing felt	per yard run	–/8
Bituminous hair felt	per roll	33/–
All rolls 25 yards long by 32″ wide.		
Cork slabs, 1″ thick (3′ 0″ × 1′ 0″)	per foot super	–/4½
„ 2″ thick (3′ 0″ × 1′ 0″)	per foot super	–/8
Slagwool	per cwt. (approx.)	12/–
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I.80 and L.G.I.80)	per roll	67/6
Ditto, 2-ply, 60″ wide (B.I.80)	per roll	135/–
Ditto, 2-ply, 60″ wide (B.I.20)	per roll	202/6
" Cabots " Quilt :—(Ex Works) Twelve roll lots delivered carr. free.		
Double ply .. per roll 42/–	per half roll	23/6
All rolls 28 yards long by 36″ wide. Special terms for quantities.		

Cut steel clasp nails, 1″	per cwt. 29/9	4″	per cwt.	20/9
„ „ floor brads, 2″	„ 20/–	3″	per cwt.	19/6
Bright oval wire nails 1″	„ 29/3	4″	per cwt.	21/3
Galvanized wire staples with slice cut points	1″ × 12 gauge		per cwt.	31/–
Scotch glue			per cwt.	65/–

Floor Clips :—

		£ s. d.
One leg floor clip	per 1,000	7 10 0
2″ short leg floor clip	per 1,000	7 10 0
2″ Regular floor clip	per 1,000	7 15 0
3″ „	per 1,000	8 8 0
2″ Regular ceiling clip	per 1,000	7 15 0
Single leg ceiling clip (7½″)	per 1,000	10 10 0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

		£ s. d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths	per ton	12 10 0
Extras on above for :—		
9″ × 7″ Section	per ton	0 5 0
4″ × 3″, 5″ × 2½″, 10″ × 8″, 12″ × 8″, 14″ × 8″ and 16″ × 8″ to 20″ × 7½″ sections inclusive	per ton	0 10 0
3″ × 1½″, 3″ × 3″, 4″ × 1½″, 4½″ × 1½″ and 24″ × 7½″ sections	per ton	1 0 0
Channels, angles and tees	per ton	13 10 0
Mild steel plates	per ton	13 10 0
Screw bolts	per ton	31 0 0

STEEL AND IRONWORKER—(*continued*)

Fabricated Steelwork

	£ s. d.
Joists cut and fitted .. .. .. per ton	16 10 0
Stanchions, ordinary sections with riveted caps and bases .. .. per ton	20 0 0
Stanchions, compound .. .. .. per ton	23 0 0
Plate girders .. .. per ton	24 10 0
Framed roof trusses, 25′ 0″ span .. .. per ton	25 0 0
„ „ „ 60′ 0″ span .. .. per ton	23 0 0

These prices are *ex mills*. For material *ex stock*, definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets
(Ex London Stocks)

	10 cwt. lots £ s. d.	Less quantity £ s. d.
4 to 9 fts. 18 or 20 gauge, 8/3″ corrugations .. .. .. per ton	18 15 0	19 15 0
10 fts. 18 or 20 gauge, 8/3″ corrugations	19 5 0	20 5 0
4 to 9 fts. 22 or 24 gauge, 8/3″ corrugations .. .. .. per ton	19 5 0	20 5 0
10 fts. 22 or 24 gauge, 8/3″ corrugations	19 15 0	20 15 0
4 to 8 fts. 26 gauge, 8/3″ corrugations ..	20 10 0	21 10 0
9 fts. 26 gauge, 8/3″ corrugations ..	21 0 0	22 0 0
10 fts. 26 gauge, 8/3″ corrugations ..	21 10 0	22 10 0
Galvanized roofing nails 2½″ .. .. .. per cwt.		37/6
Galvanized roofing washers .. .. .. „ „		45/–

PLASTERER

Plaster and Cement

	1-ton loads	5-ton loads	
Sirapite (coarse) .. .. per ton	70/–	64/–	
„ (fine) .. .. per ton	78/–	—	
Victorite No. 1 .. .. per ton	85/–	78/6	6-ton loads
„ No. 2 or non sweat per ton	80/–	73/6	6-ton loads
Thistle (browning, haired and pink finish) .. .. per ton	70/–	64/–	
Thistle (fine) .. .. per ton	78/–	—	
Pink plaster .. .. per ton	66/–	—	
White plaster .. .. per ton	78/–	—	
Keene's pink .. .. per ton	112/6	—	
Keene's white .. .. per ton	117/6	—	
Super Carbo .. .. per ton	—	47/6	4-ton loads
Carbo-setting .. .. per ton	—	57/6	4-ton loads

	1 ton upwards £ s. d.
Cullamix No. 2 cream (rendering mixture) per ton	5 10 0
„ No. 3 cream „ „ per ton	5 10 0
Snowcrete mixture „ „ per ton	5 5 0

Sundries

Sharp washed sand .. .. .. per yard cube		8/–
Cow hair .. .. per cwt.		40/–
Goat's hair .. .. per cwt.		55/–
⅜″ laths .. .. per bundle		2/–
½″ laths .. .. per bundle		2/4½
Expanded metal lathing, 9′ 0″ × 2′ 0″ ⅜″ mesh × 26 gauge .. .. per yard super		–/11
Lath nails (galvanized) 1½″ × 14 gauge ..	per cwt.	48/6
„ (bright wire) „ „ ..	per cwt.	27/–

	Less than 150 yds.	Less than 300 yds.	Over 300 yds.
⅜″ Plaster board per yard super	1/–	–/11	–/10
1½″ Galvanized nails .. .. per lb.	–/5		
Scrim cloth in 100-yard rolls .. .. .. per roll	2/3		

Wall Tiles

Commercial quality.	
Ivory, white, etc., glazed 6″ × 6″ × ⅜″ .. per yard super	9/9
Angle beads (1½″ wide) .. .. .. per yard run	1/2¾
„ „ (1″ „) .. .. .. per yard run	–/10
Rounded edge tiles .. .. .. per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″ .. .. per yard super	14/3
Angle beads (1½″ wide) .. .. .. per yard run	1/4¾
„ „ (1″ „) .. .. .. per yard run	–/11¼
Rounded edge tiles .. .. .. per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″ .. per yard super	15/–
Angle beads (1½″ wide) .. .. .. per yard run	1/7¼
„ „ (1″ „) .. .. .. per yard run	1/0¾
Rounded edge tiles .. .. per yard run	2/8½

PLUMBER

Lead

3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards ..	per cwt.	23/–
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/–
Allowance for old lead delivered to merchant	per cwt.	12/9

PLUMBER—(*continued*)

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are nett, and the prices of the fittings are subject to 33⅓ per cent. trade discount.

Rainwater Pipes

	2″	2½″	3″	3½″	4″	4½″	5″	6″
Round pipes per yard	1/9	1/10	2/3	2/8	3/1	4/1	4/9	6/1
Shorts, 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/3	–/3	–/3	–/3	–/3	–/4	–/4	–/4
Bends .. .. each	1/9	2/–	2/6	3/–	3/7	5/–	6/6	8/5
Offsets, 4½″ and 6″ projection .. each	2/2	2/8	3/–	3/5	4/4	6/3	7/6	9/10
Offsets, 9″ projection each	2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single each	2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes .. .. each	1/6	1/9	2/–	2/8	3/–	4/4	5/5	7/6

Square and rectangular pipes.

3″ × 3″ .. .. per yard	5/2
3½″ × 2½″ .. .. per yard	5/4
4″ × 2½″ .. .. per yard	5/7
4″ × 3″ .. .. per yard	5/7
4″ × 4″ .. .. per yard	6/11
4½″ × 3″ .. .. per yard	6/5
5″ × 3″ or 3½″ .. .. per yard	7/4

Gutters

	3″	3½″	4″	4½″	5″	6″
Half round gutters per yard	1/2	1/3	1/3	1/4	1/7	2/8
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra .. per yard	–/2	–/2	–/2	–/2	–/3	–/3
Angles and nozzle pieces each	1/5	1/7	1/9	2/–	2/2	3/1
Stop ends .. .. each	–/5	–/5	–/7½	–/9	–/10½	1/–
Ogee gutters per yard	1/6	1/8	1/8	1/9	2/2	2/11
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra .. per yard	–/2	–/2	–/2	–/2	–/3	–/3
Angles and nozzle pieces each	1/11	1/11	2/–	2/4	2/8	3/3
Stop ends .. .. each	–/6	–/7½	–/9	–/10½	1/–	1/3

Mild Steel Rainwater Goods

The following prices are subject to 12½ per cent. trade discount 24 Gauge rainwater slip jointed pipes.

	2″	2½″	3″	3½″	4″
Galvanized round pipes with ears per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/4½	2/9	3/1½	3/7½	4/–
Painted or galvanized short lengths with ears, extra each	–/6	–/6	–/6	–/6	–/6

18 Gauge gutters.

	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters .. per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra .. each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½ per cent. trade discount.

Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.

2″ .. .. per yard run	1/10
2½″ .. .. per yard run	2/0¾
3″ .. .. per yard run	2/5¾
3½″ .. .. per yard run	2/11¼
4″ .. .. per yard run	3/4¾
4½″ .. .. per yard run	4/10¼
5″ .. .. per yard run	5/9¼
6″ .. .. per yard run	7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

	3″	4″	4½″	5″	6″	8″
Half round gutters per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters per yard run	—	1/11	2/0¾	2/5¾	3/0½	3/11¼

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards ..	per cwt.	22/6
Lead soil pipe	per cwt.	25/6
Add if ribbon marked	per cwt.	–/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	7/–
Plumber's solder	per cwt.	102/–
Tinman's solder	per cwt.	130/–

Drawn lead traps with brass screw eye, 6 lbs.

		1″	1¼″	1½″	2″
S. trap	each	1/7	1/10	2/3	3/3
P. trap	each	1/5	1/6	1/10	2/8
Extra for 3″ deep seal	each	–/6	–/6	–/6	–/6

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.

		½″	¾″	1″	1¼″	1½″	2″
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9¼	1/1	1/4½	1/10
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.							
Elbows, square ..	each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round ..	each	1/2	1/5	1/8	2/4	2/10	4/8
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain ..	each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
Gas	62½%	53⅜%	57½%
Water	58⅜%	50%	52½%
Steam	56¼%	46¼%	47½%
Galvanized gas	53⅜%	46¼%	47½%
,, water	48⅜%	42½%	42½%
,, steam ..	43¾%	38¾%	37½%

Brasswork. Best Quality

		½″	¾″	1″
Brass screw-down bibcocks, with crutch top, screwed for iron ..	per dozen	33/–	51/–	90/–
Ditto, with screw ferrule ..	per dozen	38/–	57/–	99/–
Chromium plated easy clean screw-down bibcocks, with capstan head lettered, screwed for iron ..	per dozen	54/–	78/–	153/–
Ditto, with screw ferrule ..	per dozen	61/–	88/–	166/–

		Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male Screwed End and Iron Unions
½″	per dozen	44/–	33/–	41/–
¾″	per dozen	65/–	51/–	50/–
1″	per dozen	99/–	83/–	93/–
1¼″	each	13/6	11/9	12/9
1½″	each	21/9	18/6	20/3
2″	each	41/3	38/3	39/–

		½″	¾″	1″
Portsmouth pattern ball valve for low pressure, screwed for iron ..	each	4/1	5/11	12/–
Ditto, with flynut and union ..	each	4/9	6/9	13/6
High pressure ditto, screwed for iron	each	4/1	5/11	12/–
Ditto, with flynut and union ..	each	4/9	6/9	13/6

		2″	2½″	3″	4″
Socket thimble sloping shoulder	per dozen	10/–	13/–	16/–	22/–

		1½″	2″	2½″	3″
Flanged ferrule thimble ..	per dozen	8/–	10/–	14/–	17/5

		½″	¾″	1″	1¼″	1½″	2″
Union joints for lead and iron ..	per dozen	8/3	11/3	15/5	28/2	46/9	101/2
Single nut short boiler screws ..	per dozen	6/–	9/–	15/–	21/–	33/–	60/–
Double nut boiler screws	per dozen	9/–	10/–	16/–	23/–	44/–	69/–
Belfast sink wastes stamped brass with brass plug diameter of outlet 2″	per dozen	19/10					

INTERNAL PLUMBER—(*continued*)

Galvanized Mild Steel Open Top Cisterns riveted with internal angle iron at top and corner plates

The following prices are subject to 15% and 20% trade discount :—

	14-gauge	12-gauge	⅛″ plate	3/16″ plate
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
50 gallon capacity each	2 5 11	2 14 5	3 1 7	7 0 8
100 ,, each	3 8 9	4 2 11	4 16 9	9 10 8
200 ,, each	6 6 9	6 19 5	7 18 3	13 1 0
500 ,, each	12 6 0	13 16 1	15 16 3	22 6 9
1,000 ,, each	—	21 9 4	24 19 5	34 15 4

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to a pressure of 1 lb. per sq. inch = 1⅓ ft. head of water	14-gauge tested to a pressure of 3 lbs. per sq. inch = 4½ ft. head of water	12-gauge tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water	⅛″ plate tested to a pressure of 10 lbs. per sq. inch = 15 ft. head of water
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
20 gallons	each	2 0 3	2 3 11	2 7 8	2 12 9
40 ,,	each		3 1 7	3 9 0	3 16 8
			Tested to a pressure of 5 lbs. per sq. inch = 7½ ft. head of water		Tested to a pressure of 7½ lbs per sq. inch = 10 ft. head of water
			£ s. d.		£ s. d.
60 ,,	each		4 19 3		5 5 5
80 ,,	each				7 5 7
100 ,,	each				8 4 5

Screwed flanges or bosses

½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	
1/8	2/–	2/4	2/11	3/4	3/9	4/8	6/9	Extra per flange or boss.

2½″	3″	3½″	4″	4½″	5″	6″
8/4	14/3	16/9	19/3	26/11	30/1	45/1

Galvanized Hot Water Cylinders, Mild Steel Riveted throughout, without Manhole, with usual number of flanges

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to 5 lbs. pressure = 10 ft. head of water	14-gauge tested to 15 lbs. pressure = 30 ft. head of water	12-gauge tested to 20 lbs. pressure = 40 ft. head of water	¼″ plate tested to 25 lbs. pressure = 50 ft. head of water
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
20 gallons	each	1 18 7	2 2 8	2 8 4	2 15 4
40 ,,	each	2 10 11	2 16 8	3 6 1	3 15 0
65 ,,	each		4 8 7	5 1 8	5 16 1
75 ,,	each		5 1 7	5 15 0	6 11 4
85 ,,	each			6 10 8	7 11 9
100 ,,	each				8 2 5

Cast Iron Soil Pipes and Connections, L.C.C. 3/16″ metal.

The following prices for soil pipes are nett and the prices of the fittings are subject to 33⅓% trade discount.

		2″	2½″	3″	3½″	4″	5″ ½″ metal	6″ ½″ metal
Pipes coated or uncoated	per yard run	2/8	2/11	3/3	3/4	3/9	8/11	10/9
Double sockets extra	each	–/8	–/8	–/8	–/8	–/8	–/9	–/9
Short lengths extra 2′, 3′ and 4′	per yard run	–/3	–/3	–/3	–/3	–/3	–/4	–/4
Single spigot branch cast on pipe	each	4/3	4/5	4/7	4/9	4/11	7/6	9/8
Single socket branch cast on pipe	each	10/9	11/–	11/3	11/6	11/9	16/–	19/–
Bends, standard angles	each	3/1	3/5	3/9	4/8	5/3	9/4	12/9
Large radius bends	each	4/–	4/4	5/–	6/–	7/–	13/–	16/9
Inspection bends raised flange door, 4 gunmetal bolts	each	16/1	16/11	17/9	18/8	19/3	31/10	36/6
Swannecks 4½″ and 6″ projection	each	3/9	4/4	5/11	6/10	7/11	14/11	20/1
9″ ditto	each	5/–	5/7	6/10	7/11	9/4	17/1	22/10
12″ ditto	each	5/11	6/10	7/11	9/8	10/7	19/1	27/1
Single branch with two sockets. T pieces. T pieces diminishing two sockets, inverted two sockets.	each	3/9	4/8	5/7	6/6	7/6	15/10	21/8

INTERNAL PLUMBER—(*continued*)

Cast Iron Soil Pipes and Connections, L.C.C. $\frac{3}{16}$″ *metal—(continued)*

	2″	2½″	3″	3½″	4″	5″	6″
Parallel branch pieces not exceeding 6″ centres. Y pieces. Anti-syphon branches with curved arm.	4/10	5/11	6/10	7/11	8/11	¼″ metal —	¼″ metal —
				each			
Double branch pieces, three sockets .. .. each	5/11	7/–	7/11	9/–	10/3	20/3	27/3
Inspection branch pieces double oval access door, 2 gunmetal screws each	12/11	14/–	14/11	16/6	17/9	29/2	36/2
Long branch pieces each	5/–	6/–	7/3	8/6	9/9	19/–	25/–

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge..	per lb.	–/9½
Light gauge copper tube, solid drawn	per lb.	–/11¾
Copper tube, solid drawn screwing sizes.. ..	per lb.	–/11¼
Copper wire, 10 and 12 gauge	per lb.	–/10½
Copper nails, 1″ and up	per lb.	–/11

Fittings for Copper Tubes

Compression Type	½″	¾″	1″	1¼″	1½″	2″	2½″
Straight coupling each	1/1½	1/4½	2/–	2/7	3/8½	5/5½	13/7
Obtuse elbow each	1/9½	2/1½	3/2	4/–	7/10	10/1½	—
Tees .. each	2/0½	2/4½	3/10½	5/7½	8/11	12/8	18/7½
Crosses .. each	2/11	3/3½	5/0½	6/1½	10/6½	14/8	26/6
Reducing coupling each	—	1/4½	2/–	2/7	3/8½	5/5½	13/7
Bends .. each	1/6½	1/10½	2/10	3/7½	6/4½	9/6½	13/7
Brass stop cocks each	3/8½	5/6	8/–	14/10	20/3	34/10½	—

Extra for Polishing 25%; Chromium plating 50%; Nickel plating and polishing 50%.

Capillary Type

Straight coupling each	–/8	–/11½	1/5½	1/11	2/7	3/9	6/4¾
45° elbow .. each	1/5½	1/11	2/7½	3/6¼	5/3¼	7/11	11/5½
Tees .. each	1/7½	1/10	3/–	4/5	6/3	9/3	14/1
Crosses .. each	2/0½	2/3¼	3/9	5/3½	8/–	11/8	20/4
Reducing coupling each	—	–/7	–/9½	1/2	1/9	3/1	4/10
Bends .. each	1/9	2/1½	3/1	4/2	6/7¼	9/3	13/2
Pillar tap connection .. each	1/1½	1/7½					

Extra for Polishing 15%; Chromium plating 40%; Nickel plating 27½%.

Zinc

	Quantities of less than 3 cwts.	Quantities of more than 3 cwts.	Quantities of more than 5 cwts.
Sheet zinc, 10 gauge and up .. per cwt.	33/6	33/–	32/6
		5 sheets and under	12 sheets
8 gauge zinc safe hole perforated sheets, size 8′ 0″ × 3′ 0″ .. per sheet		4/11½	4/2½
7 gauge ditto .. .. per sheet		4/4½	3/9
6 gauge ditto .. .. per sheet		3/11	3/4¾

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

		In squares not exceeding 2 ft.	4 ft.	5 ft.	Over 6 ft.
18 oz. clear sheet ..	per foot super	–/2¼	–/2¾	–/3	–/3½
24 oz. ditto	per foot super	–/2¾	–/3½	–/4	–/4¾
32 oz. ditto	per foot super	–/4	–/5⅞	–/6⅞	–/7⅞
Obscured sheet glass net extra	.. ..	–/1½	–/1½	–/1½	–/1½
⅛″ figured rolled glass, white	per foot super	–/6½			
⅛″ ditto, normal tints ..	per foot super	–/9½			
Hammered, double rolled, Cathedral white	per foot super	–/6			
Ditto, normal tints ..	per foot super	–/8½			

Thick Drawn Sheet Glass cut to size

		In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.	6 ft.	8 ft.
1/16″ thick ..	per foot super	–/9	–/11	1/–	1/2	1/3	1/5½
⅛″ thick ..	per foot super	–/11	1/–	1/3	1/5	1/7	1/9½

	In squares not exceeding 12 ft.	20 ft.	45 ft.	65 ft.	90 ft.	100 ft.
1/16″ thick per foot super	1/5½	1/8	1/8	—	—	—
⅛″ thick per foot super	1/9½	2/3	2/3	2/6½	2/10½	2/10½

For selected glazing quality add 10 per cent. to the above prices.

GLAZIER—(*continued*)

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
1 ft. super ..	per foot super	1/1	1/4	1/7
2 ,, ..	per foot super	1/5	1/7	1/10
3 ,, .	per foot super	1/10	2/1	2/6
4 ,, ..	per foot super	2/6	2/9	3/2
6 ,, ..	per foot super	2/9	2/10	3/3
12 ,, ..	per foot super	2/11	3/2	3/8
45 ,, ..	per foot super	3/1	3/10	4/2
65 ,, .	per foot super	3/4	4/3	4/11
90	per foot super	3/7	4/8	5/1
100 ,, ..	per foot super	3/9	4/10	5/4

Plates exceeding 100 ft. super or 160 in. long or 104 in. wide at higher prices.

The usual thickness of polished plate glass is about ¼″, but if required of special thickness for glazing purposes add to the above for :—

		Plates up to and including 4 ft. super	All plates over 4 ft. super
⅛″ to 3/16″ ..	per foot super	–/2	–/4
⅛″ to 3/16″ exact	per foot super	–/2	–/3
3/16″	per foot super	No extra	–/1½
¼″ bare ..	per foot super	,,	–/1½
¼″ exact ..	per foot super	–/2	–/2
5/16″ to ⅜″ ..	per foot super	No extra	–/4½
⅜″ exact ..	per foot super	–/2	–/6

Special quotations should be obtained for other qualities and thicker substances.

Silvering

	Ordinary Quality on Polished Plate, Thick Drawn Sheet, Patent Sheet and Plain Sheet	On Embossed or Decorative Work
12 ft. super or 90 in. long per ft. super	9d.	1/4
20 ft. ,, or 100 in. long per ft. super	10d.	1/4
45 ft. super } or 110 in. long per ft. super {	1/–	1/5
50 ft. ,, } or 110 in. long per ft. super {	1/0½	1/6
55 ft. ,, } or 120 in. long per ft. super {	1/1	1/6½
60 ft. ,, } or 120 in. long per ft. super {	1/1½	1/7
65 ft. ,, } or 130 in. long per ft. super {	1/2	1/8
70 ft. ,, } or 130 in. long per ft. super {	1/3	1/9½
75 ft. ,, } or 140 in. long per ft. super {	1/4	1/11
80 ft. ,, } or 140 in. long per ft. super {	1/5	2/0½
85 ft. ,, } or 150 in. long per ft. super {	1/8	2/5
90 ft. ,, } or 150 in. long per ft. super {	1/11	2/9½
95 ft. ,, } or 160 in. long per ft. super {	2/2	3/2
100 ft. ,, } or 160 in. long per ft. super {	2/5	3/8

For silvering on fluted sheet, figured rolled and cathedral, add 4d. a foot to the prices set out in the first column for polished plate, etc.

Silvering bent glass, double or more, according to bend.

For plates over 100 ft. super add 3d. per ft. super for every 5 ft. or part of same.

Plates over 160 in. long at special rates.

Stripping for re-silvering, add 8d. per ft. super.

Wired Glass Cut to Sizes

¼-in. Georgian rough cast .. .. per ft. super 10d.

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
¼-in. Georgian polished plate per ft. super	2/6	2/8	2/10	3/2
	8 ft.	12 ft.	20 ft.	30 ft.
¼-in. Georgian polished plate per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	11/6
Washable distemper	per cwt.	60/–
Petrifying liquid	per gallon	4/6
Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins	per cwt.	66/–
White enamel	per gallon	25/–
Aluminium paint	per gallon	20/–
Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs ..	per cwt.	49/3
Driers	per cwt.	36/–

PAINTER—(*continued*)

Linseed oil raw (5-gallon drums)	per gallon	3/–
„ boiled „ „	per gallon	3/3
French polish	per gallon	11/6
Knotting	per gallon	16/–
Oil stain	per gallon	12/–
Varnish, oak	per gallon	10/–
„ copal	per gallon	16/–
Varnish, flat	per gallon	20/–
Turpentine, genuine American, 5-gallon lots	per gallon	3/3
Creosote, 1-gallon lots..	per gallon	1/4
Putty	per cwt.	18/–
Size	per firkin	3/6
Best English quality gold leaf, 23 carat ..	per book	2/4½
Extra thick, ditto	per book	3/6

BASIC PRICES FOR MEASURED WORK

The prices given below are for work executed complete and are for an average job in the London Area; all prices include overhead charges and profit for the General Contractor.

The prices given in italics are for "Materials Only" and represent the cost of the materials included in the Measured Rates. They are based on the prices given in "Basic Market Prices of Materials" with the addition of 10 per cent. for overhead charges and profit.

The cost of labour included in the Measured Rates (including its proportion of overhead charges and profit) can be ascertained by subtracting the prices in italics from the prices in heavier type.

PRELIMINARIES

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

EXCAVATOR

		Ordinary Ground	Clay
Surface digging average 9″ deep and wheeling and depositing on spoil heap, not exceeding two runs	per yard super	–/9	1/1
Excavating not exceeding 5′ 0″ deep to form basement and getting out	per yard cube	1/11	2/10½
Ditto, exceeding 5′ 0″ deep and not exceeding 10′ 0″ deep	per yard cube	2/5	3/6
Excavating not exceeding 5′ 0″ deep to form surface trenches and getting out	per yard cube	2/7	3/10
Ditto, exceeding 5′ 0″ deep and not exceeding 10′ 0″ deep	per yard cube	3/7	5/0
Ditto, not exceeding 5′ 0″ deep to form basement trench excavation commencing 10′ 0″ deep, and getting out	per yard cube	3/4½	4/6
Returning, filling in and ramming around foundations	per yard cube	1/1	1/5
Filling barrows and wheeling and depositing excavated soil not exceeding two runs	per yard cube	1/1	1/5
Spreading and levelling from excavated heaps in layers not exceeding 12″	per yard cube	–/9	1/–
Filling into carts or lorries and carting away	per yard cube	4/6	4/10
Planking and strutting to sides of basement, excavation, including strutting	per foot super	1/–	–/9
Planking and strutting to surface trenches (both sides measured)	per foot super	–/4½	–/3
Hardcore, broken brick, filled in under floors and well rammed and consolidated	per yard cube	6/6	*4/6*
Hardcore, broken brick, deposited, spread and levelled, and rammed to a true surface 6″ thick	per yard super	1/4	*–/9*

CONCRETOR

Foundations and Mass Concrete

Portland cement concrete 1 : 6 with unscreened ballast, in foundations and masses exceeding 12″ thick	per yard cube	20/2	*16/8*
Ditto, 1 : 3 : 6, with one part of cement and three parts of sand and six parts of clean gravel	per yard cube	20/9	*17/3*
Ditto, 1 : 2 : 4 with one part of cement, two parts of sand and four parts of ¾″ crushed graded shingle	per yard cube	25/7	*22/1*
Add if mixed by hand labour ..	per yard cube	2/–	
Add if in foundations not exceeding 12″ thick	per yard cube	2/3	
Add for mechanical hoisting ..	per yard cube	1/6	
Add for hand hoisting per 10 feet	per yard cube	2/3	

CONCRETOR—(*continued*)

Surface Beds

Portland cement concrete 1 : 6, bed 6″ thick, spread and levelled	per yard super	3/10	*2/9½*
Add or deduct for each inch over or under 6″ in thickness	per yard super	–/5½	
Add for surface finished with spade face	per yard super	–/3½	
Add if laid in two layers with fabric reinforcement (measured separately) ..	per yard super	–/3½	

Upper Floors and Flats

Portland cement concrete 1 : 2 : 4 as before described, 6″ thick, packed around fabric reinforcement (measured separately) finished with spade face	per yard super	5/3	*3/8¼*
Add or deduct for each inch over or under 6″ in thickness	per yard super	–/7½	

Casings

Portland cement concrete 1 : 2 : 4 as before, in encasing to steel joists	per foot cube	1/3	*–/9¾*
Ditto, packed around rods (measured separately) in lintols, sectional area not exceeding 36 inches	per foot cube	1/5½	*–/9¾*
Ditto, ditto, over 36 inches and not exceeding 72 inches sectional area	per foot cube	1/4½	*–/9¾*
Ditto, ditto, over 72 inches and not exceeding 144 inches sectional area	per foot cube	1/3½	*–/9¾*
Ditto, ditto, over 144 inches sectional area	per foot cube	1/2½	*–/9¾*

Walls in Situ

Portland cement concrete 1 : 6 with unscreened ballast in 9″ walls packed around rods (m/s)	per yard super	6/6	*4/2*
Ditto, in 12″ walls ditto	per yard super	7/11	*5/6½*

Reinforcement

⅛″ diameter and upwards mild steel rod reinforcement, cut to lengths, including bends and hooked ends and embedding in concrete lintols	per cwt.	20/9	*14/9*
Under ⅛″ diameter, ditto	per cwt.	22/3	*16/3*

Formwork

Close boarded formwork to soffites of floors and strutting up	per yard super	3/9	*1/6*
Vertical formwork to sides of concrete walls, including struts, etc. (both sides measured)	per yard super	3/–	*1/3*
Formwork to sides and soffites of concrete lintols and beams	per foot super	–/6	–/2½
Wrot ditto	per foot super	–/7	–/2½

BRICKLAYER

		Flettons £ s. d.	Second Stocks £ s. d.	Blue Staffordshire Wirecuts £ s. d.
Reduced brickwork in lime mortar 1 : 3 with ⅛″ joints..	per rod	22 19 9	31 18 8	
		13 19 6	*22 18 5*	
Ditto, ⅛″ joints ..	per rod	22 12 7	30 17 2	
		13 18 8	*22 6 10*	
Reduced brickwork in cement mortar 1 : 3 with ⅛″ joints	per rod	24 14 9	33 13 2	50 13 2
		14 16 0	*23 14 8*	*37 3 9*
Ditto with ⅜″ joints	per rod	24 13 3	32 16 11	49 4 9
		15 1 4	*23 8 10*	*36 5 2*
Add if lime mortar hand mixed	per rod	5/8	5/8	
Ditto cement mortar ..	per rod	12/9	12/9	9/–
Half brick walls in lime mortar 1 : 3 ¼″ joints	per yard super	5/1	7/–	
		3/–	*5/–*	
Ditto in cement mortar 1 : 3	per yard super	5/5½	7/5	11/1
		3/2	*5/1½*	*8/2*
Labour forming 2″ cavity to hollow walls including wall ties, etc.	per yard super		–/9	

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

BRICKLAYER—(*continued*)

Extra for internal fairface and flush jointing	per yard super	1/1½	
Extra for grooved bricks as key for plaster	per yard super	–/3	
Hacking concrete ditto	per yard super	–/6	
Horizontal double slate damp-proof course 4½″ wide bedded in cement mortar	per foot run	–/4	–/1⅞
Ditto exceeding 4½″ in width	per foot super	–/10	–/5
Vertical ditto	per foot super	1/–	–/5
"Ledkore" (Grade B) D.P.C.	per foot super	–/9	–/7
Plumbing angles	per foot run	–/1	
Rake out joints and point to lead flashings	per foot run	–/2	
Ditto stepped	per foot run	–/3	
Bedding door frames	per foot run	–/1	
Ditto and pointing one side	per foot run	–/2	
Ditto and pointing both sides	per foot run	–/3	
Parge and core flues	each	4/–	
Set and flaunch only chimney pots	each	5/–	
Hoisting and fixing metal windows size 3′ 6″ × 4′ including cutting and pinning lugs to brickwork and bedding frames in cement mortar and pointing in mastic on one side	each	5/–	
Ditto, including screwing to wood frame (measured separately)	each	3/–	

		9″×3″	9″×6″
Form opening for air brick including slate lintol and render around in cement and sand to 13½″ wall and build in Terra Cotta air brick	each	1/6 –/10½	2/6 1/7
Galvanized cast iron School Board pattern air bricks and building in	each	1/1½ –/6	1/10½ 1/–
Fixing only fireplace simple interior and surround	each	27/6	

Partitions

		2″	2½″	3″	4″
Breeze set in cement mortar	per yard super	2/11	3/5	4/1½	5/1½
		1/8	1/11	2/2	2/11
Clay tile ditto	per yard super	4/5	4/11	5/8	6/4½
		2/9	3/1	3/5	3/11
Pumice ditto	per yard super	4/6	5/2½	6/3	7/2
		3/3	3/10	4/4	5/–
Plaster ditto	per yard super	4/–	4/11	6/–	7/2
		2/9	3/5	4/–	5/–
White glazed both sides best quality bricks, set in cement mortar and pointed in Parian cement	per yard super		42/5	33/–	

Facings

Prices are extra over Fletton brickwork and are for raking out joints and pointing with a neat struck weathered ¼″ joint in cement mortar. For raking joints and pointing in white cement add an extra 11d. per yard super to the following prices.

		Flemish Bond	English Bond	Stretcher Bond
Stock facings p.c. 95/3	per yard super	4/11	5/4	4/1
		3/2	3/6½	2/4
Rustic Flettons p.c. 70/6	per yard super	3/4	3/6	2/11
		1/6	1/8	1/3
Blue pressed p.c. 185/–	per yard super	11/7	12/11	9/1
		8/6	9/7½	6/6
Sand faced hand made reds p.c. 120/–	per yard super	8/–	8/7	6/4
		5/2½	5/10	3/11
White glazed headers p.c. 470/– and stretchers 480/–	per yard super	32/–	36/–	24/8
		28/2½	32/2	21/4
For a variation of 10/– per M. in p.c. of facing bricks size 8¾″×2⅝″ on face with ¼″ joints add or deduct	per yard super	–/9	–/10	–/6¼

		Rustic Flettons	Stock Facings	Sand Faced Hand Made Reds
Half brick wall stretcher bond in cement mortar built fair and joints raked out and pointed in cement mortar on one side	per yard super	8/7½	9/9½	12/–
		4/4¼	5/6¼	7/1½
Ditto and pointed both sides	per yd. super	10/6	11/8	13/10
		4/5	5/6¾	7/1¾
One brick wall in cement mortar built fair and joints raked out and pointed in cement mortar on one side	per yard super	15/5	17/8½	22/1
		8/9½	11/1	14/3
Ditto and pointed both sides	per yd. super	17/3	19/6½	23/10
		8/10	11/1½	14/3½
Half brick wall built in best quality white glazed one side bricks, stretcher bond, in cement mortar built fair and pointed in Parian cement	per yard super		31/–	24/2
Ditto white glazed both sides and pointed both sides	per yard super		41/9	32/7

BRICKLAYER—(*continued*)

Facings—(continued)

Labour and material in hand made sand faced red brick on end window head and pointing to face and 4½″ soffite	per foot run	1/3	–/7
Hand made, sand faced brick on edge coping including double course of tile creasing with two cement angle fillets to one brick wall	per foot run	2/3	1/3

DRAINLAYER

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

	Ordinary ground	Clay
Prices per 12″ average depth per foot run :		
Trenches not exceeding 3′ 0″ deep	–/2½	–/3
Ditto, exceeding 3′ 0″ and not exceeding 5′ 0″	–/5½	–/7
Ditto, exceeding 5′ 0″ and not exceeding 10′ 0″	–/8½	–/9½

		4″ pipes	6″ pipes
6″ thick Portland cement concrete bed 6 : 1, 12″ wider than diameter of pipe, and flaunched halfway up sides of pipe	per foot run	–/8½	–/10
		–/6	–/7½
6″ ditto, and completely encasing	per foot run	1/7	1/11
		1/2	1/4¾

		2″	3″	4″	6″
Agricultural land drain pipes, laid complete with butted joints, exclusive of digging	per yard run	–/4	–/6	–/8	1/1
		–/2¾	–/3¾	–/4¾	–/8½

British Standard Quality Salt Glazed Socketed Stoneware Drainpipes and Fittings

		4″ pipes Over 2-ton lots	4″ pipes Under 2 tons, 100 pieces upwards	6″ pipes Over 2-ton lots	6″ pipes Under 2 tons, 100 pieces upwards	9″ pipes Over 2-ton lots	9″ pipes Under 2 tons, 100 pieces upwards
Pipes jointed in 1:1 cement and sand	per foot run	1/1	1/3	1/7	1/10	2/8½	3/4
		–/8¾	–/10¾	1/1¼	1/4½	2/–	2/5½
Extra for bends	each	1/4	1/7	2/–	2/4	3/6	4/–
		–/11¾	1/2¼	1/5½	1/9½	2/7½	3/2½
Ditto, single junction	each	1/10	2/2	2/9	3/3	4/9	5/8
		1/5½	1/9½	2/2½	2/8½	3/11½	4/8
Trapped yard gulleys with galvanized iron gratings, and setting in concrete and jointing to drain	each	10/–	11/5	12/4	14/–	19/–	22/–
		8/3	9/8	9/11	11/7	15/11	18/11
Ditto, with horizontal back inlet	each	11/5	13/–	13/9	15/7	20/5	23/7
		9/8	11/3	11/4	13/2	17/4	20/6
Ditto, with vertical back inlet	each	12/–	13/9	14/4	16/4	21/–	24/4
		10/3	12/–	11/11	13/11	17/11	21/3
Intercepting trap with Stanford stopper and setting in manhole and making good	each	20/5	23/10	25/4	29/8	—	—
		16/11	20/4	21/6	25/10	—	—

Coated Cast Iron Socketed Drain Pipes

		4″	6″	9″
Pipes in 9′ 0″ lengths and laying in trench, including caulked lead joints	per foot run	3/4½	5/1	8/11
		2/4½	3/8	6/7
Cutting and waste	each	1/9	3/6	—
Extra for bends, including extra joints and cutting and waste on pipe	each	10/8	20/7	56/6
		7/7	17/4	51/1
Ditto, junction ditto	each	17/2	32/5	95/4
		11/7	25/7	79/11
Intercepting trap	each	48/–	77/9	166/2
		41/4	53/–	136/6
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet		38/9	81/10	—
		21/7	51/10	—
H.M.O.W. gulley trap with 9″ inlet with high invert outlet for use with raising pieces		33/5	48/–	—
		22/–	22/9	—
4″ inspection chamber with one 4″ branch	each	64/5		41/11
4″ ditto with two 4″ branches one side	each	98/1		64/5
6″ ditto with one 4″ branch	each	93/–		59/9
6″ ditto with two 6″ branches one side	each	137/9		89/1
9″ ditto with one 9″ branch	each	209/1		141/6
9″ ditto with two 9″ branches one side	each	313/10		210/11

DRAINLAYER—(*continued*)

	White glazed	Salt glazed
4″ half-round straight main channel 24″ long each	4/10 *4/1½*	2/1 *1/4½*
Ditto, channel bends (ordinary) .. .. each	8/1 *7/5*	3/– *2/0½*
4″ Three-quarter round branch bends (short) each	8/6 *7/2*	6/9 *5/6*
Fixing only, manhole covers and frames, including bedding in grease and setting in cement mortar .. .. each	4/–	

ASPHALTER

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

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

PAVIOR

	1″	1½″	2″
Granolithic paving .. per yard super	2/7½ *1/5½*	3/6 *2/2*	4/7 *2/10½*
Add for dusting with carborundum powder per yard super			–/9
Cement and sand paving (1 : 3) per yard super	1/10 *–/9*	2/4½ *1/1½*	— —
½″ Jointless flooring, red, buff or brown, finished to a smooth trowelled surface, on concrete sub floors per yard super			5/3
¾″ Ditto, in two coats on spade faced concrete or wood sub floors			6/7
½″ thick ditto, reinforced with laths and galvanized wire netting .. .. .. per yard super			6/0½
Add for polishing .. .. per yard super			–/6½
Terrazzo paving, white chips set in white cement, panelled into squares with 1¼″ × ¼″ deep ebonite strips, on and including cement and sand screed. Total thickness 1¼″ per yard super			19/5
Ditto, but white chips set in grey Portland cement per yard super			17/4
Terrazzo tiles, white chips set in white cement :—			
Size 9″ × 9″ × ¾″ .. .. .. per yard super			20/6
Size 12″ × 12″ × 1″ .. .. per yard super			18/8
Ditto, but white chips set in grey Portland cement :—			
Size 9″ × 9″ × ¾″ .. .. .. per yard super			18/11
Size 12″ × 12″ × 1″ .. .. per yard super			17/1

	⅛″	3/16″	¼″
Sheet rubber .. .. per yard super	11/7	14/8	17/10
Rubber tiles .. .. per yard super	13/8	16/10	19/11

	9/16″	⅜″	½″
Cork tiles, polished .. per yard super	12/10½	11/–	10/–
Hard red paving bricks laid flat (9″×4½″×2⅜″) per yard super	9/–		*6/3*
Ditto, laid on edge .. .. per yard super	11/9		*9/–*

	⅝″ thick	1″ thick
6″×6″ best quality red quarry tiles per yard super	9/8 *5/8*	11/2 *6/10*
6″×6″ best quality buff quarry tiles per yard super	10/5 *6/3*	11/9 *7/5*
2″ Yorkshire stone paving, square joints and bedding per yard super	22/–	*17/4½*
2″ Finished path of coarse gravel finished with good binding gravel to slight camber per yard super	1/7½	*–/9¾*
3½″ Do. path of clean hard clinker and 1½″ gravel finished to slight camber .. .. per yard super	2/3	*1/3*

PAVIOR—(*continued*)

7½″ Do. carriage drive of 3″ clinker, 3″ coarse gravel and 1½″ binding gravel finished to slight camber per yard super	3/9	*2/2*
2½″ Do. tar paving in two layers, tar sprayed and blinded with sand .. .. .. per yard super	4/9	*3/3*

MASON

	Bath	*Portland*
Stone and all labours of usual character, covering 7″ on bed, roughly squared at back, fixed and cleaned down complete .. per foot cube	11/– *8/9½*	16/3 *14/–*

Yorkstone

Templates tooled on exposed faces, sawn beds and joints, and set in cement mortar :

	Thickness 3″		4″		6″	
Size 9″×9″ .. each	1/8	*1/4¾*	2/3	*1/10½*	3/4½	*2/9¾*
,, 14″×9″ .. each	2/7½	*2/2½*	3/6	*2/11*	5/3	*4/4½*
,, 18″×14″ .. each	5/3	*4/4½*	7/–	*5/10*	10/6	*8/9*
,, 22½″×14″ .. each	6/6	*5/5½*	8/8	*7/3½*	13/–	*10/11*
,, 27″×14″ .. each	7/10½	*6/6¾*	10/6	*8/9*	15/9	*13/1½*

Artificial Stone

In steps, copings, band courses, etc., per foot cube from	8/5 *7/5*

Reconstructed Stone

In steps, dressings, band courses, etc., per foot cube	13/– *12/–*

	Slate 1″	1¼″	1½″
Slate slabs, sawn to size, not exceeding 10 ft. sup. and planed, with rubbed face and fixing as shelving, etc. per foot super	4/6 *3/4¾*	5/– *3/8*	6/– *4/3¾*
Ditto, not exceeding 20 ft. sup. per foot super	5/4 *4/1½*	5/10 *4/6*	7/– *5/3¾*
Rubbed edges .. per foot run	–/4½	–/4½	–/4½

SLATER, TILER AND ROOFER

	20″ × 10″	16″ × 8″	24″ × 12″
Bangor and Portmadoc Slates			
Slates laid to a 3″ lap and fixed with zinc nails .. per square	79/–	77/–	80/5

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

	No. 1 Gradings 24″/22″ to 12″/10″
Randoms	
Ordinary grey greens .. .. .. per square	91/3
Weathering grey greens (V.M.S.) .. per square	101/9
No. 2 Gradings 24″/22″ to 12″/10″	
Weathering greens (V.M.S.) .. .. per square	107/–

	Bests 24″ to 12″ long proportionate widths
Westmorland Green Slates	
Randoms	
No. 1 Buttermere, fine light green .. per square	122/9
No. 2 Buttermere, light green (coarse grained) per square	120/9
No. 5 Buttermere, olive green (coarse grained) per square	117/6
Broughton Moor light sea green, olive green, silver grey green and mixed shades .. per square	128/–

Tiles	
Hand made sand faced 10½″ × 6½″ laid to 4″ gauge, fourth course nailed with galvanized nails per square	65/–
Machine made ditto .. .. .. per square	56/7
Pantiles	
Berkshire hand made surface red laid dry, per square	65/–
Bridgewater hand made red laid dry per square	65/–
Bridgewater double Roman laid dry per square	48/3
Sundries	
Stripping, slating down to and including, 18″ × 9″ per square	4/6
Ditto smaller sizes .. .. .. per square	6/–
Add for carrying down and stacking per square	1/8
Ditto stripping battens down to and including 18″ × 9″ .. .. per square	1/4½
Ditto, ditto, smaller sizes .. .. per square	2/3
Cedarwood Tiles	
Canadian Cedarwood shingles laid to 5″ gauge per square	47/4 *36/–*
Asbestos	
Russet brown asbestos cement roofing tiles 15¾″×15¾″ laid diagonally with 2¾″ lap, per square	38/– *33/–*

CARPENTER

Centering

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

Fir Sawn and Fixed

Plates, dragon ties, sleeper joists and lintols, ground floor (4″×2″ and 4″×3″)	per foot cube	3/10
Floor joists (7″×2″)	per foot cube	4/2½
Partitions (stud) (4″×2″ and 4″×3″)	per foot cube	5/1
Rafters and ceiling joists (4″×2″ and 4″×3″)	per foot cube	4/10
Purlins (6″×4″)	per foot cube	5/4
Hand labour wrot face	per foot super	–/2
Machine ditto	per foot super	–/1
Rebates, grooves, beads, chamfers and splays	per foot run	–/1
1½″×9″ ridge	per foot run	–/6¾
1½″×11″ hips or valleys, including cutting ends of rafters against same	per foot run	–/8¼
Extra labour trimming 6″×2″ floor joists around fireplace, including notching ends of joists at 14″ centres to trimmer joist 7′ 0″ long and two tusk tenons	each	6/–
Boring small hole per inch of depth	per doz.	–/6
Ditto large	per doz.	1/–

Deal Battening for Slates and Tiles

2″×1″ spaced for Countess (20″×10″) slates to 3″ lap	per square	11/2
2″×1″ ditto for Ladies (16″×8″)	per square	14/9
2″×1″ ditto for Duchess (24″×12″) ditto	per square	9/3
2″×1″ ditto for randoms 24″/22″ to 12″/10″	per square	12/3
1½″×¾″ ditto for plain tiles (10½″×6½″) to a 4″ gauge	per square	14/7
1½″×1″ ditto for pantiles to approximately 11¼″ gauge	per square	6/11

Roof Boarding

	¾″	1″
Deal roof boarding in batten widths close jointed	per square	28/3
		20/–
Ditto, prepared for patent flat roofing and including firrings to falls	per square	38/3
		25/–
Small tilting fillet	per foot run	–/2
Large ditto	per foot run	–/4

Felt

Sarking or slaters felt, fixed with 2″ side laps and 6″ end laps	per yard super	1/1½
Roofing felt ditto	per yard super	1/3½
Bituminous hair felt ditto	per yard super	2/3½

Weather Boarding

Rough deal feather edge boarding in batten widths ½″ average with 1¼″ laps	per square	30/5
Western Red Cedar ditto	per square	32/1

Fascia and Soffite Boards

1″×6″ wrot deal splayed fascia fixed to rafter feet	per foot run	–/4½
1″×9″ wrot deal soffite tongued both edges, including grooves	per foot run	–/8½

JOINER

Deal Flooring

		1″	1¼″
Plain edge flooring in batten widths	per square	38/7	47/5
		28/7	*36/5*
Ditto tongued and grooved ditto	per square	42/3	51/6
		31/2	*39/6*
T. & G. B.C. Pine rift flooring in narrow widths	per square	57/8	—
		44/4	

Wood Block Flooring, laid herringbone, 100 yards and up

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

		1″ nominal	1¼″ nominal
Burma teak	per yard super	12 7	16 10
Canadian maple	per yard super	10 8	12 4
25–30 per cent. quart Austrian Oak	per yard super	11/10	15/–

		1″ nominal	1¼″ nominal
Plain American Oak (no selection made for sap)	per yard super	11/–	—
Gurjun	per yard super	11 3	14/–
Pitch Pine (50% rift sawn)	per yard super	11/7	13/8
Ditto (100% ditto)	per yard super	13/8	16/–
British Columbian Pine	per yard super	8/8	8/11
Deal, 100 per cent. rift sawn	per yard super	12/1	12/3
Jarrah	per yard super	11 3	—
Additional straight cutting	5¼d. per foot run		

JOINER—(*continued*)

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

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

Wall Linings

⅝″ Deal tongued and grooved V-jointed Matching in narrow widths	per square	30/11
		19/10
¼″ (6 mm.) Birch (B) Plywood and fixing to walls	per square	35/7
		25/8
3/16″ Asbestos cement sheets butt jointed	per foot super	–/4
		–/2¼
½″ Fibre board and fixing to walls	per yard super	2/11
		2/4
Deal battens as grounds plugged to brickwork	per foot super	–/1½
		–/0½
2″×⅜″ wrot and chamfered fillets	per foot run	–/1¾
		–/0¾
2″×½″ wrot and moulded ditto	per foot run	–/1¾
		–/0¾

Skirtings

	Deal	Austrian Oak
1″ stock chamfered or moulded 4″ high, fixed to and including grounds and backings planted on	per foot run	–/3½
		–/2
Add for plugging to brickwork	per foot run	–/0½

		–/10¼
		–/7¼
		–/0½

Fitted ends on hardwood price as 4″ of skirtings, mitres as 6″.

Fitted ends, etc., on deal skirting included in price per foot run.

Casements and Fanlights

		1½″	2″
Deal stock moulded sashes divided into squares with glazing bars	per foot super	1/4½	1/5½
		–/4½	–/5
Add for hanging casements (butts measured separately)	each	1/9	2/–

Cased Frames and Sashes

Deal cased sashed frame, including 2″ double hung stock sashes, with 6″×3″ Oak cill and brass axle pulleys, sash line and weights, average 15 feet super	per foot super	3/9
		1/7

Doors in Deal

		¾″	1″
Matchboarded, ledged and braced door	per foot super	1/–	1/2
		–/4¾	–/5¾

		1½″	1¾″	2″
Framed, ledged and braced door, filled in with matchboarding	per foot super	1/7½	1/10	2/1
		–/6	–/6½	–/8½
Ditto garage doors in pairs	per foot super			1/10
				–/5½
Labour rebated and beaded meeting styles, per foot run				–/1

		4-panel
1½″ square framed, both sides	per foot super	1/8
		–/7¾
2″ ditto	per foot super	2/–
		–/9¾
1½″ bead butt panels one side, but square the other	per foot super	1/9
		–/7¾
2″ ditto	per foot super	2/2
		–/10½
1½″ moulded both sides	per foot super	2/–
		–/9¼
2″ ditto	per foot super	2/4
		–/11¼
For fixing only, stock or p.c. doors, allow	per foot super	–/2½

Doors in Hardwood

Austrian quartered oak:
Labour, 2 × as much as deal.
Materials, 3½ × ditto.
Labour and materials, 2½ × ditto.

Cuban mahogany:
Labour, 3 × as much as deal.
Materials, 4½ × ditto.
Labour and materials, 3½ × ditto.

Teak:
Labour, 3 × as much as deal.
Material, 3½ × ditto.
Labour and material, 3¼ × ditto.

Deal stock glazing beads, mitred and bradded	per foot run	–/1½
		–/0½
Ditto and fixed with brass cups and screws	per foot run	–/3
		–/1

Window and Door Linings

		1″	1¼″	1½″
Deal linings, 6″ wide, tongued at angles and planted on including backings	per foot run	–/6¼	–/7¼	–/8¼
		–/2¾	–/3½	–/4
Add for plugging to wall	per foot run	–/0½	–/0½	–/0½
Add for rebating	per foot run	–/0½	–/0½	–/0½

JOINER—(*continued*)

Window and Door Linings—(continued)

		1″	1½″	1½″
Add for ¾″ × 1½″ stock Deal stop planted on	per foot run	-/1½	-/1¾	-/1¾
		-/0¾	-/0¾	-/0¾
Deal window board 9″ wide, with rounded nosing, tongued at back and on and including bearers plugged to brickwork	per foot run	-/9½	-/10¾	1/0½
		-/4½	-/5½	-/6¼
1″ Deal scotia mould	per foot run		-/1¾	
			-/0¾	
Austrian quartered oak linings 6″ wide tongued at angles and planted on including backings	per foot run	1/2½	1/5½	1/8¾
		-/8½	-/10½	1/0¼
Add for plugging to brickwork ..	per foot run	-/1	-/1	-/1
Add for rebating	per foot run	-/1	-/1	-/1
Add for ½″ × 2″ Austrian quartered oak stop planted on	per foot run	-/3½	-/3½	-/3½
		-/1¼	-/1¼	-/1¼
Austrian quartered oak window board 9″ wide, with rounded nosing tongued at back and on and including bearers plugged to brickwork	per foot run	1/9	1/11½	
		1/0¾	1/3¾	
1″ Austrian quartered oak scotia mould	per foot run		-/3½	
			-/1¼	

Window and Door Frames

		Deal	Austrian Quartered Oak
4″ × 3″ door frames	per foot run	-/9½	2/2
		-/4½	1/4¼
4″ × 3″ window frames	per foot run	-/11½	2/6
		-/4½	1/4¼
4″ × 3″ transomes and mullions ..	per foot run	1/3½	3/2
		-/4½	1/4¼
6″ × 3″ door cill, sunk weathered twice throated and grooved for water bar (measured separately)	per foot run	—	3/5½
			2/0¼
6″ × 3″ window ditto	per foot run	—	2/9½
			2/0½
Add or deduct for variation in sectional area per square inch	per foot run	-/0⅜	-/1⅜
Add for each labour, for chamfer, bead or rebate, etc.	per foot run	-/0½	-/1
Add for each moulding	per foot run	-/0¾	-/1½

Architraves

		Deal	Japanese Oak
1″ × 3″ stock chamfered or moulded architraves, including mitres on softwood, planted on	per foot run	-/3	-/7½
		-/1¼	-/4½
Mitred angles on oak price as 6″ of architrave.			
Add for plugging to brickwork ..	per foot run	-/0½	-/0¾
Add for narrow splayed grounds ..	per foot run	-/1½	-/1½
		-/0¼	-/0¼

Shelving

		Deal	Austrian Quartered Oak
Slat shelving of 1″ × 2″ spaced ¾″ apart	per foot super	-/9	—
		-/3¾	
1″ shelving	per foot super	-/10	2/2¼
		-/5	1/4¼
1½″ ditto	per foot super	1/0½	2/8¾
		-/6¼	1/8¼
1″ cross-tongued shelving ..	per foot super	1/-	2/6½
		-/5½	1/5½
1¼″ ditto	per foot super	1/2½	3/0¼
		-/6¾	1/9¼
1″ × 2″ chamfered bearers planted on	per foot run	-/2¼	-/5¼
		-/0¾	-/2¾
Add if bearers plugged to brickwork	per foot run	-/0½	-/0¾

Teak Draining Boards and Twice Oiling

1½″ Moulmein cross-tongued fluted draining board fixed to slight falls ..	per foot super	3/9 — 1/11½
½″ × 2″ rounded rim bedded in white lead and screwed to edge of draining board	per foot run	-/6½ — -/2¼
½″ × 4″ rounded skirting fillet ditto	per foot run	-/8½ — -/3¾

Staircases

		Deal	Austrian quartered Oak
1¼″ treads and 1″ risers ..	per foot super	2/-	4/6
		-/9	2/-
2″ strings, fixed	per foot run	1/9½	4/6½
		-/7½	2/3½
Housing treads and risers to strings ..	each	-/9	1/6
3″ × 2½″ Moulded handrail ..	per foot run	—	1/6½
			-/10½
1¼″ × 1¼″ square balusters 2′ 6″ long ..	each	-/10	1/9
		-/2	-/5½

JOINER—(*continued*)

Staircase—(continued)

		Deal	Austrian quartered Oak
4″ × 4″ Newels with chamfered edges and fixing	per foot run	1/4½	3/2
		-/8½	1/11

IRONMONGER

Fixing only

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

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

STEEL AND IRONWORKER

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

Steelwork

		£	s.	d.
Basis for plain rolled steel joists ..	per ton	16	17	0
		14	2	0

Fabricated Steelwork

		£	s.	d.
Joists cut and fitted	per ton	20	0	6
Stanchions, ordinary sections with riveted caps and bases	per ton	23	10	6
Stanchions, compound	per ton	25	11	6
Plate girders	per ton	27	19	6
Framed roof trusses, 25′ 0″ span ..	per ton	30	4	6
Ditto ditto 60′ 0″ span ..	per ton	28	5	0

Wrot Iron Work

Simple balusters and handrail fixed (excluding mortices, etc.)	per cwt.	56/-
Bolts and nuts fitted	per cwt.	45/- 38/6

Galvanized Corrugated Sheeting

		20 B.G.	22 B.G.
Sheeting in 3″ corrugations and fixing on wood framing with screws and galvanized embossed curved washers including laps ..	per square	52/3	46/1
		42/3	36/8
Ditto fixed to steel framing ..	per square	60/1	54/7
		47/7	42/1

PLASTERER

Lime and Sirapite Plastering

		Per yard super	In narrow widths per foot super
Expanded metal lathing		1/8	-/3
		1/1½	
1″ × ⅜″ sawn laths		-/9½	-/1½
		-/5	
Render and set in lime and hair		1/8	-/3½
		-/6½	
Render, float and set in lime and hair ..		2/-	-/3½
		-/8¾	
Plaster, float and set ditto on lathing (measured separately)		2/1½	-/4
		-/9½	
Render and set with Sirapite		1/9½	-/3½
		-/8	
Plaster, float and set ditto on lathing (measured separately)		2/3	-/4
		-/10¾	
Skimming coat Sirapite		1/5½	
		-/4½	
⅜″ thick plaster board fixed including covering joints with scrim cloth		2/-	
		1/2½	

Keenes

Cement plain face on and including a backing of Portland cement and sand	2/6	-/5
	-/8½	—

Mouldings and Labours

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

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

PLASTERER—(*continued*)

Portland Cement and Sand (1 : 3)

		½″	¾″
Screeds to floors for wood or tiles	per yard super	1/2½	1/4
		-/4½	-/6½
Screeds for tiling, etc., on walls	per yard super	1/4	1/6
		-/4½	-/6¾
Renderings to walls—one coat float finish	per yard super	1/6	1/8
		-/4½	-/6¾
Plainface	per yard super		2/-
			-/6¾

Coloured Cement Plainface

Cullamix No. 2 or 3 cream, on and including water repellent cement and sand backing	per yard super	3/10
		1/9
Snowcrete mixture on and including ditto	per yard super	3/10
		1/8¼
Snowcrete and white silica sand on and including ditto	per yard super	3/4½
		1/3½

For keyed bricks or hacking face of concrete, to form key for plastering, *see* "Bricklayer."

Wall Tiles, Commercial Quality

6″ × 6″ × ⅜″ ivory or white	per yard super	16/-
		11/3
Extra for rounded edge tiles	per yard run	1/1½
		1/0¾
6″ × 6″ × ⅜″ coloured enamel bright glazed	per yard super	21/3
		16/6
Extra for rounded edge tiles	per yard run	-/4
		-/3
6″ × 6″ × ⅜″ eggshell gloss enamelled	per yard super	22/1
		17/4
Extra for rounded edge tiles	per yard run	-/4
		-/3

EXTERNAL PLUMBER

Lead

	Flats	Gutters, Flashings, etc.	Stepped Flashings	Soakers cut to size
Milled sheet lead and labour per cwt.	39/6	40/7	41/9	34/4
	26/-	26/-	26/-	26/-
Bedding edges in white lead	per foot run			-/2
Lead wedgings to flashings	per foot run			-/1½
Ditto to stepped flashings	per foot run			-/2
Dressing 6-lb. lead over glass and glazing bars	per foot run			-/3½
Copper nailing	per foot run			-/1½
Close ditto	per foot run			-/2
Bossed ends to rolls	each			-/7½
Extra labour dressing through shoots and into rainwater heads	each			3/-
Ditto to cesspools, including extra solder	each			5/3

Cast Iron Rainwater Goods

Rainwater Pipes fixed to brickwork.

		3″	4″
Round pipes	per foot run	1/3	1/6¾
		-/10½	1/2¼
Extra for bends	each	2/3	2/10
		1/5	2/-
Ditto 6″ offset	each	2/4½	2/11
		1/4½	1/11
Ditto single branches	each	2/11	3/6
		1/11	2/6
Ditto shoes	each	2/2½	2/10
		1/5½	2/1
		3½″ × 2½″	4″ × 3″
Square and rectangular pipes ..	per foot run	2/7½	2/8½
		2/0½	2/1½
Extra for elbows (fitted)	each	4/2	4/2½
		2/11	2/11½
Ditto single branches	each	5/3½	5/5½
		3/9½	3/11½
Ditto shoes	each	4/3	4/4
		3/1½	3/2

Gutters fixed to fascia.		4″	5″	6″
Half-round gutters ..	per foot run	-/11	1/1½	1/8
		-/7	-/9	1/3
Extra for angles	each	1/10	2/2	2/5
		1/1	1/4½	1/7
Ditto nozzles	each	1/11	2/3½	2/9
		1/4	1/8	2/1
Ditto stop ends	each	1/-	1/2½	1/4
		-/7¾	-/10	-/11
Ogee gutters	per foot run	1/1	1/5	1/9½
		-/9	1/0½	1/4½
Extra for angles	each	1/10	2/4	2/7
		1/1	1/6½	1/9
Ditto nozzles	each	1/7½	1/11½	2/2
		1/0½	1/4	1/6
Ditto stop ends	each	1/1	1/3½	1/8
		-/8¾	-/11	1/3

INTERNAL PLUMBER

Lead Pipes

Service.		½″	¾″	1″	1¼″
Pipes laid in trenches ..	per foot run	-/10¾	1/2¾	1/9¼	2/4½
		-/6¾	-/10¾	1/3¾	1/8½
Add if fixed on walls ..	per foot run	-/1¾	-/2	-/2½	-/3¾
Ditto if in short lengths ..	per foot run	-/1	-/1	-/1½	-/2
		1½″	2″	2½″	3″
Pipes laid in trenches ..	per foot run	3/0½	4/0¾	—	—
		2/2¼	3/0¾	—	—
Add if fixed on walls ..	per foot run	-/5	-/6	—	—
Ditto if in short lengths ..	per foot run	-/3	-/4	—	—

Distributing.		½″	¾″	1″	1¼″
Cold water pipes fixed to walls	per foot run	-/11	1/-	1/7	2/1¾
		-/5½	-/8¼	-/11¼	1/2¼
Add if in short lengths ..	per foot run	-/1	-/1	-/1½	-/2
Cold water pipes fixed to walls		1½″	2″	2½″	3″
	per foot run	2/5½	3/5¾	—	—
		1/3	2/0¼	—	—
Add if in short lengths ..	per foot run	-/3	-/4	—	—

Waste and Warning.		½″	¾″	1″	1¼″
Waste and overflow pipes fixed to walls	per foot run	-/8	-/10½	1/2½	1/8¼
		-/3½	-/5½	-/7½	-/9¼
Waste and overflow pipes fixed in short lengths	per foot run	1½″ 2/2¾	2″ 2/9½	2½″ —	3″ —
		1/1¼	1/5¼	—	—

		¾″	4″	4½″
Soil and Ventilating				
Pipes fixed, including lead tacks	per foot run	4/3½	5/4½	6/5½
		2/7½	3/5½	4/3½

		1½″	2″	2½″	3″	3½″	4″	4½″
Bends ..	each	1/6	2/-	2/9	3/9	4/3	4/6	5/6
Soldered joints to fittings		½″	¾″	1″		1¼″	1½″	2″
	each	1/9	2/-	2/3½		2/7	2/10½	3/5
		-/6	-/9	1/-		1/3	1/6	2/-
Soldered branch joints (price as largest branch) ..	each	½″ 1/11	¾″ 2/2	1″ 2/5½		1¼″ 2/9	1½″ 3/0½	1½″
		-/6	-/9	1/-		1/3	1/6	
Soldered branch joints (price as largest branch) ..	each	2″ 3/7	2½″ 4/-	3″ 4/7		4″ 5/7	4½″ 6/1	
		1/6	2/4	2/10		3/9	4/2	
Wrap small pipes with hair felt ..		per foot run		-/6		-/3½		

Drawn Lead Traps

		1¼″	1½″	2″
		3″ deep seal	3″ deep seal	3″ deep seal
P. Traps 6 lb. with cleaning eye and two soldered joints	each	7/3	7/9½ 8/4	8/11 10/5 11/-
		4/-	4/6½ 4/10	5/5 6/8 7/3
S. ditto	each	7/7	8/2 8/10	9/4 11/1 11/8
		4/4	4/11 5/4	5/10 7/4 7/11

Brasswork (*Best Quality*)

		½″	¾″	1″
Brass screwdown stop cocks including two soldered joints	each	7/5½	9/10	13/7
		4/11½	7/4	11/-
Ditto, including two red lead joints for iron	each	5/6	6/6½	9/6
		4/-	4/10½	7/8
Ditto, including one soldered and red lead joint	each	6/4	7/5½	11/10
		4/4	5/4½	9/7
High pressure Portsmouth pattern ball valve with flynut and union and one soldered joint	each	8/3	11/-	18/10
		5/6	8/4	15/11
Ditto, including red lead joint for iron	each	6/9	9/-	15/9
		4/10	6/9	13/4
Brass thimble and soldered and cement joints	each	2″ 5/1		4″ 9/-
		2/11		6/-
Ditto, with solder and caulked lead joints	each	5/8		10/1
		3/5		6/4

Fixing Only (*Connections to Pipes measured separately*)

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

Screwed and Socketed Galvanized Steam Quality Steel Tubes and Fittings

Pipes up to and including 1½″ include short running lengths, sockets, connectors, elbows, bends, fire bends; Tees and Diminishing Pieces enumerated.

Distributing.		½″	¾″	1″	1¼″	1½″	2″
Pipes fixed to walls	per foot run	-/10½	-/11½	1/3¼	1/10½	2/4¾	3/-
		-/5	-/6	-/8	-/11	1/2¼	1/6¼

INTERNAL PLUMBER—(*continued*)

Distributing—(continued).

Pipes fixed to walls, in short lengths, fittings, etc., measured separately per foot run	-/10¾	-/11½	1/4	1/10¾	2/5¾	3/1½
Extra for	-/4¼	-/5	-/6¾	-/9½	1/0¼	1/3¾
Firebends .. .. each	-/4	-/6	-/9	1/3	1/6	2/-
Bends .. .. each	1/2	1/5	1/9	2/6	3/1	4/9
	-/7½	-/10	1/1½	1/10	2/3	3/7
Round elbows .. each	1/4½	1/7	1/9½	2/3½	2/9½	4/5
	-/10	1/-	1/2	1/7½	1/11½	3/3
Square ditto .. each	1/3½	1/5½	1/8	2/2	2/7½	4/1½
	-/9	-/10½	1/0½	1/6	1/9½	2/11½
Tees .. .. each	1/6	1/9½	2/-	2/6	3/0½	4/9
	-/10½	1/1½	1/3½	1/9	2/1½	3/6
Crosses .. .. each	2/9	3/2	3/10	5/-	6/-	9/1
	1/11	2/3	2/10	3/9½	4/6½	7/3
Diminishing pieces each	-/10	-/11	1/2	1/6	1/11	2/8
	-/4½	-/5	-/6½	-/8½	-/11	1/4½
Caps .. .. each	-/7	-/8½	-/10	1/1½	1/5	2/1
	-/3½	-/4½	-/5½	-/8½	-/10½	1/4½
Plugs .. .. each	-/6	-/7	-/8½	-/10	1/1	1/6½
	-/3	-/3½	-/4½	-/5½	-/7	-/10½

Cast Iron Waste, Soil and Vent Pipes

	2″	3″	4″	5″	6″
L.C.C. pipes in 6′ 0″ lengths fixed to brickwork .. per foot run	1/7	1/11	2/3	4/3	5/3
	1/1	1/4	1/7	3/6	4/3
Extra for bends .. .. each	4/11	5/9	7/6	11/2	13/7
	1/11	2/6	3/10	5/7	7/10
Ditto single branches .. each	6/3	7/10	10/11	10/5	12/10
	2/9	2/10	3/6	2/11	3/7
Ditto swannecks 6″ projection each	4/2	6/-	8/-	11/-	15/-
	2/-	3/5	4/11	7/4	10/4
Extra for access door or any fitting .. .. .. each	7/-	7/-	7/6	8/5	8/5

Zincworker

	13 G.	14 G.	15 G.	16 G.
Rolled sheet zinc on flats per foot super	-/7¾	-/8	-/9½	-/10
Ditto in gutters, cover flashings, etc. per foot super	-/8½	-/9	-/10	-/10½
Ditto in stepped flashings per foot super	-/10½	-/11	1/-	1/0½
Labour and risk dressing over glass per foot run	-/4½	-/4½	-/4½	-/4½
Capped ends to rolls .. .. each	-/2¼	-/2¼	-/2¼	-/2¼
Extra labour to cesspools .. each	2/7½	2/7½	3/2	3/2

Copperworker

Distributing.

	½″	¾″	1″	1¼″	1½″	2″
Solid drawn copper tube fixed to walls per foot run	-/9	-/11	1/4½	1/9½	2/4	3/1¼
	-/5¼	-/7	-/10¾	1/1	1/3½	1/11¼
Add if in short lengths per foot run	-/0¾	-/0¾	-/1	-/1½	-/2	-/2¼

Fittings for copper tubes

Compression type						
Straight couplings each	1/9½	2/4	2/11½	3/8	5/-	7/-
	1/2½	1/8	2/2½	2/10	4/1	6/-
Obtuse elbows .. each	2/8	3/1	4/4	5/4	8/7	11/4
	2/-	2/4	3/6	4/5	7/7	10/3
Tees .. .. each	3/-	3/5½	5/1	7/2	10/10	15/1
	2/3	2/7½	4/2	6/2	9/9	13/11
Crosses .. .. each	4/-	4/6½	6/4½	7/10	12/9	17/5½
	3/2	3/7½	5/4½	6/9	11/7	16/2½
Reducing couplings each	—	2/2	2/11½	3/8	4/11½	7/-
	—	1/6	2/2½	2/10	4/0½	6/-
Bends .. .. each	2/4½	2/10	3/11½	4/11	8/-	11/7
	1/8½	2/1	3/1½	4/-	7/-	10/6
Brass stopcocks each	5/2½	7/4½	10/4	18/-	24/6	40/4
	4/0½	6/0½	8/10	16/4	22/8	38/4

Capillary type						
Straight couplings each	1/7	2/-	2/9½	3/5	4/4	5/9½
	-/9	1/-	1/7½	2/1	2/10	4/1½
45° Elbows .. each	2/6½	3/2¼	4/2	5/3½	7/4¾	10/5½
	1/7½	2/1¼	2/11	3/10½	5/9¾	8/8½
Tees .. .. each	2/9½	3/2	4/7½	6/4	8/6	12/-
	1/9¼	2/-	3/3½	4/10	6/10	10/2
Crosses .. .. each	3/4	3/9	5/6½	7/7	10/6½	14/9
	2/3	2/6	4/1½	6/-	8/9½	12/10
Reducing couplings each	—	1/7¾	2/0½	2/7½	3/5½	5/0½
	—	-/7¾	-/10½	1/3½	1/11¼	3/4½
Bends .. .. each	2/10½	3/5	4/7½	6/-	8/10	11/11
	1/11¼	2/4	3/4½	4/7	7/3	10/2
Pillar tap connections each	2/0½	2/9½				
	1/2½	1/9¼				

	24 G.	23 G.
Rolled sheet copper on flats .. per foot super	1/5	1/7
Ditto in gutters, cover flashings, etc. per foot super	1/6	1/8
Ditto in stepped flashings .. per foot super	2/1½	2/4½
Labour and risk dressing over glass .. per foot run	-/4¼	-/4¼
Capped ends to rolls .. .. each	-/3¼	-/3¼
Extra labour to cesspools .. .. .. each	3/8	3/8

GLAZIER

Sheet Glass (Ordinary Glazing Quali.

18 oz. clear sheet and glazing to wood, sprigged and with back and front putties, to all normal sizes not exceeding 60″ in length or 40″ wide .. .. per foot super	-/6¼
24 oz. ditto .. .. per foot super	-/7¾
32 oz. ditto .. .. per foot super	-/11½
Obscured ground sheet glass, net extra to above prices per foot super	-/1¾
¼″ figured rolled white glass and glazing to wood with beads (measured separately) .. .. per foot super	-/10½
Ditto, normal tints, ditto .. .. per foot super	1/2¾
Hammered double rolled cathedral white ditto per foot super	-/10
Ditto, normal tints, ditto .. .. per foot super	1/1¾
Add for glazing into metal frames (ordinary rebates) per foot super	-/1⅛
Ditto, metal sashes with ferroput .. per foot super	-/2¼
Ditto, solid metal casements and screw beads per foot super	-/2¼
Wash leather strip or similar material and bedding edge of glass .. .. per foot run	-/3¼
Glazing only, thick drawn sheet glass, polished plate or wire polished plate for all normal sizes. (For prices of glass *see* materials section and add profit, say 10 per cent.) per foot super	-/6¼

PAINTER

Whitening, Distempering and Painting (on new Plastered Walls)

Twice distempering white .. per yard super	-/4½	-/1
Ditto, in common colours .. per yard super	-/7	-/3½
Add for stippling .. .. per yard super	-/2	—
Preparing and painting two coats of undercoating and one coat of enamel .. per yard super	1/9	-/8

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

General surfaces .. .. .. per yard super	1/-	-/4
Perforated landings and staircases both sides (one side measured) .. .. .. per yard super	2/6	-/8
Pipes, bars, balusters, etc., not exceeding 3″ girth per yard run	-/1½	
Metal window frames .. .. .. per yard run	-/2¾	
Eaves gutters .. .. per yard run	-/7½	
2″ Rainwater pipes .. .. .. per yard run	-/3	
4″ ditto .. .. per yard run	-/6	
Squares one side .. .. per dozen	1/9	
Large ditto .. .. per dozen	2/3	
Extra large ditto .. .. per dozen	3/-	
Edges of casements .. .. each	-/3	

Painting on New Woodwork

		Knot, prime, stop and paint three coats oil colour		Add or deduct for each coat more or less	
General surfaces ..	per yard super	2/-	-/8	-/6	-/2
Fascias and soffites	per yard super	2/6	-/8	-/7½	-/2
Fillets, skirtings, etc., not exceeding 3″ girth	per yard run	-/3	—	-/0¾	—
Ditto, not exceeding 6″ ..	per yard run	-/5½	—	-/1½	—
Ditto, not exceeding 9″ ..	per yard run	-/7	—	-/1¾	—
Ditto, not exceeding 12″ ..	per yard run	-/9	—	-/2	—
Squares one side	per dozen	3/6	—	-/9	—
Large ditto	per dozen	4/6	—	1/-	—
Extra large ditto ..	per dozen	6/-	—	1/4	—
Edges of casements	each	-/6	—	-/1½	—

Sundries

Twice creosoting woodwork ..	per yard super	-/6 -/2
Twice limewhiting brickwork ..	per yard super	-/4½ -/0½

		Sizing	Staining	Once Varnish
General surfaces ..	per yard super	-/2	-/4½	-/6
		-/¾	-/1½	-/2½
Wax polishing	per foot super		-/4½	
Body in and French polish on hardwood surfaces	per foot super		1/-	

Writing

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

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

Paperhanging	On walls		On ceilings	
Preparing new plastered walls for papering per piece (60 feet super)	1/4	-/5¼	1/5½	-/5½
Pasting and hanging only.				
Plain hning paper per piece (60 feet super)	1/4	-/1½	1/8	-/1½
Common printed papers per piece (60 feet super)	2/-	-/1½	2/6	-/1½

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