

*Mine host of "The Poulett Arms" serves good ale, so if you
happen to be down Ilminster way, take a look at the brickwork
on the way in. The bricks are 'Phorpres' Rustics lime-washed
except for the chimneys which are left their natural red-brown.*

"The Poulett Arms" near Ilminster (for Messrs. Brutton, Mitchell Toms Ltd.). Architect: E. H. Clarke, F.I.A.A. Contractor: A. Taylor, Norton-sub-Hamdon.



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The Editor will be glad to receive MS. articles
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Though every care will be taken, the Editor cannot
hold himself responsible for material sent him.

THURSDAY, JUNE 2, 1938

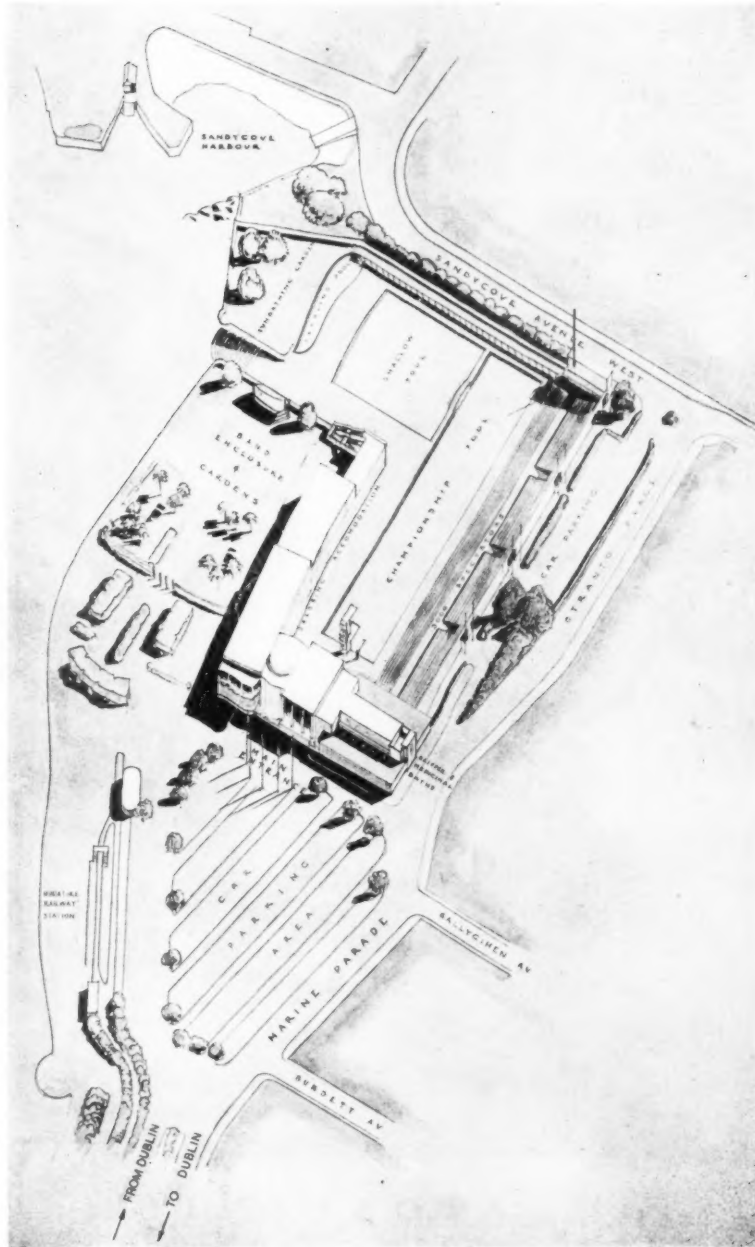
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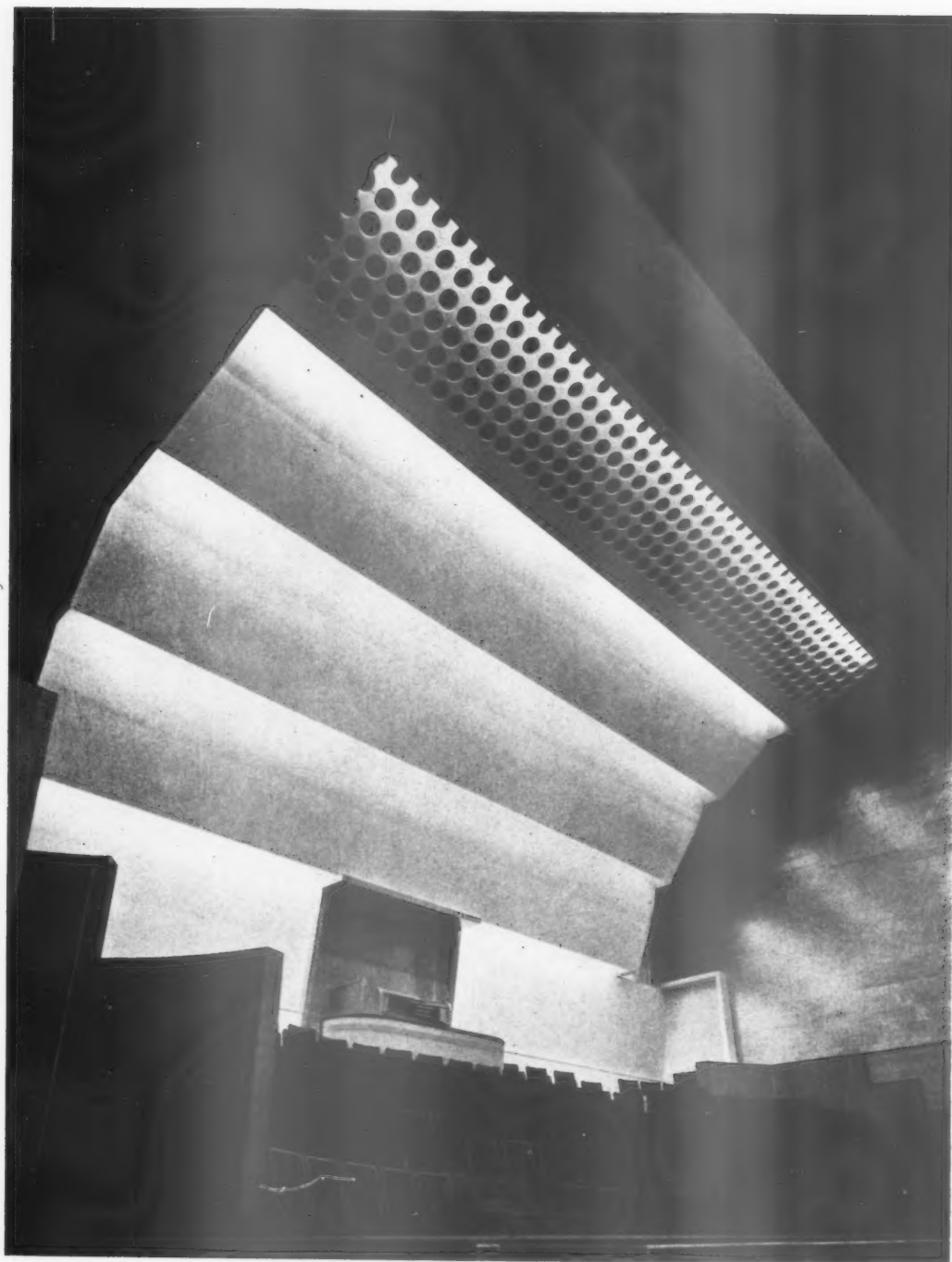
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SWIMMING POOL, DUN LAOGHAIRE

WINNING DESIGN: BY J. R. BOYD-BARRETT



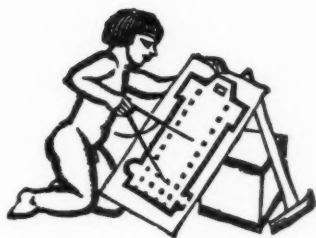
AS announced in last week's issue, the design submitted by Mr. J. R. Boyd-Barrett in the competition for a swimming pool at Dun Laoghaire was awarded the first premium of £400. A bird's-eye view of the winning design is reproduced above.



ACOUSTIC PROSCENIUM HOOD

The acoustic hood and organ console in the large hall, Wolverhampton Civic Halls. The hood is constructed of plaster on expanded metal on steel framing and is painted white, matt finish. Further illustrations of the

Civic Halls, recently opened by the Earl of Dartmouth, appear on pages 939-944. Messrs. E. D. Lyons and L. Israel were the architects; their design was placed first in an open competition assessed by Mr. C. Cowles-Voysey.



8. CO-OPERATION OR ESCAPISM?

THE whole aim of the articles of which this is the eighth has been to prove one point. That point is that in the future architectural practice must consist of two parts: the first, designing individual buildings on individual plots; the second, co-operation with many other persons in the problems of territorial planning.

This double scope does not mean that every architect will need to divide his energies between the two. The work of the mass of architects will always remain wholly concerned with individual buildings or building groups. What it does mean is that the majority must realize the importance of the second part with such conviction that they are ready, if necessary, to pay in hard cash to encourage a number of men to prepare themselves for representing the profession adequately in the large-scale planning of land. This is the least the profession can do and now is the time to decide to do it.

There appears at present every week, almost every day, evidence that the public will not tolerate much longer the limitations of town planning as we now know it. It is obvious that the town and regional planning of merely holding the ring desperately against vested interests and claims for compensation is coming rapidly to an end. The reception of the Bressey Report, the publication in the daily press of "ideal" replanning schemes, and the evidence before the Royal Commission on the Location of Industry, leave no doubt that the positive planning of land areas is about to begin. If architects, by apathy or incompetence, fail to produce men capable of taking a proper part in these schemes, the profession must decline catastrophically in social importance and influence.

The provision of an adequate number of these architect collaborators does not require revolutionary changes. It is almost wholly a matter of making use of existing organizations. It could be done by co-operating with the existing town planning schools of Liverpool, London University and the A.A. School of Planning to encourage suitable young men both to study town planning as it now exists and to train themselves for constructive planning by the preparation of schemes for areas where some new development is

under consideration. The training value, and the publicity value, of reports upon actual proposals—whether new by-pass roads or new housing schemes—need no emphasis.

In the opinion of the JOURNAL architects should determine, as an immediate objective, to have at their disposal within ten years fifty men who, trained as architects and fully understanding town planning as it is today, have managed to preserve imagination and enthusiasm undepressed by the nibblings, shufflings and petty preservations of the contemporary system of saving something from the mess.

Architects must consider, and consider now, whether this is worth doing. They should consider that thirty years ago architects were the leaders in the idea of expert collaboration in planning the utilization of land. Thereafter, during years of obstruction and delay, they let the leadership go; and now, when obstruction is on the verge of disappearing, they appear to be throwing away, not leadership this time, but the remnants of what contact with planning the enthusiasm of individuals has retained for them.

The A.A. School of Planning (which, sketchy and over-ambitious though it may be, aims at training men of all professions in collaboration on planning schemes) is to be dropped by the Architectural Association. Other organizations—organizations of engineers, transport and building—have offered to continue support if the school is kept going. But *not* the architects.

It seems that the profession's representatives still regard the architect as an isolated artist unconcerned to the point of antagonism with the society in which he lives; and that these are prepared, once again, to throw away the architect's part—his very large part—in territorial planning to anyone who cares to pick it up.

Those who are interested in the details of the process can read on page 932 what was said at the Annual General Meeting about the R.I.B.A. Committee which is concerned with town planning matters. After doing so they should bear in mind that within the next few days 10 vacancies on the council which appoints the personnel of this committee will be filled according to the votes of the members.



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NOTES & TOPICS

ELECTIONS

THE R.I.B.A. elections are with us again, but owing to the change in the Constitution the Standing Committees will be elected, no longer by the public (i.e., the profession), but by the "Party" (i.e., the Council). Thus, on the voter who elects the Council the whole responsibility rests.

The Editor of this JOURNAL, with the unfailing impartiality which is so lugubrious a feature of modern architectural journalism, is publishing brief biographies of all the nominees in another part of the paper, but as a voter and not an editor, I am moved to say a few words on Form. For what they are worth, here are my tips from the course.

R.I.B.A.: RUNNERS AND BETTING

Fellows: six vacancies. To get the hedging over first, let me say at once that it would be invidious, not to say presumptuous, to tip off such known favourites as Adshead, Abercrombie, Ansell, Stanley Hall and Easton, who are certain to carry the money anyway. My purpose is to draw backers' attention to the (possibly) lesser-known runners, A. C. Bunch (County Architect of Warwickshire) for instance, and E. P. Wheeler (Chief Architect of the L.C.C.), two official architects of outstanding quality. Again, Serge Chermayeff is an obvious choice for the modern not-so-young-now men, as is S. C. Ramsey, the power behind the Public Relations Committee, which is at present easily the best goer in the R.I.B.A.'s rather so-so stable.

Of the *Associates (three vacancies)* I fancy the chances of T. S. Barnes, Walter Goodesmith, W. G. Holford, Brian O'Rorke, Basil Ward, Colin Penn, R. A. H. Livett and R. T. F. Skinner.

Colin Penn had a length to spare over all comers in the second section of the *News Chronicle* School Stakes. The rest are all well-known stayers, both R. A. H. Livett, who has shown such form on the flat at Leeds, and W. G.

Holford, the Liverpool colt, who has shown such promise in the Team Valley, being heavily backed in the North. Of the well-fancied field, I take R. T. F. Skinner to be a good bet since, being trained by Tecton, he is sure to come out sound; furthermore, his staying power has already been well and truly tested in many a neck-and-neck finish in the Committee-Room Plate. As an example of his quality I would mention that he has just come back from Barcelona, where he ran well in two air-raids, the idea being to get first-hand *architect's* information for A.R.P. Ask yourself whether this is the sort of man you want on the Council.

Again, Basil Ward (Connell, Ward and Lucas) has shown consistent form this season (in the Public Relations Committee) and should be an odds-on chance. Of the *Licentiate (one vacancy)*, Louis Blanc looks a likely winner.

Reviewing my list, and making final selections, I suggest that backers will get a shock if the following don't get comfortably home. In the *Fellows Selling Plate*, Bunch (A. C.), Wheeler (E. P.), Chermayeff (S.) and Ramsey (S. C.). In the *Associate Stakes*, Holford (W. G.) and Ward (Basil) should be certainties, and Skinner (R. T. F.) should be strongly backed. As for the *Licentiate Handicap*, Louis Blanc looks as though he ought to keep a nose in front.

STUDENT VOTE

Sorry to keep harping on the A.A., but things are still lively in that hot-bed of democracy, and seem likely to continue so for some time. At the general meeting on Tuesday, just before Sir Raymond's genial talk on town planning in America, results of the Council elections were announced.

It seems that 8 out of 10 members nominated by the School were successful. Which means, presumably, that only the other two are anti-student-co-operation and all that goes with it. This goes to show what concerted action can do. And if the majority of senior members are too lazy to vote, it's fair enough the students should have their way.

SAVE THE PLANNING SCHOOL

Is there a chance that the rejuvenated Council will make a bid to save the Planning School? There's an evil rumour—and I'm determined to believe it is *only* a rumour—that the Planning School is to close down in July. In the name of Wren, in the name of Nash, in the name of Unwin, Why?

Is architecture, on the point of resurrection, to be tempted back to the effete humbug of artist-and-client? I feel certain that the urge to plan on a big scale, to co-ordinate architecture with the social pattern, is the inspiration nowadays of the best work not only in the A.A., but in all architectural schools.

And this, among other urgently essential things, is what the Planning School has stood for. It is not, we suspect, for lack of funds that it must go, and it seems to me that if enough architects (doctors, economists, sociologists and farmers, too) will have the guts to stand by it, the Planning School will survive and wax exceeding strong.

NATIONAL PLANNING SURVEY

Most timely is the report of the National Survey and National Planning Committee, of the Town Planning

R.I.B.A. ELECTIONS

Before June 11, voting papers for the new R.I.B.A. Council must be returned. On pages 935-939 the names and biographies are published of the candidates for the 10 vacancies on the Council. Under the new constitution all committees are nominated by the Council and it is therefore particularly important that every member should vote.

Institute, which is published this week. The report emphasizes that, "national planning is urgently required to supplement and reinforce local and regional planning." It stresses the fact that "location of industry and population" is the most important of all aspects of planning, and makes detailed recommendations for "a new organ of central government" in the form of an advisory national planning commission.

These things have been said before and will be said again. The fact that those who talked about them twenty years ago are now heartily sick of the sound of words like *planning* and *national* is no excuse whatever for kicking them over the side. Sustained repetition of a slogan is an essential part of the technique of putting ideas across in a democratic society. The fact that the slogan ceases to mean anything to the man that invented it is unfortunate, but unimportant.

SCULPTURE IN ARCHITECTURE

What is claimed (with some justification) to be the first chapel ever to be constructed within the feet of a statue is now nearing completion on the plateau of Dombes, 10 miles from Lyons.

The statue represents the Blessed Virgin, weighs 1,500 tons, and at its base is 25 feet in diameter.

TRIALS OF HOME-OWNERSHIP

The Referee at Tavistock County Court last week pointed out that, under the terms of a building contract, an owner was entitled to get a waterproof house except when there was an exceptional tempest.

The action before him was over a house in which it was alleged that water had run down the chimney to such an extent that a bucket placed at the bottom had rapidly overflowed—and this despite a damp-course in the chimney.

The architect, who was charged with negligence, stated that "he had given of his best to prevent water getting into the house," while the foreman and builder were unable to account for the continued torrent.

It looks as if the owner will just have to buy another bucket.

MARCH OF TIME

The rain had become a cloudburst, the lane was not made up and the builder, a big man, absorbed a lot of my umbrella. And so with uneasy ploddings we came again in sight of a job of mine, having been further up the lane to see some additional work.

In the lane beside the site stood two cars. With the indomitable spirit of my race I made some attempt at a joke.

"Visitors?" returned the builder, nudging me out from under the umbrella. "That's the plumber's in front, and William the plasterer's sister's beyond. She comes for him."

I am glad to say neither was in the least stuck up. Each gave us a most genial nod as we passed.

PARTHENON ROOF PROBLEM SETTLED

First mention to Lee Simonson for his sets in the New York Theatre Guild's production of Giradoux's *Amphitryon*, now blazing at the Lyric. They are as witty, imaginative, and highly civilized as the play itself.

In the good old days, when acroteria were much more important than social psychology, there used to be virile discussions about just how the middle of the Parthenon roof could have been constructed to allow shafts of light to illuminate the goddess beneath.

In the last scene of *Amphitryon*, where Alfred Lunt descends from heaven to meet Lynn Fontanne on the roof of the temple, I was provided with a simple solution. The roof was flat, and from my seat in the gallery I could clearly recognise Paropa. Forward, beyond the proscenium, a Lenscrete slab obviously provided the necessary shafts of light.

RECOGNITION FOR MR. KEAY

It is good news that Mr. L. H. Keay, after a long reign as Director of Housing for Liverpool, has now been appointed City Architect. Mr. Keay's name is a household word among architects all over the country, and a good deal of the rest of Europe knows about his work. But I have always felt that Liverpool more or less took him for granted, and I am therefore more than delighted that he has at last been given the job he should obviously have had years ago.

Manchester, too, has paid Mr. Keay an indirect compliment by making Mr. John Hughes its Director of Housing. Mr. Hughes had a good prize-winning career at the Liverpool School, and after three years work with Mr. Keay went to Manchester as deputy housing director. That he should be thought good enough to take over the whole job at the age of thirty-four is a great compliment to his ability; it also says much for the value of his early years with Mr. Keay.

ASTRAGAL

THE BILL

On Tuesday last, May 31, the Architects Registration Bill passed its Second Reading in the House of Lords without a division.

POINTS FROM THIS ISSUE

- "There's an evil rumour—and I'm determined to believe it is only a rumour—that the A.A. Planning School is to close down in July."
—Astragal 930
- On Tuesday last the Architects' Registration Bill passed its second reading in the House of Lords without a division 931
- The first of a series of articles on official architects' departments .. 933
- Biographical notes on the candidates for membership of the R.I.B.A. Council 935

R. I. B. A.



A.R.P. CONFERENCE

The following arrangements have now been made for the proceedings. The inaugural meeting will take place at 8 p.m. on Monday, June 13, the president to be in the chair. Sir Samuel Hoare, Secretary of State for Home Affairs, will speak and declare the conference open. Two short papers will then be read: "Air Raid Precautions as a Problem for the Architect," by Mr. T. E. Scott, F.R.I.B.A., and "Some General Principles of Structural A.R.P.," by Mr. E. L. Bird, M.C., A.R.I.B.A.

The instructional course will consist of four sessions from 10 a.m. to 12.30 p.m. and 2 p.m. to 4.30 p.m. daily, on June 14 and 15. Membership of the instructional course is now fully booked up and no further applications can be entertained other than from those R.I.B.A. Allied Societies and London local authorities who have been invited to send representatives. Arrangements for repeating the course at a later date are now under consideration.

EXHIBITIONS

The Governments of Canada and New Zealand have asked to have the Health, Sport and Fitness Exhibition for showing in the respective Dominions. It is, however, not possible to meet these requests as the tour is fully booked up with English centres.

The designs submitted in the Sydney Cathedral competition are on view at the R.I.B.A. until June 15, 10 a.m. to 8 p.m. daily, Saturdays 5 p.m. (Sundays excepted). The exhibition will not be open from June 4 to 7, inclusive.

"Health, Sport and Fitness" opens at the Bristol Museum and Art Gallery on June 4.

"Modern Schools" closes at the Bradford College of Arts and Crafts on June 11.

On Monday, May 9, at the annual general meeting of the R.I.B.A..

MR. H. GILBERT JENKINS [F.] SAID*:

It is regrettable that the Report of the Town-Planning, Housing and Slum Clearance Committee is the usual record of something proposed to be done in the future and little or nothing finished during the past year. This should be one of the most important of the committees appointed by the Council but so little does it interest itself in its subjects that five meetings were considered sufficient to dispose of its work.

It is common knowledge that the new L.C.C. Town Planning procedure is holding up millions of pounds worth of building, but apparently the committee have not heard of this, as they solemnly report that the L.C.C. have agreed to inform the R.I.B.A. when the various stages are reached and the maps can be inspected. Why cannot the committee join with the T.P.I., in obtaining printed zoning regulations with maps and schedules to assist architects in getting their schemes through?

In the previous year, the committee was considering whether the Institute should promote another Town Planning Conference as in 1910. Such a conference promoted by the Institute would be highly beneficial to the design of town planning, and would help to remind the various authorities of the importance of this side of the work, and of the advantage of having a planning officer or consultant, who had received an architectural training.

There is not one word about it this year so we can only conclude that the committee feels unable to undertake so important a piece of constructive effort, and has let it drop, as it has let other matters of similar importance drop, year after year.

Last year, this committee reported that its memorandum on the creation of a Planning Board for Greater London had—with the President's approval—been submitted to the Minister of Health, and a recommendation to the Council would be made for its publication in the *Journal* and the Press.

I have had a search made in the *Journal* for it without success, and doubtless members would like to know why it remained unpublished, also why this committee did not secure the co-operation of our very alive Public Relations Committee in securing publication of a *résumé* in the Press. Meanwhile the Minister has acted, and the Institute has been deprived of any credit, in this important matter.

If this committee performed its work efficiently, the Institute would take its proper place with the Town Planning Institute as leaders in this great movement.

Owing, however, to the lack of driving force in this committee, town planning is being allowed to drift out of the hands of the designer into those of the surveyor and engineer with disastrous results to both countryside and town.

It was left to the Architectural Association to found a planning school, and so far as can be judged from the last two reports of this committee, they merely threw cold water on the project, although even our Government—not usually interested in such matters—is coming to the conclusion that national planning is an urgent necessity in this post-war age.

Last year I drew attention to the lack of leadership which the Institute had shown—thanks to this committee—over the design of the new Cromwell Road—Barnes Bridge Traffic Avenue. The chairman of the Committee replied that consultations had taken place with an important person from the Ministry of Transport and it was impossible to get the thing remedied. He little realised that he was confessing that the Ministers and his advisers considered the committee's suggestions merely obstructive and therefore worthless.

An examination of the maps made it obvious that the general line of the route had been carefully worked out by the Ministry and would not be altered but that the planning of building sites fronting the new road had been given no consideration at all.

Had real constructive criticism been directed to this alone—and on this, an architects' institute could have spoken with authority—the Minister would have been impressed and the scheme would have been amended.

Great architectural improvements could have been made possible, the taxpayer and ratepayer would have been saved a quarter million of money and many architects would have been provided with opportunities for designing on large-scale sites. All this has been lost by the inefficiency of the committee. It is high time that they woke up.

Sir Charles Bressey's report on London traffic routes will soon be published, and—now that the Council has the appointment of all committees—it is to be hoped that we may have a Town Planning Committee which will produce constructive criticism upon it, in time to be of service to the community, and thus redound to the credit of the Institute.

*** Please read this after you have read this week's leading article.**

OFFICIAL DEPARTMENTS

I: THE L.C.C.

[By R. D. MANNING]

THE author of the article printed below was the winner of the recent A.A.S.T.A. competition for an essay on the subject: "The Future of the Architectural Assistant." In this article and in each of the four which follow his subject is that of the present conditions and opportunities in a large official architect's department—particularly from the viewpoint of the younger architect.

The JOURNAL believes the seriousness of this subject to be obvious. In the last nine months comparisons have been made between various aspects of official and private practice. The JOURNAL does not intend to enter into this controversy. It believes that, since architectural education is designed to turn out fully responsible men, the aim of the profession must be to discover a system which provides the fullest responsibility and opportunity for each member that can be made consistent with the scale of the work undertaken and differences in individual ability. This standard system—equipped with incomes

as high and secure as economic conditions permit—should then be the criterion by which both private and public offices should be judged.

To inform the profession of strong and weak points in representative official departments is the immediate intention of these articles. The formulation of a standard system based partly upon that information is the ultimate intention.

In suggesting that he should prepare these articles, the JOURNAL considered the author's qualifications to be particularly suitable. Mr. Manning has had very wide experience in private practice, both as principal and assistant, and in public offices, and is a member of the R.I.B.A. Salaried Members' Committee.

The articles are based upon practical data supplied by men working, or until recently working, in the departments concerned. With this reservation the facts stated and conclusions drawn are wholly the author's.

AN increasing proportion of the younger members of the architectural profession are deliberately adopting careers in official offices. There is a general feeling of dissatisfaction and frustration among these men, due entirely to the conditions in which they are expected to do their work. During the next ten or twenty years they will be rising to the senior posts in their departments. It is, therefore, quite natural that they should wish to see the service improved, since they have to operate it eventually, and they are entitled to support, rather than opposition, from those now at the top of the tree.

The object of these articles is to set out the general organization of some of the best-known official architects' offices in this country, with criticisms and suggestions made by the men who work in them, in order to provide a basis for proposals to ensure the best results from a system which it is generally recognized will play an increasing part in architectural practice for many years to come.

I have selected the L.C.C. as the subject of the first of this series of articles because it is by far the largest and most important Local Authority in the country. It enjoys immense prestige on this account and should be a model fit for emulation by all other Local Authorities.

It is a commonplace that the Council administers the affairs of a population as large as those of many sovereign states,

but the scope of its activities is really very difficult for the layman to grasp. The Architect's Department, for example, supervises (under the London Building Acts) all the building work carried out by private interests within an area almost completely urbanized, containing nearly 5,000,000 people, and is also responsible for huge building programmes, carried out by the Council itself, of slum-clearance, housing, schools, hospitals and multitudinous buildings such as fire-stations, clinics, bathing-stations, etc.

One cannot but sympathize with the difficulties of Local Authorities in keeping pace with their rapidly increasing responsibilities, and the work of the L.C.C. cannot be lightened by the knowledge that, by virtue of its size and circumstances, it is naturally looked to for precedents in many matters by other authorities. To cope with the increased work, it has been necessary to develop great departments almost impromptu, so to speak, since the work would not wait for deliberations on the ideal way to tackle it. It is inevitable that some defects should appear which, from the very circumstances in which they occur, are difficult to analyse, and more difficult for men already immersed in urgent current affairs to remedy quickly.

The Architect's Department

The whole department contains four divisions. The Statutory (Administration of the Building Act) and Constructional Divisions are controlled by

Divisional Architects, the Quantities and Measuring Division by the Quantity Surveyor and the Administrative Division by the Chief Clerk. The County Architect is responsible for the whole of this huge department, with a staff numbering about 1,150.

The Constructional Division is, however, the only one of the four which corresponds to an architect's department within the scope of these articles, and it contains only about 300 of the total departmental staff.

It is the purpose of this article to enquire whether the organization of this Division is as good as might be, as an architect's department, and if it is not, to analyse the causes. It is an important question whether there are a number of intrinsically trivial defects, which together produce major grievances and inefficiency, or fundamental weaknesses, of which the defects are but symptoms.

Organization

The Division is organized in Sections, under Assistant Architects, which deal with housing, schools, hospitals and general work and maintenance; there is also a heating and special construction section. Each Section is sub-divided into groups, under Principal Assistants, each containing a core of men on the permanent staff, and numbering from ten to twenty men each.

The County Architect is paid £2,500, rising to £3,000 per annum. Divisional Architects receive £1,200-£1,500, Assistant Architects £780-£1,100 and Principal Assistants £660-£900. The general levels of salaries below these grades correspond roughly with those paid by similar departments elsewhere. The application of grading to individual men, however, appears unsatisfactory; we hear, for instance, of an assistant aged 40, second-in-command of a group (a quite responsible position), paid only £420 per annum. There is also a rule limiting the initial salary paid to temporary assistants to £6 per week; this is occasionally waived, but its significance will be discussed later.

The maximum annual leave for temporary assistants is a fortnight, but the permanent staff have three or four weeks, according to grade. Working hours are satisfactory, 9.30 to 5 (5.30 on Fridays and 12.30 on Saturdays), but only half-an-hour is allowed for lunch. This, being unreasonable, not to say impracticable, is generally disregarded.

We have here the outline of a system which appears logical and should work smoothly. Disregarding irrelevant personal grievances, the available evidence, however, compels one to ask whether, in fact, all is well with the organization of the department.

How it Works

The ultimate test by which any architect's office must be judged is the quality of the work it produces, and to anyone who believes in the possibilities

of "Official" architecture, the L.C.C. is a great disappointment.

There seems little question that the material quality of the work is excellent, and no pains are spared to ensure in this sense that value for money is secured. It is in the design of the work, with its repercussions on the economic side and on the question of civic amenities, that one finds such disquieting evidence of faulty organization.

It requires no internal evidence to know that the average level of design is mediocre, though isolated examples of good work, such as the fire brigade headquarters and some jobs for the parks committee, are produced. These demonstrate by contrast what might be produced by the whole division under different conditions of organization. The schools and hospitals are uninspired, where they are not worse, and the housing architecture is truly deplorable. It is really tragic that this should be so, when one considers the importance of this work, and the magnificent opportunity it offers.

The housing section produces occasional blocks of flats designed on modern lines, which receive press publicity, and are accepted by the public as typical. Unhappily, they are exceptional, typical work being represented by the familiar neo-Georgian blocks, which are being built all the time, in huge quantities, all over London.

No one seems to know where these designs in the first instance originated; they are not the work of the men who do the working drawings, being rigidly stereotyped, and classified in the strangest way (for example, by the type of kitchen incorporated, which in turn depends on the type of water-heater installed!). The point of view of tenants is apparently ignored. Pram balconies are almost unknown; cycle and pram stores are not provided; the sites are mainly dreary wastes of tar-paving ("children only ruin grass"); obstinate insistence on the Georgian idiom causes inadequate lighting, especially in kitchens. Other authorities, in England and abroad, provide better amenities as a matter of course; why cannot the L.C.C.?

There appears to be little attempt to use men according to their own particular abilities or experience. Several new assistants, one an A.R.I.B.A., were drafted to the heating section, to trace plans for the engineers. One man, who asked the deputy architect how long his employment on work for which he was unsuited might last, was rebuked for asking "improper" questions.

One group in the housing section is described as containing 15 men, varying in age from the early twenties to over fifty, earning from £3 to £8 per week; several were qualified, while at least three had been in private practice, and were used to controlling jobs. All were engaged in precisely similar work.

A corollary to this is perhaps the chief cause of the dissatisfaction which is undoubtedly rife, namely, the lack of scope given to individual assistants. The layouts of housing estates, for example, are planned by one group, without reference to the men who do the working drawings, and are usually typical "drawing-board" patterns of standard blocks, made without regard to aspect or the wider aspects of civic planning. Variations of these layouts are strongly discouraged.

The work is so rigidly standardized that one newly arrived assistant, after three weeks' work, found that another man in an adjoining room had been simultaneously doing $\frac{1}{2}$ -in. details of a job of which he himself had been doing the $\frac{1}{2}$ -in. scale drawings; neither had known of the other's existence. Such things are made possible by the persistent use of stock details of kitchens, w.c.s, etc., which are incorporated bodily. Such methods may save trouble, though this is doubtful; they certainly do not produce good architecture.

Initiative is snubbed to such an extent that one assistant who might be considered to merit some consideration, inasmuch as he had been in the service about 12 years, did not even receive an acknowledgment of a design for flats which he submitted to the housing section, having done this work in his own time, purely out of enthusiasm.

No attempt is made to instruct new arrivals in the procedure of the office. Information has to be picked up in dribbles, here and there, usually from men who have acquired knowledge similarly. In consequence, such information is frequently incorrect. Questions are not welcomed by the senior officers and frequently earn a reputation for being a busybody and rebukes for asking "improper" questions.

The Results

The results of the state of affairs indicated by the foregoing appears to be that the whole division is permeated by a lack of enthusiasm, aggravated to a feeling of exasperation and frustration in the very type of assistant which it is obviously the Council's interest to attract, the able young architect who will bring new ideas and a fresh outlook to the work. There is, in fact, a steady stream of such men into the office who find the conditions unbearable and leave after periods varying from one or two years down to a few weeks only. Such a statement might be described as exaggerated, were it not borne out by the frequency with which the L.C.C. advertise for staff, and by the noticeably large proportion of assistants in other offices, private and official, who have worked such short spells in this division. Men have even refused or resigned permanent posts rather than remain.

Lack of responsibility and the curb on initiative leads to a difficulty in obtaining decisions which, combined with lack of

enthusiasm, has marked effect on the volume of work turned out. One assistant states that, in eight weeks, his output was little more than he could have done in three, and that this was primarily due to waiting for decisions from higher authority. He was even warned by his group chief not to work too fast because "anything you do will probably be altered." A logical inference is that the division is actually overstaffed, though a considerable amount of overtime is found necessary.

Men working in such conditions too easily learn to regard their jobs merely as "bread and butter"; there are too many in the L.C.C. who have either allowed qualifications to lapse, or have not bothered to qualify, even though they have already gone part of the way.

Failure to utilize individual experience and ability makes it almost impossible to judge men by their qualities. The rule limiting initial salaries paid to new assistants means that older men with wider experience are seldom introduced into the service. In consequence, promotion can only be by seniority and fresh blood cannot find its way into the senior posts, which are filled by men who, having spent their lives in the department, are too accustomed to its methods to notice its defects.

One gets the impression that while the department has grown to an almost uncontrollable unwieldiness, the attempt to run it as if it were one-tenth its present size still continues. The chief officers try to retain a personal interest in jobs; which is a physical impossibility and leads to capricious interference with details of design without comprehension of any individual problem. At the same time, assistants are allowed no scope, so that architecture falls between two stools. One inevitable result is the reliance on "safety first" which is so evident, and interference occurs in matters which the architect should decide.

Lack of grip, in staff affairs, results, not in too much freedom or in lack of discipline, but in the surrender of discipline to domination by the administrative division, which, lacking sufficient understanding of architectural conditions and permeated by what I call "office-boy mentality," maintains control by a network of petty rules and restrictions whose fundamental basis is distrust of the individual. A good example is the attendance book, based on the assumption that without such an institution no one would be punctual; actually it defeats its own object, since it can be, and is, evaded; it is not unknown for a man to sign on and go out immediately to have the breakfast he has missed in order to be "punctual." Another example is the rule by which pay is stopped if a man with less than one month's service is away ill; the injustice and lack of logic of such a rule is obvious. Private architects' offices, and many other official offices, do not find such methods necessary. These

in fact, constitute an important contributory factor towards the malaise which is apparent.

Lack of grip, in architectural matters, leads, amongst other things, to control and interference by external influences, notably the Valuer's Department, in details which should be solely the architect's responsibility. An important factor in the obstinate retention of the Georgian idiom by the Housing Section is the refusal by the Valuer to agree to the use of metal windows, on the ground apparently, that wood costs less to maintain. There seems to be no appreciation that other factors, such as lighting, harbourage for vermin in wood-work, more modern ideas of design, should also be taken into consideration. An official of this department, when tackled by an architect on the subject is reported to have confessed ignorance of the possibility of using rust-proofed steel windows.

This division of control leads to unfortunate results. One block of flats is reported to have been designed experimentally with steel casements, which were subsequently vetoed by the Valuer. Wooden windows were accordingly substituted, but the openings were not redesigned to suit them, with unhappy effect on the elevations. Another block is stated to have been redesigned eight times in eighteen months, following repeated indecision by the Valuer as to the accommodation required, and was finally built with a 54 degree pitch roof (to match an adjoining estate) the space in which was wasted, because the accommodation finally decided upon did not call for such a roof.

Conclusions

The weaknesses in the department indicated by the evidence can, I think, be traced to two fundamental causes.

Firstly, there seems to be no logical reason for retaining control of so large an organization under one officer. The volume of duties is beyond the real control of any one man. Moreover, the qualities required for the administration of the Building Acts are quite different from those needed to run an architect's department. The Quantities Division should, one would think, be a separate entity under the Quantity Surveyor in any case; the two professions are quite different in character, and should work in co-operation, neither being subordinate to the other.

Similarly, the Valuer, who is responsible for the purchase of sites, and the financial side of building and maintenance, must obviously be cock of his own walk. But so also must be the architect, and where the work of the two departments coincides, co-operation should surely be the rule, not dictation by either to the other.

Secondly, there appears to be a fundamental lack of appreciation by the council of the function of architects. Experience in private offices and in some

other official departments shows that the best architectural work is obtained by giving experienced assistants as much freedom and responsibility as possible, within the limits of the policy of the principal or authority. In private practice, a qualified man of 28-30 is accepted as a responsible architect, and few clients would hesitate to entrust him with any commission, save perhaps work of unusual size or complexity. There is, however, a marked tendency for official bodies to regard only chiefs of departments or sections as responsible men, assistants being treated as irresponsible cyphers.

The limit placed on initial salaries paid to new assistants indicates another aspect of this second factor. The motive of the rule seems to be the widespread belief among official bodies that the younger the recruit, the better servant he will be, since the limit is fixed at a level which will normally only attract younger men. This belief may be justified where clerical staff is concerned; it is certainly fallacious where architects are concerned. The work of an official architect's office can only benefit by the attraction to it of older men who have had wider experience, as well as younger men.

The conditions of the large official department would appear to be met by the development of a system of groups, such as has been recently advocated in various quarters, and is actually in operation, very successfully, in some offices. Each group should consist of an architect, ranking as such, and

responsible to the section architect, with not more than half a dozen assistants of various grades. A group should be responsible for the design and execution of jobs complete, including layouts, sketches and supervision. It would be possible for groups to co-operate with abnormally large jobs if necessary.

Such a system would facilitate the development of fresh ideas, would ensure each problem being treated on its own merits, and would stimulate enthusiasm in the staff, by promoting a more personal atmosphere in which the most junior assistant need not be discouraged from making suggestions. By giving many more assistants the chance to show their mettle, it would facilitate promotion by merit. Such a system would make it impossible for any individual to hide behind standardized design, lack of responsibility, and a rigid routine, until by sheer length of service they could achieve senior positions, in which they can successfully smother the work of subordinates who show too much initiative.

Finally, there should be a system of post-entry training in the methods and policy of the council, such as exists in other departments, and questions and suggestions by assistants should be encouraged. This would provide a reservoir of men capable of filling senior executive posts, and would check the present tendency of men in such positions to leave administrative matters to the clerical staff, which is a fruitful cause of the perpetuation of obsolete or inefficient methods.

R.I.B.A. ELECTIONS THE CANDIDATES

I. FELLOWS

ABERCROMBIE, LESLIE PATRICK

AGE: 59.

EDUCATION: Articled to C. H. Heathcote, Manchester. Manchester School of Art, and Liverpool University.

PRACTICE: Housing and similar schemes; town planning consultant; lecturer at Liverpool School of Civic Design; Professor of Civic Design, Liverpool, and Professor of Town Planning, London University.

PREVIOUS SERVICE: Vice-President; Member of Council; Chairman of the Town Planning, Housing and Slum Clearance Committee.

OTHER SERVICE: Editor of "Town Planning Review"; Past President of the Town Planning Institute.

ADSHEAD, STANLEY DAVENPORT

EDUCATION: Offices of George Sherrin and Ernest George.

PRACTICE: Private: Various public buildings and libraries won in competition;

work on the Duchy of Cornwall Estate and many housing schemes. Professor of Town Planning, Liverpool, 1909-14; Past Professor of Town Planning, London University.

PREVIOUS SERVICE: Member of various R.I.B.A. Committees; Member of Council; Member of Royal Fine Art Commission.

PUBLICATIONS: Several Regional Town Planning Reports.

ANSELL, WILLIAM HENRY

AGE: 66.

EDUCATION: Offices of John Belcher, R.A., Sir Andrew Poynter and E. S. Prior.

PRACTICE: Private: Various offices, hospitals, and houses.

PREVIOUS SERVICE: Chairman, Board of Architectural Education, 1931-1933; Past Vice-President and Member of Council.

OTHER SERVICE: Past President of the A.A.; Member of the Council and of the Faculty of Architecture of the British School at Rome.

ASHLEY, HENRY V.

AGE: 66.

EDUCATION: Articled to William Dunn and studied whilst travelling in England and France.

PRACTICE: Private, partner in firm of Ashley and Winton Newman. Numerous schemes won in open competition; Art Galleries, Birmingham; Masonic Peace Memorial, and various other buildings.

PREVIOUS SERVICE: Chairman of Practice Standing Committee; Vice-President of the Council, 1929-1931.

ASLIN, C. H.

AGE: 44.

EDUCATION: Sheffield University, Department of Architecture and Department of Applied Science; articled to the late J. P. Earle, Sheffield; M.I.STRUCT.E.

PRACTICE: Architect to the County Borough of Derby; schools, housing and hospitals; central improvement scheme, including police courts, markets, bus station and municipal offices.

PREVIOUS SERVICE: R.I.B.A. and Allied Societies Committees and Councils; member of Official Architects' Committee.

BAIN, VICTOR

EDUCATION: University College, London.

PRACTICE: Private, including educational, commercial, industrial and domestic buildings. Placed first in open competition for new Public Baths, Kingston-upon-Thames; placed second in open competition for new Central Baths, Leeds; hon. mention in open competition for new Council Offices, Swinton and Pendlebury.

PREVIOUS SERVICE: On R.I.B.A. and Allied Societies Committees and Councils; member R.I.B.A. Council, 1935-37; member, Allied Societies' Conference, 1934-36; past-president West Yorkshire Society of Architects, and member of Council and Executive; member of Science Standing Committee; member of Town Planning, Housing and Slum Clearance Committee, and Preservation of Architectural and Historic Buildings Sub-Committee.

OTHER SERVICE: Member of House and Estates Committee of Leeds University.

PUBLICATIONS: "National Planning."

BARTLETT, PERCY J.

EDUCATION: Articled to late Cole A. Adams; A.A. School.

PRACTICE: Assistantships in private and public offices until 1927. Since then chief architect to Messrs. Boots, Nottingham. Business and factory buildings for Messrs. Boots; domestic and other work in Bristol and elsewhere.

BRADDELL, T. A. DARCY

AGE: 54.

EDUCATION: Articled to Sir Ernest George. A.A. Evening School.

PRACTICE: Private, Partner, Darcy Braddell and Humphry Deane. Many houses, office buildings and other work.

PREVIOUS SERVICE: Chairman of Board of Architectural Education; Vice-President of Council.

BUNCH, ARTHUR CHARLES

AGE: 59.

EDUCATION: Pupil of late J. B. Colson, and assistant to Colson, Farrow and Nisbett, of Winchester.

PRACTICE: County Architect of Warwickshire; Advisory Architect to Warwickshire Joint Planning Committees. Works include housing, schools, police stations, hospitals, and other works.

PREVIOUS SERVICE: Member of Official Architects' Committee and Central Panels Committee; member of Council and Town Planning sub-Committee of Birmingham Architectural Association.

**CHERMAYEFF, SERGE**

AGE: 38.

EDUCATION: Experience as decorator, designer and painter in Europe and Argentine. Later designer to Messrs. Waring and Gillow.

PRACTICE: Private. Formerly in partnership with Erich Mendelsohn. Domestic work, E.D.C. Studios, exhibitions, new offices for Messrs. Gilbey, I.C.I. Research Laboratories, Manchester. In partnership with Erich Mendelsohn, Bexhill Pavilion.

OTHER SERVICES: Member of Executive and Exhibition Committee of M.A.R.S., member of the A.T.O., past member of the Council of the Society of Industrial Artists.

COLLINS, HENRY R.

AGE: 54.

EDUCATION: Articled with late T. Stevens, Bournemouth; Continental travel; worked, as assistant, in London, Birmingham, Cambridge, and Chester.

PRACTICE: Thirty years' private practice; senior partner, H. R. Collins and A. E. O. Geens, Bournemouth. Numerous competition premiums, the most recent being municipal offices and assembly hall, Romford, Essex, 1935 (1st and 2nd premiums); general practitioner over Southern Counties; prior to war, six years' private practice in Barnsley, Yorks; housing work with County Borough of Chester immediately after war.

CROSS, KENNETH M. B.

EDUCATION: Articled to the late A. W. S. Cross, M.A., F.R.I.B.A., Cambridge University.

PRACTICE: Private practice 1913-present time (partner with the late A. W. S. Cross, 1913-1932). Public baths, town halls, public library, maternity and child welfare centre, electricity stations, schools, ecclesiastical and crematorium; domestic work.

Competitions: Morecambe Open-air Bath Finchley Baths (1st), Newcastle-on-Tyne Baths, Manchester Art Gallery (3rd), Bolton School for Girls (3rd).

PREVIOUS SERVICE: Member of Competitions Committee, 1931-1938; Chairman of Competitions Committee, 1938; Health and Fitness Exhibition Committee, 1938.

PUBLICATIONS: "Modern Public Swimming Baths," "Modern Public Baths and Wash-houses," "Practical Notes for Architectural Draughtsmen."

EASTON, JOHN MURREY

EDUCATION: Articled to George Bennet Mitchell, London; Godwin Bursary, 1927.

PRACTICE: Private, partner in firm of Stanley Hall & Easton and Robertson. Principal works: British Pavilion, Paris Exhibition, 1925; Horticultural Hall; hospitals and work at Cambridge; London Architecture Medal, 1928.

PREVIOUS SERVICE: Art Standing Committee, Literature Committee.

FORSHAW, J. H.

AGE: 42.

EDUCATION: Liverpool School of Architecture; Lever Prize Certificate in Civic Design.

PRACTICE: Liverpool, New York and Birmingham; domestic, commercial and ecclesiastical; educational and public buildings; consultant town and regional planning schemes; Architect to Miners' Welfare Committee; Lay-out of playgrounds and playing fields, pithead baths and advisor generally on the development of new industrial schemes; work exhibited in various R.I.B.A. Exhibitions.

PREVIOUS SERVICE: R.I.B.A. and Allied Societies Committees and Councils; Art Standing Committee, Exhibitions Sub-committee, London Architecture Bronze Medal Jury.

OTHER SERVICE: Member Advisory Council L.C.C. Central School of Arts and Crafts.

PUBLICATIONS: "Lancaster and Morecambe Regional Planning Scheme," Liverpool University Press 1927.

HALL, E. STANLEY

AGE: 57.

EDUCATION: Articled to late Edwin T. Hall; A.A. School, 1904-7.

PRACTICE: Private (now partner, Stanley Hall & Easton and Robertson). Chiefly hospitals, including Hospital for Sick Children, Great Ormond Street; Queen Charlotte's Hospital, Hammersmith; additions to the General Infirmary and St. James's and Seacroft Hospitals, Leeds; to York County Hospital, Elizabeth Garrett Anderson Hospital and Queen's Hospital for Children, London.

PREVIOUS SERVICE: Hon. Sec. R.I.B.A., 1925-28; Vice-President, 1928-30 and 1935-37; Vice-chairman Executive Committee and Member of Council; Finance and House Committee; Conditions of Contract Joint Tribunal; Professional Conduct Committee; Joint Committee of London Architects and Builders; London Architecture Bronze Medal Jury.

OTHER SERVICE: President, Architectural Association, 1922-23; member of Board of Studies in Architecture, London University.

HILL, G. NOEL

AGE: 44.

EDUCATION: Liverpool School of Architecture.

PRACTICE: Official. Assistant to Gilbert Frazer and Messrs. Briggs and Thornley, of Liverpool. Assistant, Liverpool Corporation Housing Department and City of Leicester. City Architect, Manchester. Responsible for the housing and other work in the City of Manchester.

PREVIOUS SERVICES: Member of Council and Vice-President, Manchester Society of Architects.

LOWETH, SIDNEY HAROLD

EDUCATION: Royal Academy Architectural Schools, Silver Medallist and Prize Winner for Architectural Design.

PRACTICE: Official. Deputy County Architect Kent, schools, hospitals, county courts, libraries, clinics, etc.

PREVIOUS SERVICE: Unification Committee, Science Standing Committee; Member of Council of South-Eastern Society of Architects.

OTHER SERVICE: Chairman of Maidstone Arts and Crafts Society, Member of Examinations Board for Art and Building for the Kent and Surrey Education Committee.

MEADOWS, SAMUEL DOUGLAS

PRACTICE: Chief Architect. Commissioners of Crown Lands.

**MOBERLY, ARTHUR HAMILTON**

AGE: 52.

EDUCATION: A.A. School. Articled to E. J. May. R.A. School.

PRACTICE: Private, partner in the firm of Slater and Moberly. Various commercial and office buildings and houses.

PREVIOUS SERVICES: Chairman of Literature Standing Committee, 1925-1927; Chairman of the Board of Architectural Education, 1934-1935.

MUSMAN, E. BRANDER

EDUCATION: University College, London. First Class Honours. Donaldson Silver Medallist.

PRACTICE: private, partner, Musman and Worrall. General work, including many public houses and hotels. Lecturer in Design at University College.

RAMSEY, STANLEY C.

EDUCATION: King's College, London.

PRACTICE: Private, in association with Professor Adshead, work for the Duchy of Cornwall, and various housing estates.

PREVIOUS SERVICE: Hon. Secretary of the Public Relations Committee, 1934-36; Chairman of same Committee, 1937-38.

PUBLICATIONS: "Small Houses of the Late Georgian Period," "The Life of Inigo Jones."

RICHARDSON, A. E.

PRACTICE: Private, partner, Richardson and Gill. Many city buildings, housing work for Duchy of Cornwall, and country houses. A.R.A. Professor of Architecture, University of London.

PREVIOUS SERVICE: Vice-President of Council, Literature Standing Committee.

STRETTON, CLEMENT

AGE: 59.

EDUCATION: Articled to Stockdale Harrison, F.R.I.B.A., Leicester, 1896; passed R.I.B.A. qualifying exam. and elected Associate, 1901. Bronze Medal, Honours Course, Building Construction, South Kensington, 1901.

PRACTICE: Private. Domestic, industrial and various housing schemes.

PREVIOUS SERVICE: Served on Council, 1935-1937; served on Allied Societies Conference from 1935 to present time; Hon. Secretary, Leicester and Leicestershire Society of Architects, 1910 to 1925; President, 1935-37.

OTHER SERVICE: Member of Leicestershire County Council Joint Planning Committee; member, Leicestershire Panel of Architects; member, Leicester Architects' and Builders' Joint Committee.

SULLIVAN, L. SYLVESTER

AGE: 60.

EDUCATION: Hastings School of Art, Alfred Waterhouse and Son, First Atelier of Architecture.

PRACTICE: Private. General work, Surveyor to the Saddlers Company, including Head Offices for Messrs. Courtaulds, Ltd., and Harwood House, Cookham Dean.

PREVIOUS SERVICE: Chairman Board of Architectural Education, Member of Council and Past Vice-President, Vice-Chairman Finance Committee, Past Chairman Practice Standing Committee, Past Chairman Professional Conduct Committee, Past Chairman Building Act Committee, Past Member Schools Committee.

OTHER SERVICE: Vice-President A.A., Member of Faculty, British School at Rome, Member of Registration Council of the U.K., Chairman of original Admission Committee to Register.

SWARBRICK, JOHN

AGE: 59.

EDUCATION: Manchester University and R.A.; Medallist of R.A. and A.A.; M.I.Struct.E.

PRACTICE: Private, as partner of Joseph Swarbrick in general practice, 1900-1928. Specialist in measurement of daylight.

PREVIOUS SERVICE: Several years' service on Practice and Science Standing

Committees, and has represented R.I.B.A. at several illumination conferences.

PUBLICATIONS: "Robert Adam and his Brothers"; "Easements of Light."

SYME, JOHN S.

EDUCATION: Trained in the office of the late Sir R. Rowand Anderson, Edinburgh; diploma of Edinburgh College of Art; technical and architectural subjects at Heriot-Watt College, Edinburgh—bronze medal in architecture.

PRACTICE: Private. Banks in Norwich, Doncaster, Newcastle and Durham; stands and other racecourse buildings at Newmarket, York, Gosforth Park and Lingfield; country homes for the Earl of Harewood (in collaboration with Sir Herbert Baker), the Marquess of Titchfield, and the late Sir Mark Sykes; churches and chapels at York; church restoration at Howden, Yorks; housing scheme at Durham, in association with Mr. J. Hervey Rutherford.

PREVIOUS SERVICE: Member of Council; President, York and East Yorks Architectural Society.

OTHER SERVICES: Formerly lecturer on architecture to York City School of Art.

TRENCH, G. MACKENZIE

AGE: 53.

EDUCATION: Articled to Thomas Arnold; completed articles with successors.

PRACTICE: Official. Police Architect and Surveyor at New Scotland Yard; police stations, section houses, garages, wireless stations, sports pavilions, etc., including West Wickham wireless station and Wray House married quarters, Chelsea.

OTHER SERVICE: Served on many Home Office and other Departmental Committees.

WALLIS, THOMAS

EDUCATION: Articled to Sydney R. J. Smith. A.A. School.

PRACTICE: Private, partner in firm of Wallis, Gilbert and Partners. Winner of various competitions at Aldershot, Stoke-on-Trent, and elsewhere. Very large number of factories and similar buildings.

PREVIOUS SERVICE: Member of Science Standing Committee.

WARD, BERNARD MICHAEL

AGE: 63.

EDUCATION: School of Architecture, University College, Liverpool.

PRACTICE: Private.

SERVICES: President of the Liverpool Architectural Society.

WHEELER, E. P.

PRACTICE: Official. Superintending Architect to the London County Council.

WORNUM, G. GREY

AGE: 50.

EDUCATION: Slade. Articled to R. Selden Wornum. A.A. Evening School. Various prizes.

PRACTICE: Private; with Louis de Soisson. Various Haig Memorial Homes. In independent practice: flat blocks and other buildings. Architect of the R.I.B.A. building.

PREVIOUS SERVICE: Member of Council and Art Standing Committee.

OTHER SERVICE: Past-President of A.A.

II. ASSOCIATES

ADAMS, W. NASEBY

AGE: 50.

EDUCATION: Liverpool School of Architecture.

PRACTICE: Private, Partner of H. V. Ashley and Winton Newman.

PREVIOUS SERVICE: Member of Council. Committees, Competitions, Public Relations, Prizes and Scholarships, Registration Council.

ALLEN, JOSEPH STANLEY

AGE: 40.

EDUCATION: Liverpool. Post-graduate study in Europe and America. Athens Bursar.

PRACTICE: Assistant to Donn, Barber and George B. Post, New York, and Sir Arnold Thornely. Private practice with H. S. Silcock; 2nd premium, Police and Fire Station, Accrington. Head of Leeds School of Architecture.

PREVIOUS SERVICE: Board of Architectural Education, Art Standing Committee; member of Council and Vice-President of West Yorkshire Society of Architects.

BARNES, THOMAS SCOTT

AGE: 36.

EDUCATION: A.A. School. Town Planning Prize.

PRACTICE: Private, domestic and working-class housing; consultant in town planning.

PREVIOUS SERVICE: Member of Town Planning, Housing and Slum Clearance Committee, and Secretary for past three years; member of Practice Standing Committee.

PUBLICATIONS: Various articles on housing and town planning.

BLACKETT, JOHNSON

AGE: 41.

EDUCATION: Birkenhead and Liverpool Technical College and Liverpool School; M.I.Struct.E.; Brenforce Travelling Scholarship and gold medal of Structural Engineers; Alfred Bosson medal.

PRACTICE: Senior Assistant with Messrs. Rees and Holt, Liverpool; engaged in general private practice. Present position, Deputy Borough Architect, County Borough of Newport, Mon. Works: all types of municipal buildings, including housing and flats, hospitals, schools, bus garages, electricity power stations, public baths, business premises, and a large amount of maintenance work.

PREVIOUS SERVICE: 1930 to 1932, chairman of the South Wales Institute of Architects, Eastern Branch, and since 1932 has held office of Hon. Sec.; since 1926, Fellow of the S.W.I.A. and member of Council.

BRIDGWATER, D. L.

EDUCATION: Liverpool School.

PRACTICE: Private. Partner, Mitchell and Bridgwater. Works: Offices, flats, houses and various other buildings.

CASTLE, JAMES THOMAS

EDUCATION: R.I.B.A. Ashpitel Prize. M.T.P.I.

PRACTICE: Senior Architectural Assistant to County Architect of Middlesex.

CATCHPOLE, E. G.

AGE: 49.

EDUCATION: Articled to W. Eade and E. T. Johns, of Ipswich.

PRACTICE: City Architect, Plymouth, formerly chief architectural assistant, Blackburn Corporation; elementary and secondary schools, orthopaedic, isolation and mental hospitals; new police headquarters, fire station and housing for City of Plymouth.

PREVIOUS SERVICE: President of Devon and Cornwall Architectural Society.

OTHER SERVICE: Hon. Architect, Plymouth and District Playing Fields Association.

DOUGILL, WESLEY

AGE: 45.

EDUCATION: Liverpool School and British School at Rome; Godwin and Wimperis Bursary; measured drawings prizes and medal; Rome Scholar.

PRACTICE: Private. Lectureship and Research Fellowship in Dept. of Civic Design, Liverpool; town-planning schemes in Cheshire; domestic work in Yorkshire, Buckinghamshire and Westmorland; 1st prize in open competition for layout of sea-front at Portsmouth; 2nd prize in competition for health centre, Bilston, Staffs; 3rd prize in competition for new town of Kincorth, Aberdeen.

PREVIOUS SERVICE: Associate Member of Council; Art Standing Committee; Hon. Secretary, Liverpool Architectural Society.

OTHER SERVICE: Member of local branch of C.P.R.E. and lecturer to R.I.B.A. and C.P.R.E. on town planning subjects.

PUBLICATIONS: Editor, "The Town Planning Review," Liverpool University.

DURNFORD, J.

AGE: 49.

EDUCATION: A.A. School; R.A. School at University College; Banister Fletcher Bursary and silver medal.

PRACTICE: Official. Assistant Architects' Dept., London County Council; cottage estates, block dwelling estates, nurses' homes and hospital buildings, farm buildings and general buildings. Various premiums in competitions.

PUBLICATIONS: Article on "Housing Estates" in "Building Encyclopedia."

GOODSMITH, WALTER

AGE: 35.

EDUCATION: Technical College and University, Sydney; London University Atelier; experience in architectural, engin-

earing and town planning offices; Institution of Structural Engineers, Brenforce Silver Medal, 1930; Portland House Medal and Travelling Scholarship, 1932.

PRACTICE: Private. Insurance building at Bournemouth and housing estate in conjunction with Raymond McGrath; consulting and exhibition work for E.D.A.; consultant designer for shelters, stop-posts, etc., London Transport.

PREVIOUS SERVICE: Hon. Sec. Science Standing Committee; Hon. Sec. Foreign Relations Committee; member Parliamentary Science Committee; member Building Divisional Council of British Standards Institution, also serving on nine B.S.I. committees; member joint sub-committee of Practice and Science Standing Committees and the Town Planning, Housing and Slum Clearance Committee to consider future revisions to L.C.C. Building Bye-laws.

OTHER SERVICE: Lecturer on architecture, interior design, materials, equipment and furniture, at the Polytechnic School of Architecture since 1935; lecturer at the Architectural Association School of Architecture, 1936-37.

PUBLICATIONS: Articles in architectural and technical press since 1932, contributor to "Specification," "Electrical Engineer," and "Lighting Engineer" sections.

HARRISON, JOHN

EDUCATION: Assistant to Graham and Hall, and Browne and Glover, Newcastle-upon-Tyne; Assistant to T. C. Howitt.

PRACTICE: Deputy County Architect, Hampshire; now County Architect, Derbyshire.

HOLFORD, WILLIAM GRAHAM

EDUCATION: Liverpool School, various offices in England, America, South Africa, France and Italy; Travelling Scholarship, Society of Arts and Sciences of America, 1929; Rome Scholar, 1930; M.T.P.I.

PRACTICE: Private, houses; winner in Gidea Park Competition; 1936, Consulting Architect to Team Valley Trading Estate; 1934, Lecturer at Liverpool School of Architecture; 1936, Lever Professor of Civic Design, Liverpool.

PREVIOUS SERVICE: Literature Committee; Junior Members Committee.

LIVETT, R. A. H.

AGE: 40.

EDUCATION: A.A. School.

PRACTICE: Assistant to the late Paul Waterhouse, London; chief assistant to T. C. Howitt (Nottingham Corporation); deputy Housing Director to the City of Manchester; Housing Director, Leeds.

PREVIOUS SERVICE: Member of the Council of the West Yorkshire Society of Architects.

OTHER SERVICE: Lecturer at the Leeds School of Architecture.

PUBLICATIONS: Various articles on Municipal Housing and large-scale Flat Development. Broadcasts on Housing and Town Planning.

O'RORKE, EDWARD BRIAN

EDUCATION: Cambridge University School. Archibald Dawney Scholar. R.I.B.A. Bronze Medal for recognized Schools.

PRACTICE: Private. Various exhibitions and other work; particularly interior work on the "Orion" and "Orontes" and Imperial Airways flying boats.

PENN, COLIN

AGE: 31.

PRACTICE: Assistant to Mendelsohn and Chermayeff, Connell, Ward and Lucas, and in the U.S.A. With two partners, won *News Chronicle* competition for rural school. Assistant in large public office.

PREVIOUS SERVICE: Member of Town Planning, Housing and Slum Clearance Committee.

**SKINNER, R. T. F.**

AGE: 29.

PRACTICE: Private, partner of firm of Teeton. Carried out various well-known modern buildings, including "Highpoint," Highgate, Dudley Zoo, and work at the London Zoo and Whipsnade.

PREVIOUS SERVICE: Member of Junior Members' Committee.

OTHER SERVICE: Secretary of the A.T.O.

**WARD, BASIL M.**

EDUCATION: Articled pupil in New Zealand; studied at London University School of Architecture Atelier; gained 2nd place, Rome Scholarship competition, 1926; one year's study British School at Rome; three years in Burma under private practising architect.

PRACTICE: In private practice as partner of firm of Connell, Ward and Lucas. Domestic, film studios, and other work.

PREVIOUS SERVICE: Three years member of Council; four years Public Relations Committee; chairman of Publicity sub-Committee; member of Science Committee, Town Planning, Housing and Slum Clearance Committee, and the Schools Committee of the Board of Education; founder member of MARS.

OTHER SERVICE: London University Extension Lecturer; gave series of lectures at the R.I.B.A. entitled "Architecture, Its Place in Human Society"; external examiner, Architectural Association.

III. LICENTIATES**ASHWORTH, ERNEST**

AGE: 48.

EDUCATION: Articled at Bradford, Yorkshire; Bradford Technical College and School of Art.

PRACTICE: Architectural and Housing Assistant, Plymouth Corporation, Devon; schools, hospitals, concert hall, development of housing estates and flats.

PREVIOUS SERVICE: Member, West Yorkshire Society of Architects.

BEGLEY, W. W.

AGE: 45.

PRACTICE:] Architectural staff of the L.C.C.

PREVIOUS SERVICE: Science and Literature Committees; Member of the Architectural Graphic Records Committee; hon. director of meetings to the Ecclesiological Society.

BLANC, LOUIS

PRACTICE: Private, London; various commercial buildings, including new building for D. H. Evans.

PREVIOUS SERVICE: Building Acts Committee, R.I.B.A. Representative on L.C.C. Advisory Committee on Amendment of London Building Act.

FIELD, FREDERICK H.**GRIFFITHS, GORDON H.**

EDUCATION: Articled Ivor Jones and Percy Thomas, Cardiff; part-time Dept. of Architecture, Technical College, Cardiff; Associate Member of the Town Planning Institute.

PRACTICE: Private; domestic architecture, alterations to business premises, alterations to club premises, housing development schemes.

PREVIOUS SERVICE: Member of the South Wales Institute of Architects.

MANNING, R. D.

AGE: 37.

PRACTICE: Varied experience in private practice as principal and assistant and in public offices. Assistant in large public office.

PREVIOUS SERVICE: Member of Salaried Members' Committee.

WALDRAM, PERCY J.

PRACTICE: Private. Previous practice as an architect and engineering consultant, now largely consultant in the measurement and predetermination of daylight.

PREVIOUS SERVICE: Member of Council. Member, Science Standing Committee. R.I.B.A. representative on numerous committees of British Standards Institution. Chairman, Joint Committee on Orientation of Buildings and on Lighting of Schools. Fellow and Examiner, Chartered Surveyors' Institution.

PUBLICATIONS: "The Principles of Structural Mechanics." "Steel Frame Buildings." Technical Paper No. 7 Illumination Research (part), H.M. Stationery Office.

**WALKER, RAYMOND**

AGE: 33.

EDUCATION: The Leeds School of Architecture and the Architectural Association.

PRACTICE: Five years as principal in private practice. Late staff architect to the Coal Utilization Council; now staff architect to the Cement and Concrete Association.

PREVIOUS SERVICE: For two years a member of the Architects' Registration Council; a member of the Admission Committee of the A.R.C.U.K.

OTHER SERVICE: Member of the Combustion Appliances Joint Consultation Board; lecturer to the Schools and Allied Societies of the R.I.B.A. on technical subjects.

PUBLICATIONS: Various articles in the technical papers on the development of materials and building methods.

WHITEHOUSE, S. LUNN

EDUCATION: Birmingham School of Architecture.

PRACTICE: Private: Ecclesiastical, commercial and domestic.

PREVIOUS SERVICE: Member of Council, Art Standing Committee and Allied Societies' Secretaries Conference; Member of Council of Birmingham and Five Counties A.A.

OTHER SERVICE: On staff of Birmingham School of Architecture.

CIVIC HALLS, WOLVERHAMPTON;



GENERAL—The building contains two halls, a large one with organ for use by choral and musical societies and for important social functions; and a small one with a stage for amateur theatricals. Both halls have cinematograph projector rooms and spring floors for dancing.

Top, the main front and entrance portico to the large hall; *above*, detail of entrance portico; *left*, entrance to small hall.

DESIGNED BY E. D. LYONS AND L. ISRAEL



INTERNAL FINISHES :—

MAIN FOYER—2 in. brick piers ; plaster walls, painted ; terrazzo floor ; plaster ceiling on expanded metal, with domes of fibrous plaster, painted slate blue.

LARGE HALL—Plaster walls distempered, off white ; piers to balcony promenade in grey tiles with yellow strip tiles ; walls to promenade, plaster, painted yellow ; main ceiling, solid plaster on expanded metal, painted yellow ; beams to main ceiling in fibrous plaster, painted yellow and grey ; laylight, metal, glazed with spray-tinted glass ; walls surrounding stage and acoustic hood, faced with silver leaf ; panelling to walls to underside of balcony and stage, Indian white mahogany veneer, with cover fillet painted primrose yellow ; floor and choir stepping, teak ; fabrics specially woven and designed to be incorporated in with the decorative scheme ; carpets, nigger brown with fawn stripes ; tip-up stacking arm-chairs of tubular steel.

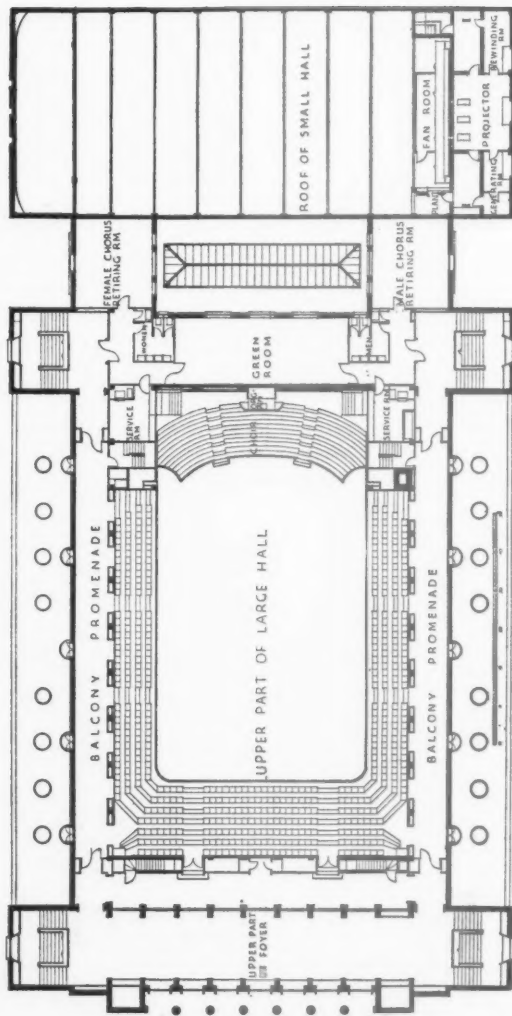
SMALL HALL—Walls, wallboard fixed solid, uncoloured ; dado and proscenium opening joinery, Indian white mahogany ; ceiling, solid plaster, painted terra-cotta colour ; beams, fibrous plaster, painted grey and off white ; acoustic hood over stage, solid plaster faced with silver leaf ; furniture, as large hall.

ANTE ROOM—Ceiling, plaster painted off white, with beams painted primrose yellow one side and grey the other side, soffites off white ; anodized aluminium metal screens with wiretex glazing ; walls, plaster, painted off white ; reveals to entrances painted lacquer red.

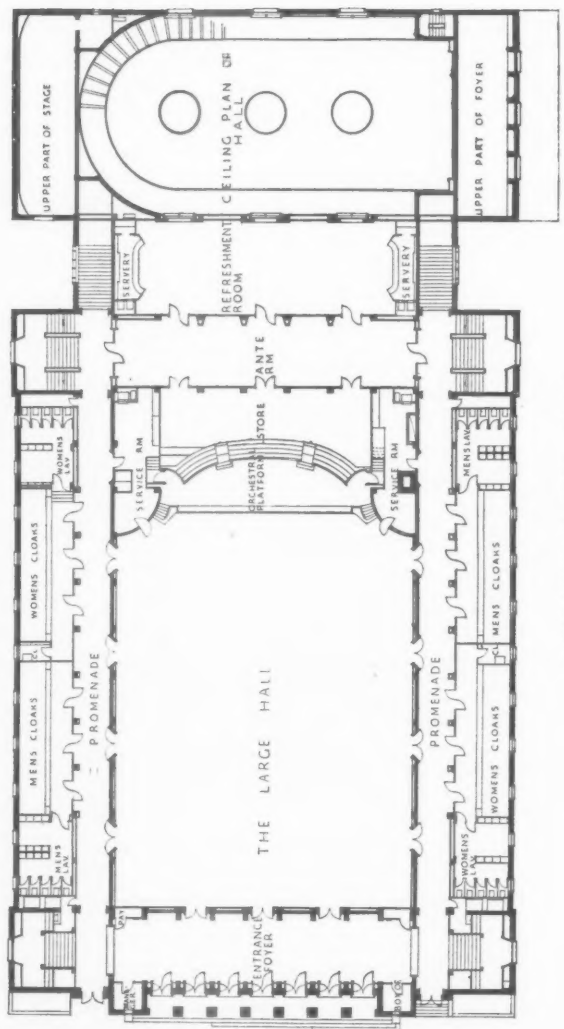
Above, the large hall ; left, balcony of large hall.



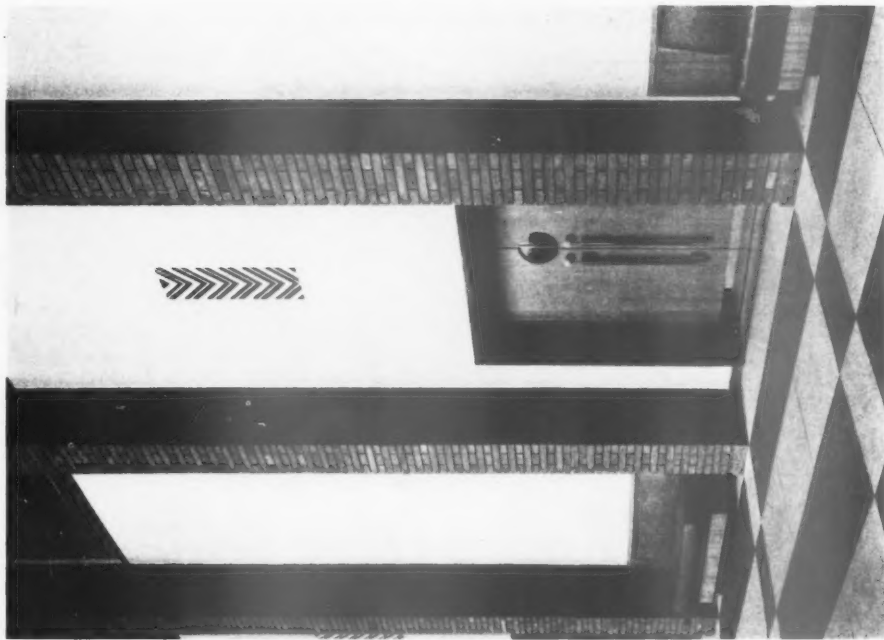
CIVIC HALLS, WOLVERHAMPTON: DESIGNED BY E. D. LYONS AND L. ISRAEL



FIRST FLOOR PLAN



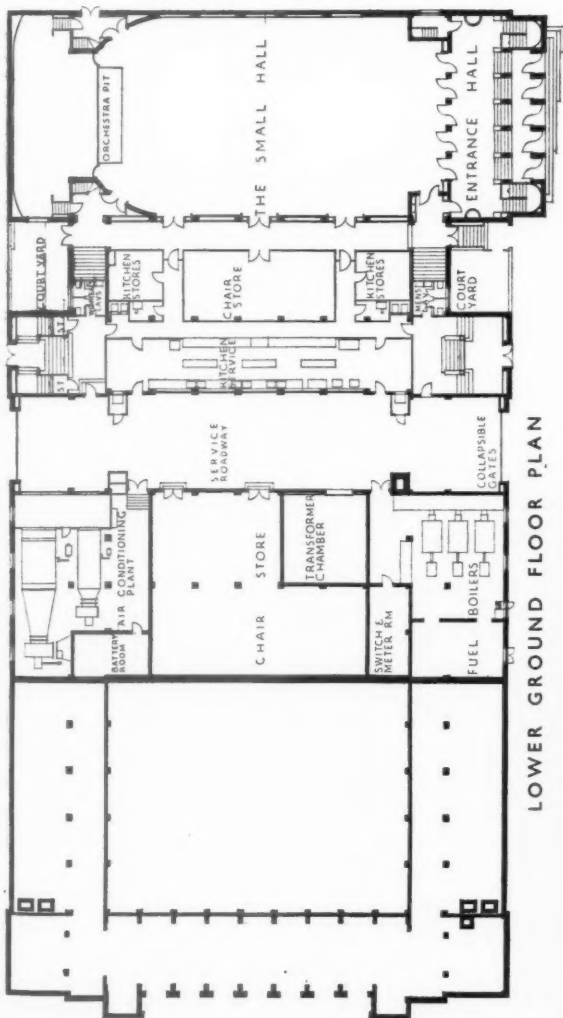
GROUND FLOOR PLAN



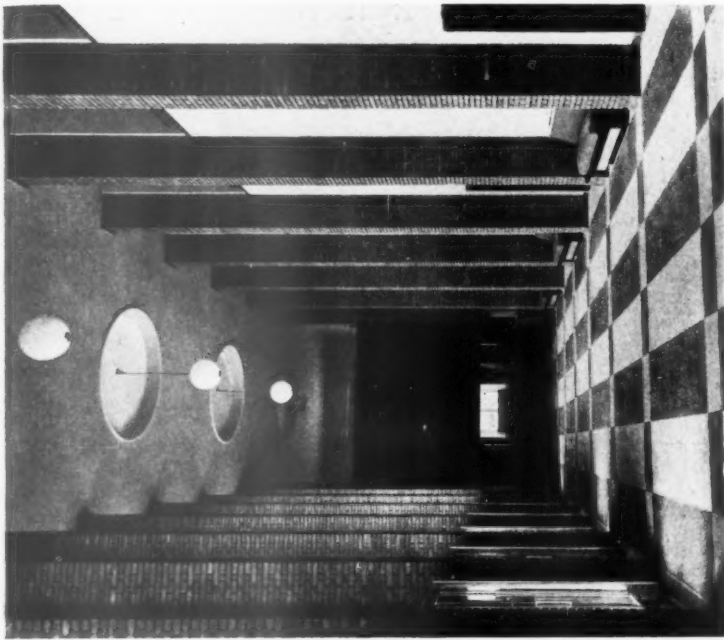
PLAN—The large hall seats 1,283 persons on the ground floor and 497 in the gallery, and the lower platform accommodates an orchestra of 80 and the tiers behind a choir of 200. The small hall seats 700 persons. Both halls can be used as separate units or en suite. The main entrance hall of the building will ultimately be connected to the Town Hall by a bridge for civic purposes.

Above, one of the entrances to the large hall from the foyer.

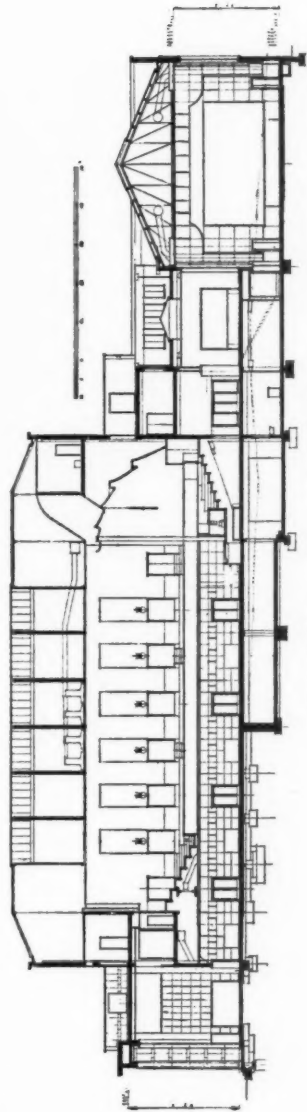
GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



CONSTRUCTION—Steel frame; brick walls, 14 ins. external, 9 ins. internal surrounding halls; 4½ ins. for inner linings and partitions. Floors are hollow tile; balconies, reinforced concrete; roofs, steel trusses, boarded and slated. The elevations are in multi-coloured facing bricks and Portland stone, with windows and grilles in anodized aluminium. The plinths to the side elevations are in faience.
Above: Entrance foyer to large hall; left, artistes' entrance and the long roller-door for unloading scenery on to the stage of the small hall.

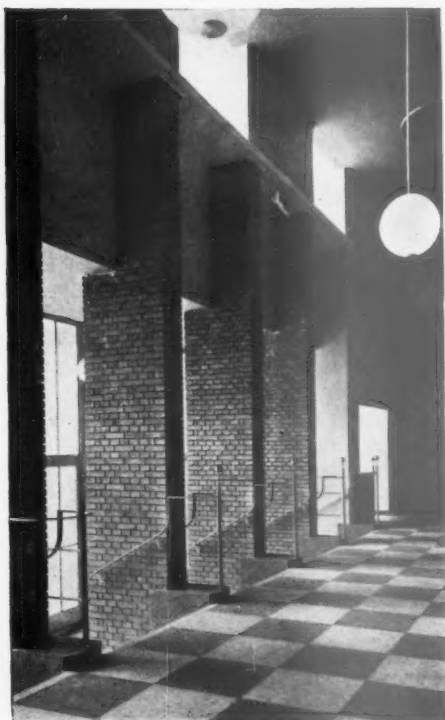
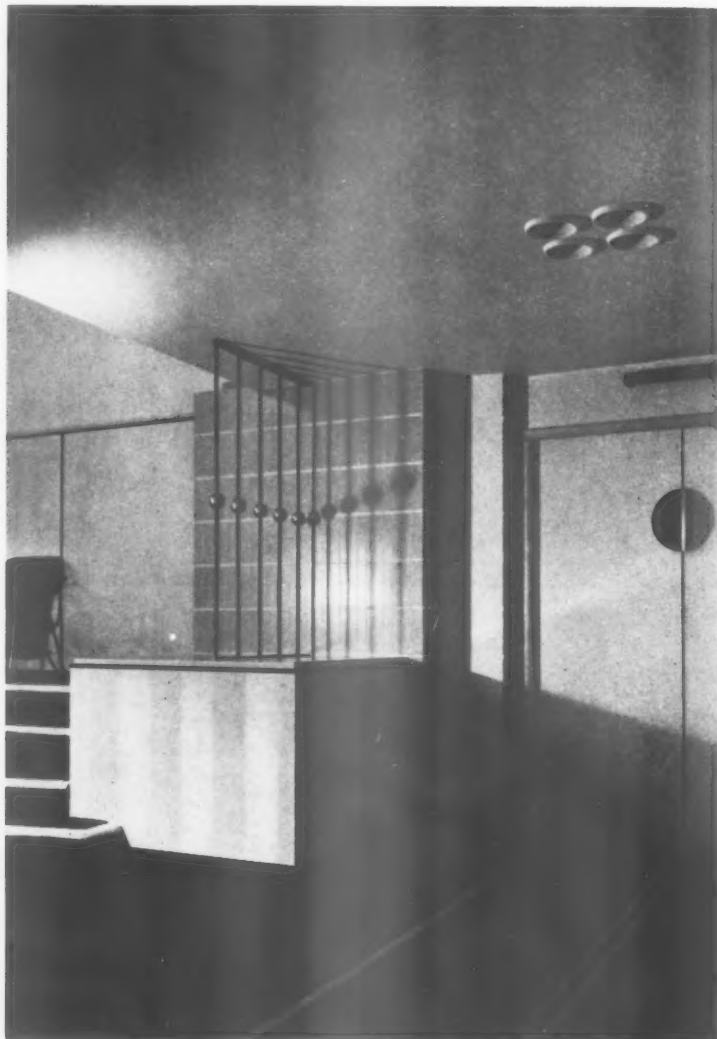


LONGITUDINAL SECTION

CIVIC HALLS, WOLVERHAMPTON



DESIGNED BY E. D. LYONS
AND L. ISRAEL



Top, left, balcony promenade to large hall; top, right, one of the entrances to the balcony promenade; left, street entrances to foyer of small hall; above, the small hall. The mural decorations on either side of the proscenium opening are by Miss Muriel Gilbert. The general contractors were Messrs. Henry Willcock & Co. For list of sub-contractors see page 963.

WORKING DETAILS : 657

GALLERY TO SQUASH COURT

• HOUSE IN CHELSEA, S.W.

• MENDELSON AND CHERMAYEFF

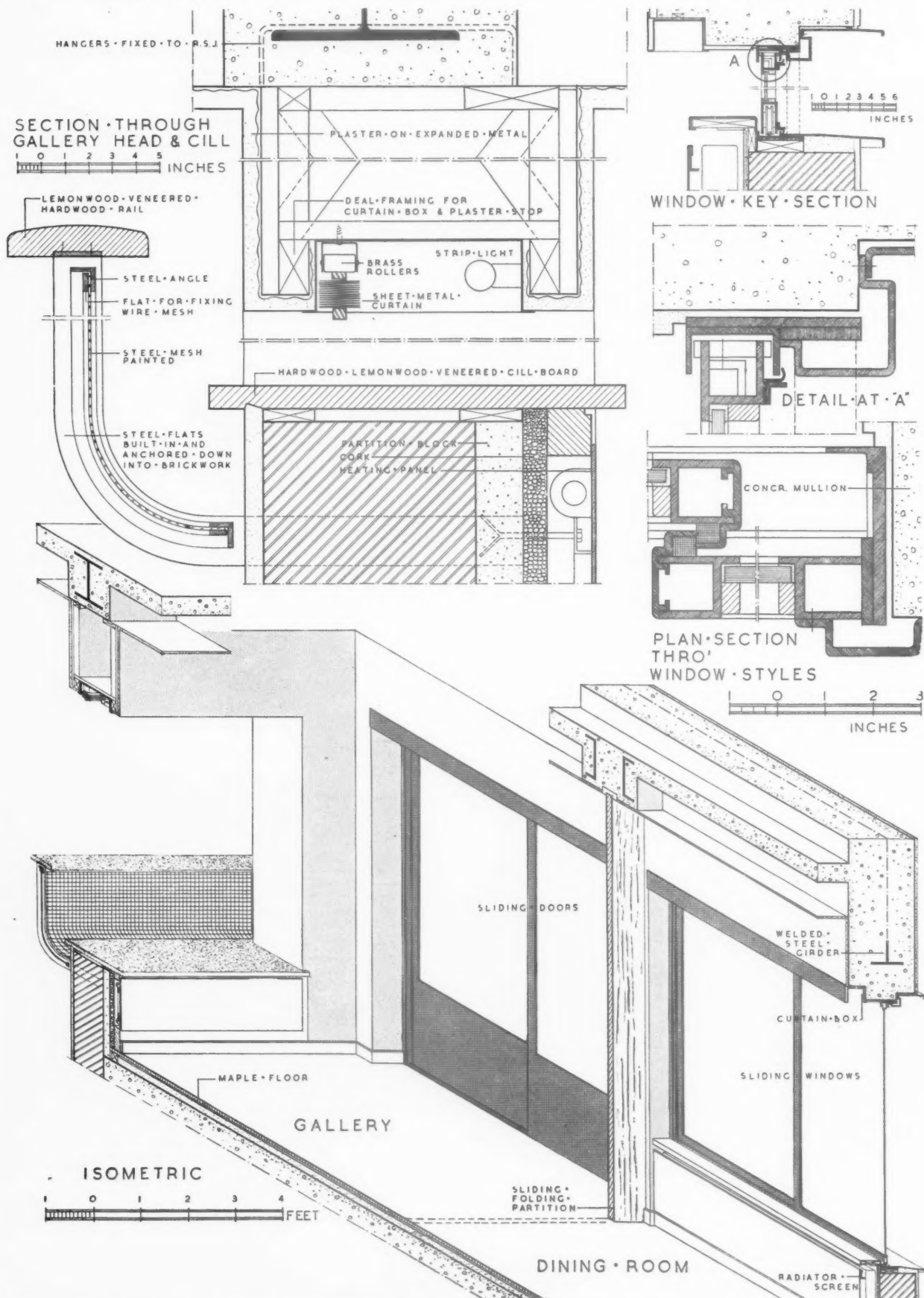


The spectators' gallery to the squash court is an extension of the dining-room on the ground floor, and is separated from it by a sliding-folding partition. The squash court is below ground floor level. The whole of one side of the gallery is open to the squash court, a curtain being drawn across the opening when the court is not in use. The cill to the opening forms a seat for spectators, and it has a balustrade in steel mesh, painted, with veneered hardwood rail. A heating panel runs the full length of the opening underneath the seating.

Sliding metal doors lead on to the garden terrace at one end of the gallery, while at the other end a sliding-folding partition gives access to the squash court staircase. Details are shown overleaf.

WORKING DETAILS : 658

GALLERY TO SQUASH COURT • HOUSE IN CHELSEA, S.W. • MENDELSON AND CHERMAYEFF



Isometric and details of the squash court gallery illustrated overleaf.

The Architects' Journal Library of Planned Information

INFORMATION SHEET SUPPLEMENT

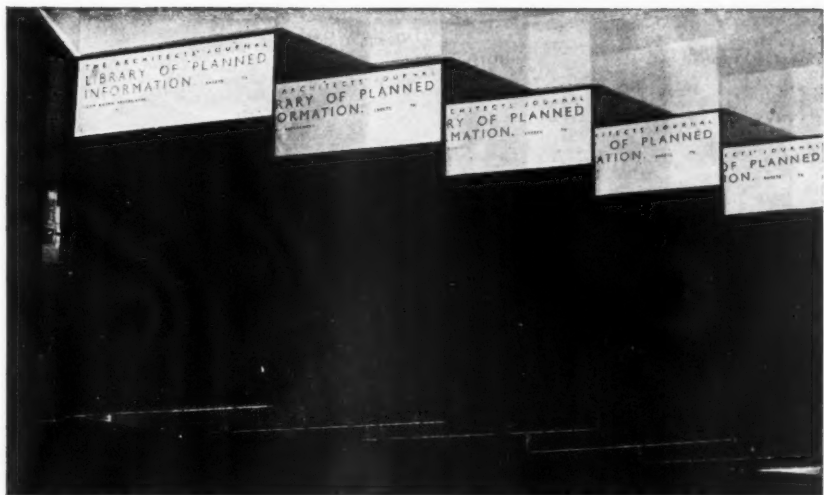


SHEETS IN THIS ISSUE

631 Kitchen Equipment

632 Doors and Door Gear

In order that readers may preserve their Information Sheets, specially designed loose-leaf binders are available similar to those here illustrated. The covers are of stiff board bound in "Rexine" with patent binding clip. Price 2s. 6d. each post free.



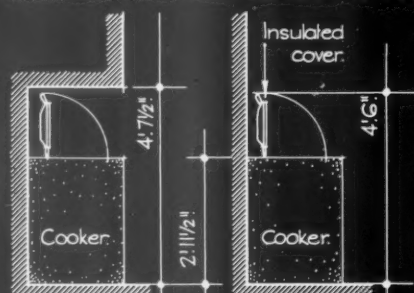
Sheets issued since Index :

- 601 : Sanitary Equipment
- 602 : Enamel Paints
- 603 : Hot Water Boilers—III
- 604 : Gas Cookers
- 605 : Insulation and Protection of Buildings
- 606 : Heating Equipment
- 607 : The Equipment of Buildings
- 608 : Water Heating
- 609 : Fireplaces
- 610 : Weatherings—I
- 611 : Fire Protection and Insulation
- 612 : Glass Masonry
- 613 : Roofing
- 614 : Central Heating
- 615 : Heating : Open Fires
- 616 : External Renderings
- 617 : Kitchen Equipment
- 618 : Roof and Pavement Lights
- 619 : Glass Walls, Windows, Screens, and Partitions
- 620 : Weatherings—II
- 621 : Sanitary Equipment
- 622 : The Insulation of Boiler Bases
- 623 : Brickwork
- 624 : Metal Trim
- 625 : Kitchen Equipment
- 626 : Weatherings—III
- 627 : Sound Insulation
- 628 : Fireclay Sinks
- 629 : Plumbing
- 630 : Central Heating

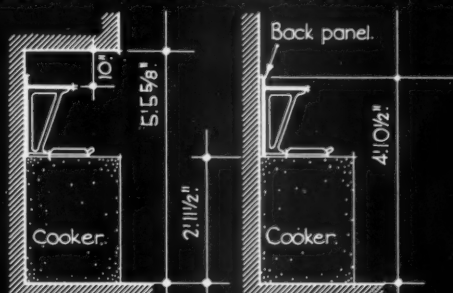
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

INSTALLATION & CONSTRUCTION OF THE ESSE HEAT STORAGE COOKERS:

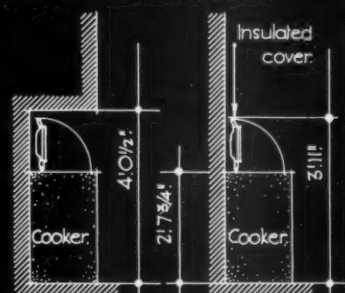
DIAGRAMS GIVING MINIMUM HEIGHTS REQUIRED FOR TYPICAL INSTALLATIONS OF THE VARIOUS DOMESTIC MODELS:



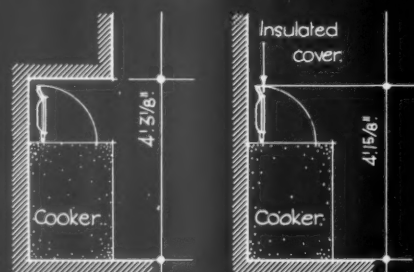
Clearances required for Type No. 2 PREMIER cooker inset in recess & outstanding.



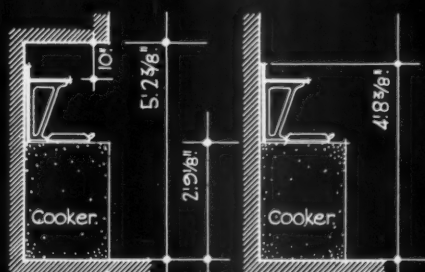
Clearances required by Type No. 61 PREMIER cooker inset in recess and outstanding.



Clearances required by ESSE FAIRY cooker inset in recess & outstanding.



Clearances required by the ESSE MINOR inset in recess & outstanding.



Clearances required by the ESSE MINOR fitted with plate rack & back panel inset & outstanding.

DIMENSIONS:

For detailed dimensions and elevations of these cooker types, see future Information Sheet No. 2 of this series.

FLUES:

All models are fitted with a flue nozzle for top or back circular flue connection. Existing chimneys can be used.

AUXILIARY UNITS:

For particulars of auxiliary ovens, water heaters etc., see Information Sheet No. 2 of this series.

TYPICAL CONSTRUCTION: SKETCH SHOWING OPERATING PRINCIPLES & ARRANGEMENT OF FIRE & OVENS OF THE PREMIER ESSE.

All models are fitted with an insulated bolster or cover for retaining the heat of the hot plate when it is not in use.

Enamelled top plate.
Porcelain enamel finish.

Outer casing cut away to show inner parts.

Walnut size anthracite or other smokeless fuel.

Insulated fuel hopper.

Fire & toasting radiant.

Toasting & ashpit doors.

Insulated fire door.

Fire bar shaker to clear bottom grate of ash.

Baking and boiling oven.
The size of the individual ovens is dependent upon the model of the cooker.

Standard flue nozzle.

The boiling hot plate and heat accumulator of all models stores its heat when the cooker is not in use. A fire inspection plug is provided.

Oven heat indicator.

Towel rail if fitted.

Adjustable thermostat.

Insulated doors to all ovens.

A flue dust removal drawer is fitted in the side of the PREMIER ESSE roasting oven.

OPERATION:

All cookers burn continuously, refuelling being necessary twice per day.

Ventilators to lower ovens.

Information from The Esse Cooker Company (Proprietors: Smith & Wellstood, Ltd.)

INFORMATION SHEET: KITCHEN EQUIPMENT: HEAT STORAGE COOKERS: No. 1.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 Oscar A Bayne

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 631 •

KITCHEN EQUIPMENT

Product : Esse Heat Storage Cookers
Domestic Models, No. 1

General :

This Sheet is the first of two illustrating Esse heat storage domestic cookers, and shows in diagrammatic form the *minimum heights* required for recessed and outstanding installations of the Premier, Minor and Fairy models. For models not fitted with the back panel and plate rack, the clearances given represent the lowest recess into which the cooker may be fitted, and do not take into account the head-room required in practice. In general, the lower the soffit of the recess over the cooker, the further the lintel should be kept back from the line of the cooker front.

Models :

Each of the three models mentioned above is provided with an insulated bolster or cover for retaining the heat in the hot plate. Each model is available with plate rack and back panel, and certain specific utensils and accessories are supplied with each. Detailed descriptions and prices of the different domestic models will be given on the second Sheet of this series. There are over fifty types ranging from the small domestic models shown, to major installations cooking for 1,000 persons. Various extras are available, including auxiliary ovens, separately fired water heaters combined with the cooker or independent, enamelled bases, etc. Prices range upwards from £32.

Operation :

The cookers are designed to burn continuously at a controlled rate, and thus be ready for use at all times. Since cooking is by conducted instead of direct heat, all natural flavours of the foodstuffs are retained and

shrinkage of meat is almost entirely eliminated.

The fire itself is fed with anthracite from an insulated gravity hopper and is sufficiently slow burning to make re-fuelling necessary only twice in 24 hours. With the exception of occasional riddling of ash from the fire bars with the shaking tool and daily emptying of the ash pit below, no attention is required.

Construction :

Most of the working parts of a typical cooker are shown on the front of this Sheet. The construction is such that the fire is not in direct contact with the oven sides or the food, and the latter cannot therefore be spoiled by scorching. The correct amount of heat is conveyed to each oven and part of the cooker by controlled radiation and conduction, and is retained by heavy insulation.

Installation :

The cookers are readily erected and existing chimneys can be used, if free from down draught and if dampers are provided when other flues use the same chimney. Cost of delivery and erection varies according to distance. A minimum charge of £5 is made for delivery and erection of the Minor models and £6 for the Premier. Delivery of the Fairy model is free. A dead level smooth hearth should be provided. Flue piping is extra.

Finish :

The exterior of the cookers, except the top plate (which is enamelled black) is finished in porcelain enamel in any one of various colours. Cream is standard for the Minor and Premier models. All bright parts are chromium plated.

Name of Manufacturers : The Esse Cooker
Company (Proprietors :
Smith & Wellstood, Ltd.)

Head Office and Works : Bonnybridge,
Stirlingshire

Telephone : Bonnybridge 111

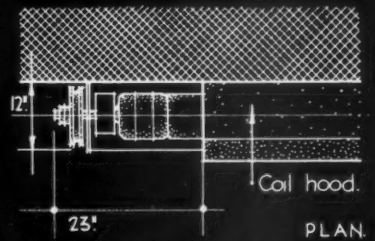
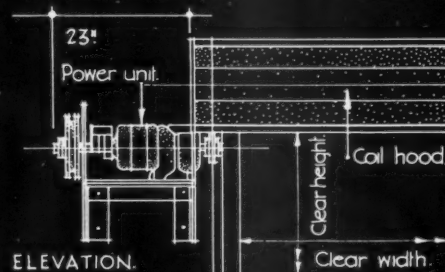
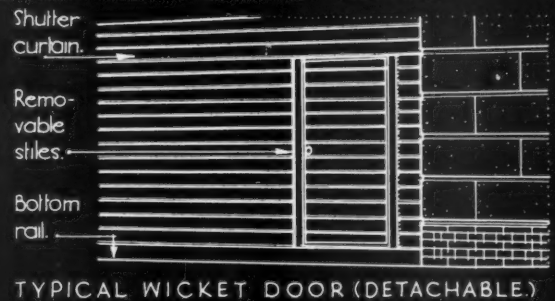
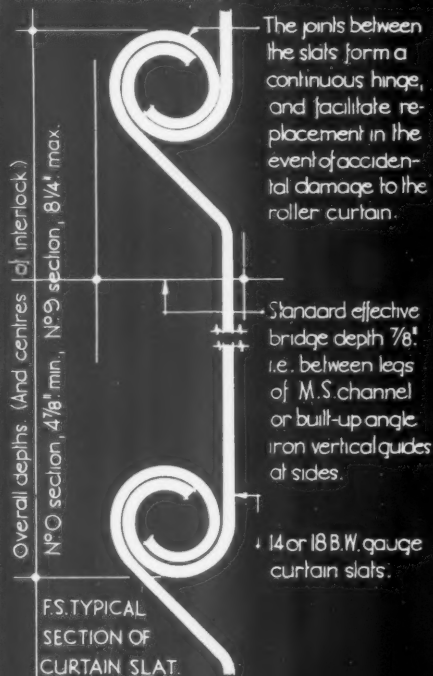
**London Showrooms and
Demonstration Kitchens :** 63, Conduit Street,
W.1, and 11 Ludgate
Circus, E.C.4

Telephone : Central 3655

Also in Liverpool, Edinburgh and Glasgow

769.

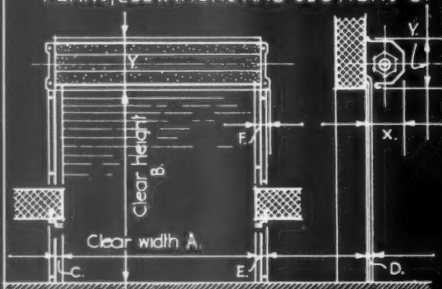
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION CONSTRUCTION & WORKING CLEARANCES OF HASKINS • ROLADOR • STEEL ROLLING SHUTTERS:



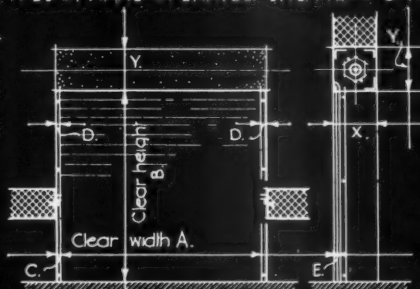
Shutters may be equipped for electrical operation as shown here. (See all normal hand operated types set out below.)

PART PLAN & ELEVATION OF ELECTRICALLY OPERATED SHUTTER (OVERHEAD MOUNTING)

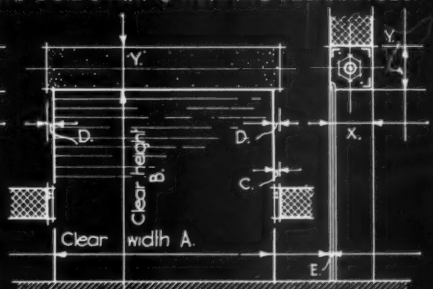
PLANS, ELEVATIONS AND SECTIONS OF TYPES OF HAND OPERATED SHUTTERS GIVING COIL DIAM'S & WORKING CLEARANCES:



A.	B.	C.	D.	E.	F.	max.	min.	X.	Y.
4' - 6'	6'	1"	2"	2 3/4"	4"	1 1/2"	13"	16"	
6' - 8'	8'	1 1/2"	2"	3 1/4"	4 1/2"	2"	14"	17"	
8' - 10'	10'	2"	2 1/2"	3 3/4"	5"	2 1/2"	15"	18"	

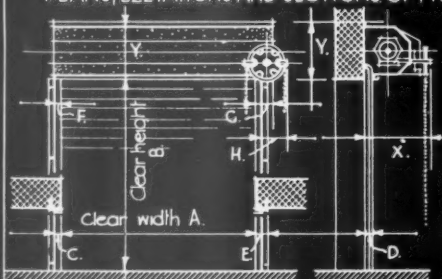


A.	B.	C.	D.	E.	X.	Y.
4' - 6'	6'	1"	2"	1"	13"	14"
6' - 8'	8'	1 1/2"	2 1/2"	1 1/2"	14"	15"
8' - 10'	10'	2"	3"	1 1/2"	15"	16"

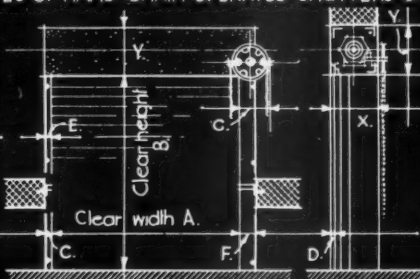


A.	B.	C.	D.	E.	X.	Y.
4' - 6'	6'	1"	2"	1"	13"	14"
6' - 8'	8'	1 1/2"	2 1/2"	1 1/2"	14"	15"
8' - 10'	10'	2"	3"	1 1/2"	15"	16"

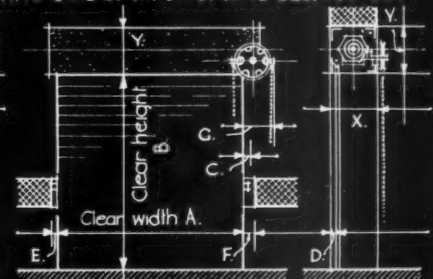
PLANS, ELEVATIONS AND SECTIONS OF TYPES OF HAND-CHAIN OPERATED SHUTTERS GIVING COIL DIAM'S & WORKING CLEARANCES:



A.	B.	C.	D.	E.	F.	G.	H.	X.	Y.
8' - 10'	8'	1 1/2"	2"	3 1/4"	2 1/2"	4 1/2"	9"	21"	17"
10' - 12'	11'	2"	2 1/2"	3 3/4"	3"	5"	9 1/2"	22"	18"
12' - 14'	14'	2 1/2"	3"	4 3/4"	3 1/2"	5 1/2"	10"	23"	19"



A.	B.	C.	D.	E.	F.	G.	X.	Y.
8' - 10'	8'	1 1/2"	1 1/2"	2 1/2"	4 1/2"	9"	14"	15"
10' - 12'	11'	2"	2"	3"	5"	9 1/2"	15"	16"
12' - 14'	14'	2 1/2"	2"	3 1/2"	5 1/2"	10"	16"	17"



A.	B.	C.	D.	E.	F.	G.	X.	Y.
8' - 10'	8'	1 1/2"	1 1/2"	2 1/2"	4 1/2"	9"	14"	15"
10' - 12'	11'	2"	2"	3"	5"	9 1/2"	15"	16"
12' - 14'	14'	2 1/2"	2"	3 1/2"	5 1/2"	10"	16"	17"

Information from Haskins (E. Pollard & Co. Ltd.)

INFORMATION SHEET: MANUAL CHAIN & POWER OPERATED STEEL SLAT ROLLING SHUTTERS: Nº 1.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. *Wm. A. Bayne*

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• 632 •

DOORS AND DOOR GEAR

Product : Steel Rolling Shutters

This is the first of two Sheets dealing with Haskins Rolador steel rolling shutters (Patent Nos. 257850 and 200187), and illustrates typical construction and clearances of the manual (push-up) operated types and some of the hand chain operated types, as well as the electrically operated shutter. Coiling spaces and necessary working clearances required for geared crank handle and for hand chain operated shutter types will be given on a further Sheet.

Uses :

Shutters are suitable for the protection of almost any type of opening, whether windows or doors, in commercial, industrial, public and domestic buildings.

Curtain :

The curtain of the shutters is constructed from mild steel strip, 14 or 18 gauge, machine rolled and straightened. The slots have an effective bridge depth of $\frac{1}{4}$ in., and are designed to lie flat against the sides of the guides. To the bottom slat is riveted a heavy tee or angle iron bottom rail. The overall depth or height of the slats varies between $4\frac{1}{2}$ ins. and $8\frac{1}{2}$ ins., according to the height and width of the opening, and the standardized shape is designed to give the greatest possible strength and rigidity to withstand wind pressure. The joints between the slats form continuous hinges throughout their entire length, thus ensuring economical replacement if necessary. Owing to the steady movement and fitting in the guides, end locks to the slats are not required.

Shutters of this kind can be fitted singly in openings up to 50 feet wide by almost any height.

Springs and Barrels :

All shutters operate on tested high tensile spring steel coils, of the right strength to balance the shutter in all positions. The springs are separately housed in hexagonal steel boxes, and as each is capable of lifting up to 120 lbs., the appropriate assembly of units enables the heaviest shutter to be raised without effort. A $1\frac{1}{8}$ in. diameter centre axle of solid drawn steel tubing is provided to carry the boxes, on totally enclosed hardened steel roller or ball bearings. In large and all-gear shutters the centre axles are reinforced with 10 gauge steel barrels of varying diameters. The centre shaft remains stationary, the spring boxes and outer barrel revolving around it. For small openings push-up, hand operated shutters of light construction are available with spring assemblies supported on steel axles at each side of the opening. Larger shutters are fitted with a solid shaft and cast hexagon blocks at both ends to house the bearings. Accuracy of balance in this type is obtained by using a combination of three gauges of springs, lifting 50, 60 and 70 lbs. respectively.

Brackets and Bearings :

The spring assembly is supported on mild steel plates of suitable strength, shaped to joist or concrete lintol, or on standard malleable cast iron webbed brackets with axle supports of malleable cast iron shaped to receive the axle, and bolted to brackets. This type is fitted with roller bearings of hardened steel, and for geared shutters, heavy ball bearings.

All brackets are fitted with bolts and nuts, patent indented foundation bolts, or suitable caulking as required for fixing to steel, concrete, brick or wood-work.

Guides :

These consist of mild steel channel or built-up angle iron vertical members at the sides, of sufficient depth to prevent the curtain blowing loose under wind pressure. Guides are complete with continuous angle irons, bolts and nuts, patent indented foundation bolts, lewis bolt caulking, etc., as required for fixing. Where necessary, double grooved intermediate hinged or removable pilasters separate the shutters in the opening, complete with worm geared hoisting winch, pulleys and wire rope.

Spring Box Casing :

18-gauge D shaped or square sheet steel hoods, or sheet steel fascia with necessary stiffeners and ribs, are provided to suit conditions of fixing.

Fastenings :

These consist of chain lock and pin on endless hand

chains, or flush shoot bolt fastenings on the inside of bottom rails of shutter curtains, or hasps and staples on the outside to take padlocks.

Installation :

Various methods of installation are possible, as indicated on the Sheet, depending on the type of operation, shutter position in relation to the lintol and the position of the guides, gearing, etc. Push-up manually operated shutters are worked by long arms and hooks, or by lifting rings in the bottom bars according to height. Mechanical endless hand chain operation incorporates movement through compound spur or worm reduction gear. The chains are galvanized and extend to within 1 ft. 6 ins. of the ground. Locks may be fitted to both types as described above.

The standardization of the components enables the shutters to be erected by semi-skilled labour if necessary, and for this purpose full erection drawings and instructions are supplied.

Wicket gates :

(a) Detachable : This type of gate is entirely removable, the stiles being portable and fitted on each side of the aperture in the shutter curtain, and held apart and in position by means of a loose bar at the top. To one stile are connected the butts on which the gate hinges, the gate itself swinging into the aperture with the stiles forming the jambs. Fastening is by means of a deadlock, latch and keys.

(b) Swing. This type of gate is non-detachable, and is side hung in a swinging frame which is hinged from butts fitted on the guide at the side of the rolling shutter. The frame is constructed with hinged angle stiles which clasp the sides of the aperture when it is swung into position. The angles are locked by a movement of a small shoot bolt, and the gate itself is hinged from one side of these stiles and locked with a deadlock and latch with keys.

Ventilation Slots and Louvres :

Ventilation or the admission of light through the shutter curtain can be arranged by the louvres, and these can be spaced at any distance or to any design which avoids weakening of the slats.

Bottom Bars :

Bottom bars can be shaped to conform to road cambers, slopes, curbs and railway tracks. For openings having a falling ground line, a self-adjusting bottom rail is available to overcome the difficulty of completely closing the opening without the use of a permanently tapered bottom rail. This rail hangs horizontally until it is lowered, and immediately it strikes the ground it tilts on a ball-bearing pivot and assumes the ground slope. On being raised it returns by its own weight to the horizontal.

Finish :

For installations in exposed positions, particularly where there is great humidity or salt atmosphere, it is advisable for the curtain to be hot spelter galvanized. In this process slats, bottom bars and hoods are treated with virgin spelter, and an average deposit of four thousandths of an inch is guaranteed. In the galvanizing, shutter slats are first rolled and then immersed in the spelter so that the entire surface is covered.

Delivery and Packing :

Shutters are delivered complete, carriage paid, ready for fixing to any site in the United Kingdom or packed and delivered ready for shipment f.o.b. London or c.i.f. any port abroad.

Manufacturers : Haskins (E. Pollard & Co., Ltd.)

London Address : Blackhorse Lane, Walthamstow, London, E.17

Telephone : Larkwood 2622

Manchester Office : F. W. Hulme, Grosvenor Chambers, 16 Deansgate Blackfriars 7055

Telephone : 51 Bibury Road, Hall Green

Birmingham and Midlands : Birmingham, Springfield 1953

Telephone : Berylcote, Castle Lane, Bournemouth

Southampton and District : Winton 215

Telephone : 26 St. Heliers Avenue, Hove

Brighton and District : Hove 3730

Telephone : L. J. Haywood, Weynflete, Barton Road, Torquay

Devon and Cornwall : R. H. Campbell, 19 Relton Terrace, Monkseaton, Northumberland

North East Coast of England : Whitley Bay 1854

Telephone : Archibald Sadler & Co., 46 The Parade, Cardiff

South Wales : Cardiff 5209

Telephone : N. B. Carson, 214 West Regent Street, Glasgow

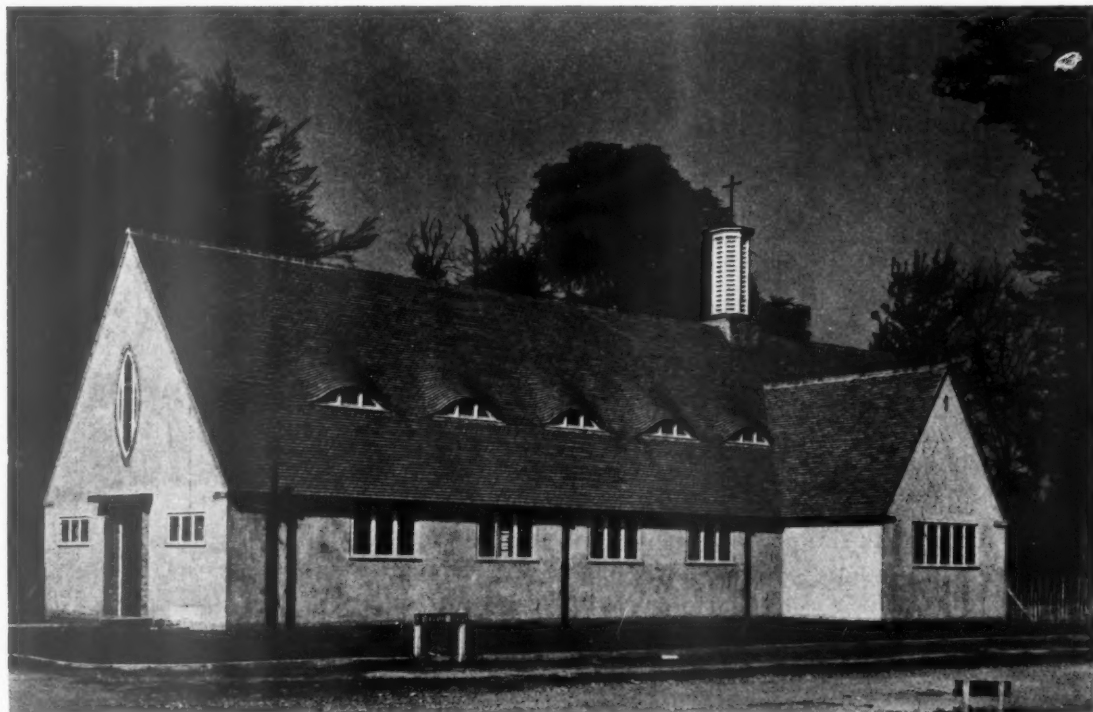
Scotland : Douglas 3877/8

Telephone : R. Cringan Hogarth, 14a Scottish Providential Building, Belfast

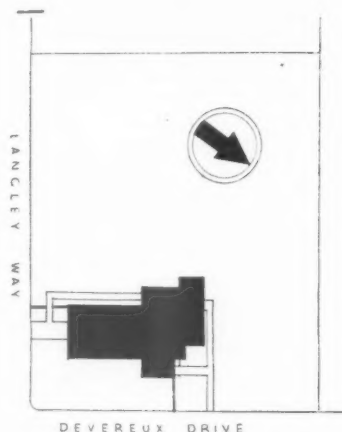
Northern Ireland : Belfast 27127

Telephone :

CHURCH HALL, WATFORD, HERTFORDSHIRE



D E S I G N E D
B Y W E L C H
A N D L A N D E R



SITE PLAN

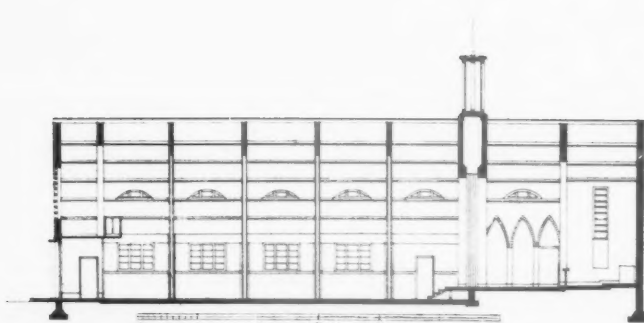
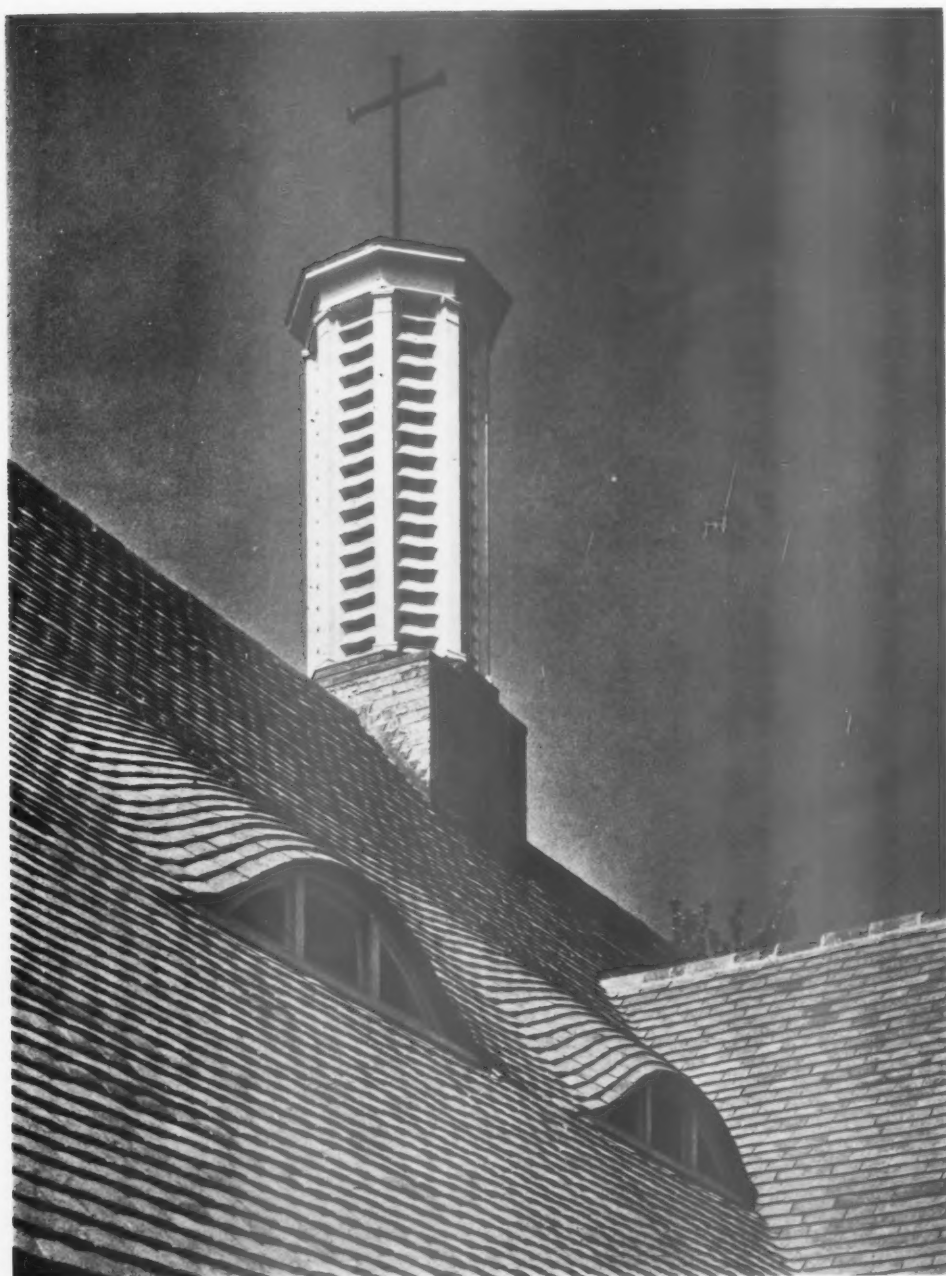
GENERAL—It was stipulated that part of the hall should be reserved for worship only (to seat about 30 persons); the remainder to be capable of being shut off and used for other parochial activities. A stage was not required—only a platform. A number of small rooms were also needed.

SITE—Langley Way and Devereux Drive, Watford, Hertfordshire.

CONSTRUCTION AND EXTERNAL FINISHES—Walls: brick; fair face and distemper internally and rendered outside. Roof: boarding on purlins supported on arched wood trusses formed of five layers of $1\frac{1}{2}$ in. timbers bolted together, and sheathed with wallboard. Roof covered externally with hand-made sand-faced tiles. Floors: deal boarding on battens generally.

Top, a view from the east; and the entrance to the choir on the north-east front.

CHURCH HALL, WATFORD, HERTFORDSHIRE



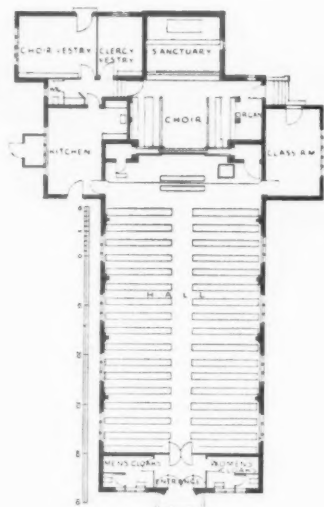
LONGITUDINAL SECTION

PLAN—The building is capable of being divided at the chancel arch by sliding doors 18 ft. high which run between a double arch. When the opening is closed the lectern and pulpit go into the space occupied by the sliding doors when open and the sections of the platform on which the pulpit and lectern stand can be pulled round to the front of the fixed part of the platform, making it about 9 ft. deep.

INTERNAL FINISHES—Furniture and joinery generally painted grey; sanctuary furnishings of limed oak. Walls and roof distempered broken white internally with the exception of brick dado in light coloured Dutch bricks. Curtain at back of altar blue, and cornice above curtain grey picked out with gold and red. Wallboard was used for boxing in the steel girders, and for walls and ceiling in the vestry; the sliding screens, the front of the stage, the casing for the heating pipes, and the panelling on the front of the balcony are in hardwood.

Above, a detail of the roof.

DESIGNED BY WELCH AND LANDER



PLAN

Right, looking towards the entrance and organ;
below, left, the altar; below, right, looking
towards the choir and sanctuary.

The general contractors were Pitchers, Ltd.,
and the names of the sub-contractors and sup-
pliers are given on page 963.



REHOUSING SCHEME, UNION STREET,



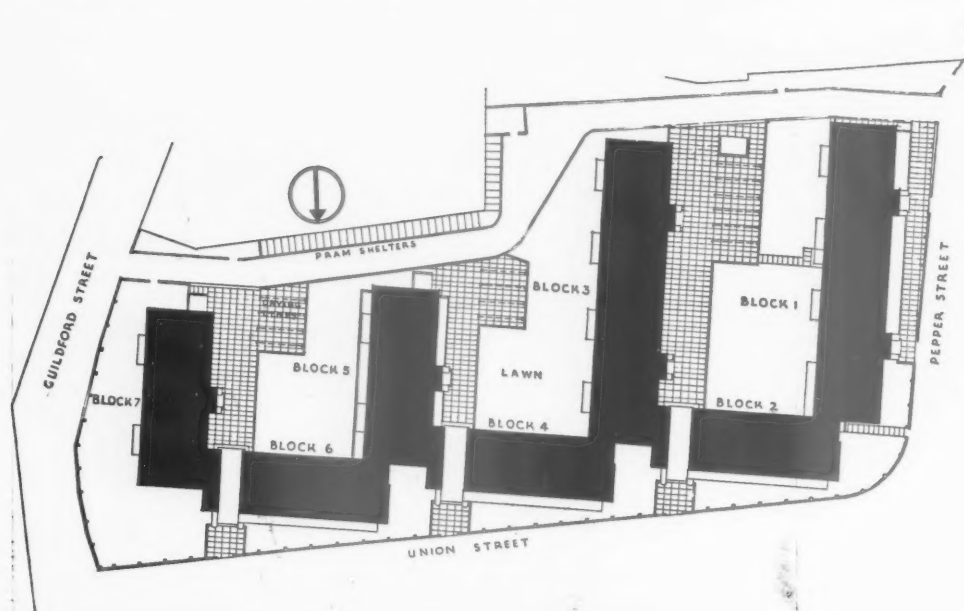
GENERAL—One of a series of rehousing schemes for the Ecclesiastical Commissioners, erected in the London area. Scheme contains 93 flats, supervisor's office, basement storage and outbuildings. Owing to the congested nature of the site, and the difficulty of clearing it, the scheme has been built in two operations, and under different contracts.

SITE— $1\frac{1}{2}$ acres, bounded by Union Street, Guildford Street and Pepper Street, Southwark. The oblique direction of the surrounding roads has resulted in a staggered form of layout allowing the more open aspect to that side of the main parallel blocks on which the principal rooms are placed. These blocks, containing 3- and 4-room flats, run approximately north-south, and are linked along the northern frontage by smaller blocks containing 1- and 2-room flats,

with their living rooms and bedrooms facing south. There is a lack of recreational facilities in this district, therefore the flat roofs of the four main blocks are suitably paved and protected, and form additional recreation space available to the tenants.

CONSTRUCTION—Owing to the nature of the sub-soil, all foundations had to be taken to a considerable depth, and consist of a series of reinforced concrete piers joined at ground floor level with reinforced concrete beams cast in one with the ground floor slab. External walls are in brickwork $13\frac{1}{2}$ ins. thick for the full height. The floors and roof are reinforced concrete hollow tile construction. Partitions are 2-in. hollow tile.

Above, view from the junction of Union Street (left) and Pepper Street. On the facing page is a detail of the balconies.

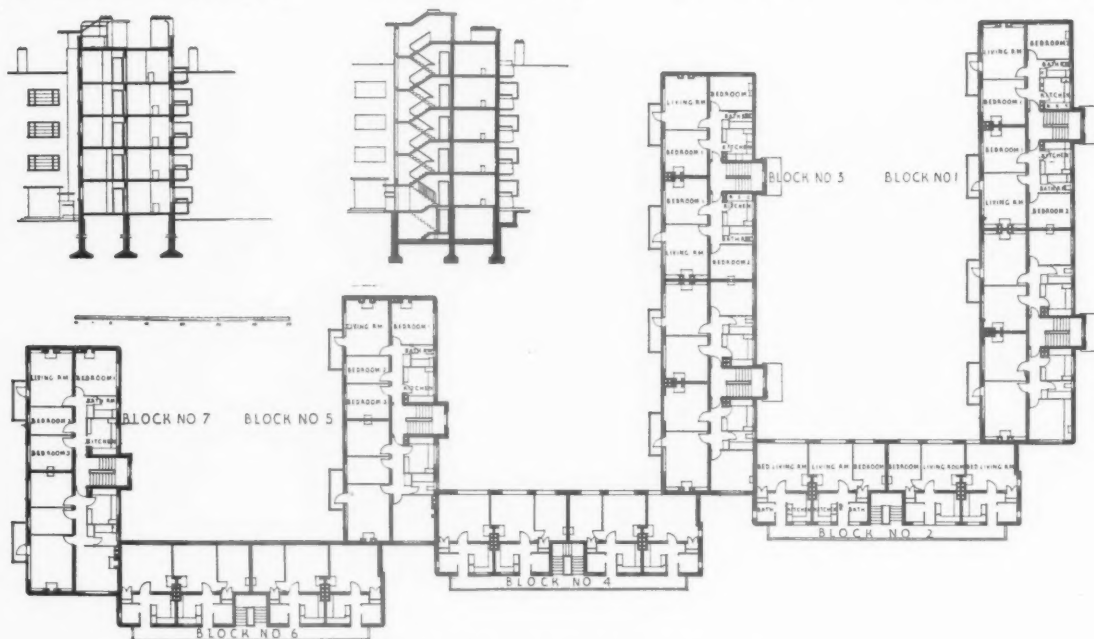


SITE PLAN

SOUTHWARK: BY EDWARD ARMSTRONG



REHOUSING SCHEME, UNION STREET,



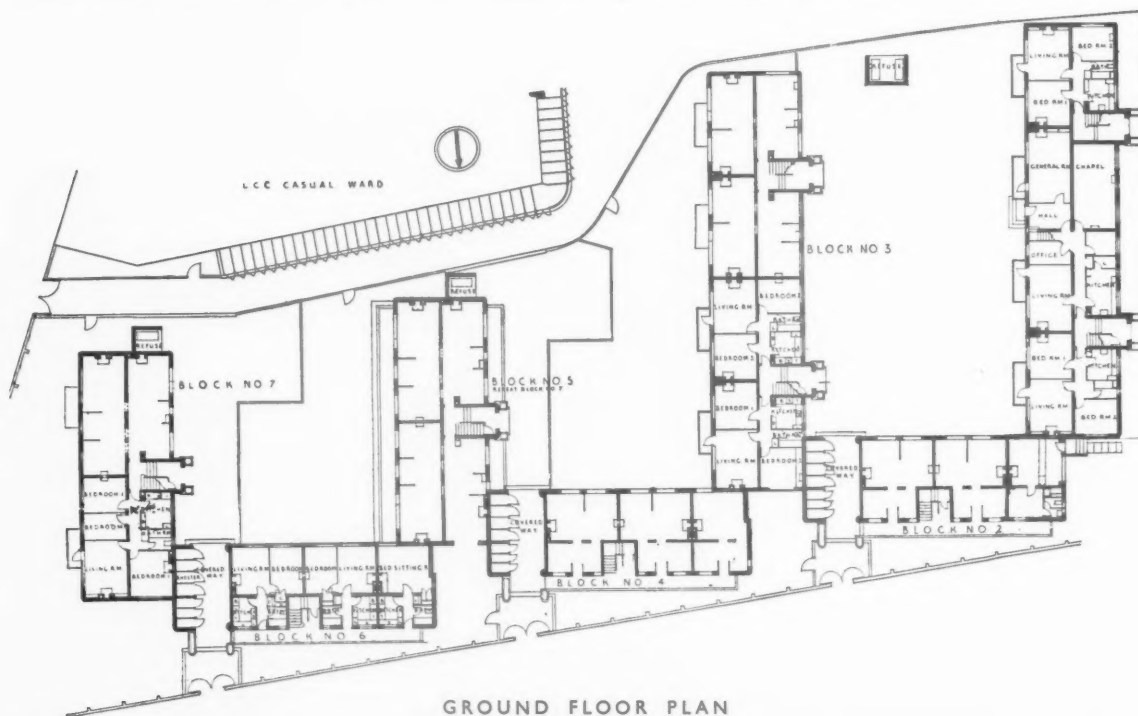
FIRST FLOOR PLAN AND SECTIONS

PLAN—The 3- and 4-room flats in the main blocks are served by internal access staircases serving two flats per floor. The 1- and 2-room flats in the smaller blocks are served by access balconies. Each flat of more than two rooms has its own private balcony, which opens direct from the living room. The contract also includes the following: drying and storage space in the form of a basement under block No. 5; a fuel store to house tenants' fuel, which will be bought at bulk rates; pram and cycle shelters for 60 per cent. of the flats; agent's office adjacent to the caretaker's flat.

EXTERNAL FINISHES—The external walls are in light buff facing bricks with artificial stone trimmings.

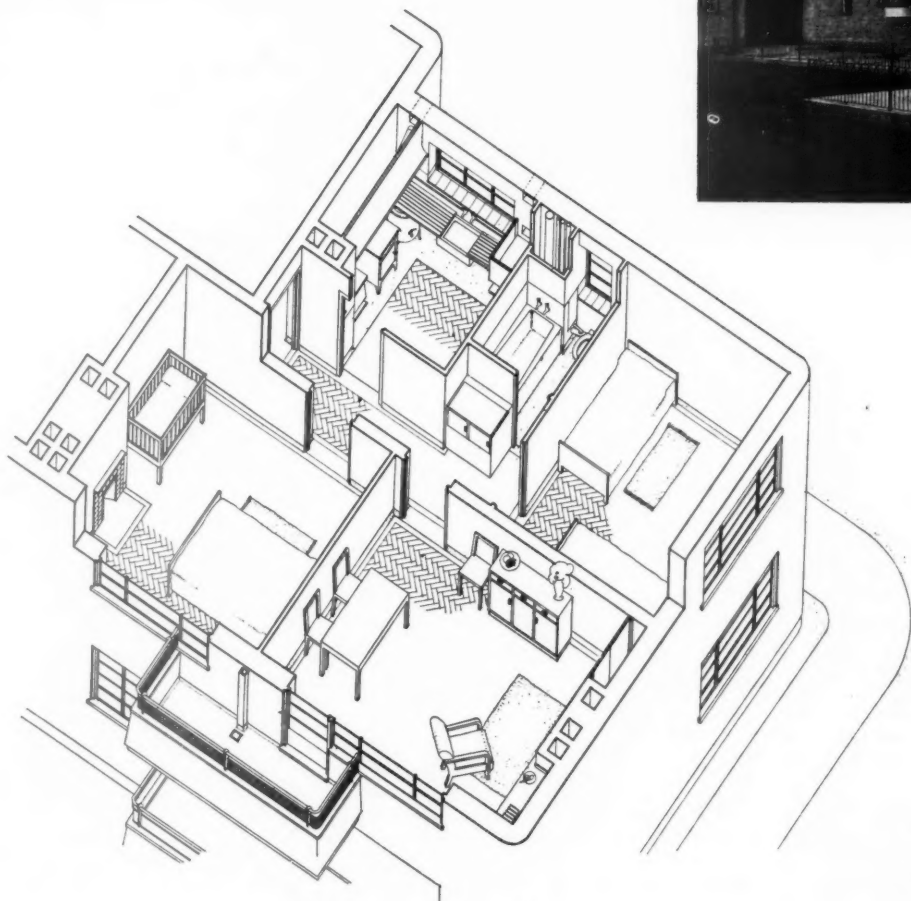
Windows are standard metal casements in timber frames. Reinforced concrete balconies are finished in special non-craze rendering. Flat roofs are insulated against temperature variations and paved with hard-wearing surface.

INTERNAL FINISHES—Walls are plastered. All door frames are of steel, grouted solid to partitions, floors to kitchens and bathrooms are in granolithic, coved up to the plaster, with a heavy lino inset over the working space in the kitchen. All other floors are in wood block, laid in mastic direct upon the screed, finished with a mastic expansion joint against the coved granolithic skirting. Walls of staircases and dados in kitchens and bathrooms are finished with a hard cement glaze in colour.



GROUND FLOOR PLAN

SOUTHWARK: BY EDWARD ARMSTRONG



AXONOMETRIC
OF A
3-ROOMED FLAT

SERVICES—Each flat is equipped with its own hot water installation, run from a small coke-burning boiler in the kitchen, supplying hot water direct to bath, sink and copper at a minimum cost to the tenant. Cooking is by gas, but the buildings are also carcassed for electric power. Each kitchen is fitted with a ventilated larder, dresser and shelving. Living rooms and principal bedrooms are provided with open fuel fires, with gas poker points; secondary bedrooms have gas fires. All pipe runs are in ducts with access panels at each floor.

COST—Built in two operations under separate contracts at a net building cost of £52,870. Price per cubic foot approximately 1s. 4d. Average net weekly rentals: 1-room flats, 5s. 3d.; 2-room flats, 7s. 3d.; 3-room flats, 9s. 6d.; 4-room flats, 11s. 6d. The photographs show: left, looking towards block 3; right, one of the entrances.

The general contractors were E. H. Smith (Croydon) Ltd. (first operation); Holliday and Greenwood Ltd. (second operation). The names of the sub-contractors and suppliers are given on p. 963.



From the R.A. Exhibition (No. 1286): Ruislip Police Station. By G. Mackenzie Trench. (Perspective: Alex F. Reid.)

L I T E R A T U R E

THE QUEEN'S HOUSE

[By E. R. JARRETT]

The Queen's House, Greenwich: being the Fourteenth Monograph of the London Survey Committee. By George H. Chettle. Published by the Trustees of the National Maritime Museum, Greenwich, by arrangement with the London Survey Committee. (Issued to subscribers.)

INIGO JONES is so important a figure in the development of English architecture that any authoritative information about his life and work is welcome; this monograph describes with care and admirable clarity his first architectural creation. The introduction by Professor Callender dealing with Greenwich before the building of the Queen's House is most valuable in explaining the peculiar requirements of the problem with which the designer was confronted. We now, and for the first time, are able to grasp the whole scheme and furthermore can disentangle the work of Inigo Jones from the later additions of John Webb and others which for so long have been instrumental in confusing the issue and obscuring the original intention. It can honestly be said that many will be surprised to learn that the house as we know it today does not represent the original design, but reference to the text and the excellent series of plans and illustrations gives us an entirely new understanding of the charming building which so impressed people of the time by its architectural character and decoration that it was referred to as the "House of Delight."

Before considering the building, it is necessary to appreciate the site and its

unusual features. Professor Callender tells us that on the death of Henry V, Humphrey, Duke of Gloucester, for the better protection of London and so that both the river and the Dover Road could be commanded, acquired land at Greenwich stretching from Blackheath to the Thames, thus forming Greenwich Park. He built a watch tower to control the road and close to the river a palace which, added to by generations of kings, became a favourite royal residence. Henry VIII was born in the palace and spent much time there, visiting his newly founded shipyards at Woolwich on one side and Deptford on the other. Across the estate ran a right of way, the road from Deptford to Woolwich, dividing the royal gardens from the park. This road was walled and had at one point an opening protected by a gate-house where the road could be crossed, and this spot is the scene of young Walter Raleigh, his cloak, and Queen Elizabeth.

From our point of view, however (here Mr. Chettle takes up the tale), it is of greater importance as being the site of the building, the "curious devise of Inigo Jones," which he designed for James I and his Queen, Anne of Denmark, and which is known as the Queen's House. This was Jones's first architectural creation and the first building in England to be designed in the true manner of the Italian renaissance. The problem was a house spanning a road and by designing two buildings, one on one side of the road and one on the other, and connecting them by a covered bridge he successfully answered the conditions. The

project was not carried far at that time, and in 1618 the work was stopped for ten years, but was taken up again for Charles I and Henrietta Maria. Now, Charles was an art lover and a collector of pictures and Henrietta Maria was the daughter of Maria de Medici, for whom de Brosse designed the Luxembourg after a visit to Florence to absorb the spirit of the great *palazzi* of that city, and Jones, working in the new Italian manner, must have found his royal patrons sympathetic clients. A plan of the house in 1635 as it appeared when "Mr. Surveyor's" work was probably complete makes an interesting comparison with the house as it stands today.

Inigo Jones died in 1652, and after the Restoration in 1660, John Webb, his pupil and assistant, prepared schemes for additions; not all of them, fortunately, being carried out. Those executed consisted of throwing two more bridges across the road so that continuous circulation on the first floor was obtained and resulted in the plan being changed from an H to a rectangle. Generally speaking, this is the house as we now know it, but further alterations were made at many dates later, until the last indignity befell it in 1911 "when the lower part of the walls of the great hall was lined with plywood."

In 1925 the Hospital buildings and the Queen's House were taken over as historic buildings for maintenance and repair by H.M. Office of Works, and when in 1933 the Greenwich Hospital School moved to Holbrook a survey of the house was made and repairs were started. The house is now incorporated in the National Maritime Museum and is in good hands.

The importance of the Queen's House as a document in the history of architectural development in this country cannot be over-estimated. In one stride it lifted us from the medieval structure ornamented with copybook and ill-understood renaissance trimmings, which is the Elizabethan contribution, on to a level with the Italians themselves. Fourteen years after the death of the designer came the fire of London, which gave Wren his chance, and had it not been for the foundation laid by Inigo Jones, the future development of our architectural design is a matter for intriguing speculation.

The production of the monograph is admirable, the illustrations are good, and chosen with every care, though the paper does not flatter the blocks, and it is a pleasant book to read. The London Survey Committee, the Trustees of the National Maritime Museum, and H.M. Office of Works are all to be congratulated upon their collaboration in preparing so valuable an addition to our knowledge; while thanks are due, as Mr. Walter Godfrey says in his preface, "to Sir James Caird, Bart., the

generous benefactor who has provided the funds necessary to produce, and worthily to illustrate, this book."

MEXICAN ARCHITECTURE

[By HUGH CASSON]

The New Architecture in Mexico. By Esther Born. London: Kegan Paul. Price 21s.

TO most people Mexico is still the land of Mañana, guitar music, and basking peons. This romantic impression, largely fostered by the tourist agencies, is a myth which this book should help to counteract.

The last great revolution resulted in an intellectual and artistic awakening of surprising vigour. Under the leadership of Diego Rivera, the painter, and with the naturally enthusiastic support of the Tolteca cement concern, an architectural movement was initiated which attempted to solve, in a direct and rational way, the social problems created by the reforms of the new régime.

In this book has been collected the majority of modern work carried out in Mexico during the last ten years or so. The quantity of it is startling, and certainly far beyond what would be expected in any North American city. Owing to foundation difficulties, Mexico has mercifully escaped the dreary domination of the skyscraper. Indeed, so shifting are the sands upon which the city is built, that the soil of a site has to be artificially compressed with weights before a building can be erected upon it, and allowance made for the inevitable movements, which have already so transformed the skyline of some of the main streets of the city that it resembles one of the more light-hearted compositions of Mr. Lubetkin.

The leaders of the modern movement were fortunate in attracting official interest in their schemes, and Government construction has been the predominating field in which this building has taken place. Schools, colleges, hospitals, housing schemes, long-suffered social needs, provide the most successful architecture in the country, though the book contains also many houses, offices and flat blocks. These, though well planned, are for the most part rather *démodé* in external appearance. There is a tendency to stylization, and the quality of the work seems to become inferior once the simplifying action of strict economy is removed. Although it is claimed that the functional house was born in America, and is no longer a novelty in Mexico, the examples given are still influenced by the heavy ornament and coarse detail of the Mexican building tradition. It can be said in their favour that their designers are enterprising with colour. It is good to hear of some attempt to escape from the restricted palette of the international style.

You cannot, however, get away easily

with modern architecture, even in Mexico. Buildings designed in the contemporary manner still arouse strong prejudice, and at the present time the forces of opposition predominate in the Government. On the other hand, architects consider their profession as an appointment to public service, and the fact that they are more or less compelled to be their own contractors gives considerable impetus to the furtherance of good design. In no other country does the dreary business of knowing the right people mean so little.

The book is handsomely produced under the supervision of "Typography-Architect" Ernst Born. There is a supplement devoted to the work of the best modern painters and sculptors—full-page portraits of the contributors smirk or smoulder (according to type) above outlines of their biography, work, and doctrines. It is like looking through "The Spotlight." The lay-out is slick and sophisticated, the pages as glossy as chestnuts, the type impeccably sans-serif. The photographs are competent, numerous and shiny. There is no doubt that photography, and no longer architecture, is the truly democratic art of today.

MODERN BUILDING PRACTICE

The Building Encyclopedia. Vols. 3 and 4. General Editor, S. G. Blaxland Stubbs. London: The Waverley Book Co., Ltd. Price £4 4s. the 4 vols.

A HANDBOOK of Modern Building Practice for the Working Builder—thus runs the sub-title to this work. But not only for the working builder, one would think. How about the working architect? Unless his practice has become specialized and therefore almost a habit, there are apt to be times when he is faced by particular problems—constructional or otherwise—the answers to which somehow seem to be absent just at the moment. If the architect should happen to be yourself, you will know that the knowledge was at your finger tips at the time of your Final, of course, but now—let's face it—

"You beat your pate and fancy wit will come;
Knock as you please, there's nobody at home."

It is at awkward times like these that a ready reference at one's elbow is invaluable, and if that reference is comprehensive, alphabetically arranged, and has a fully cross-referenced index, there is little more one can ask. Information is at once to hand on any subject, whether it be the London Building Acts, Metal Trim, Noise Abatement, Sewage Disposal or Surveying.

As this work seems to have been intended primarily for the Speculative

Builder, several of the many articles are devoted to planning and style, though as a guide to better design they are perhaps not quite as one might wish. Examples are given of various types of speculative housing, but should a builder wish to go modern as a change from his habitual villa, it is to be feared that he will gather little more than that he should flatten his roof and put in horizontally barred windows and stair handrails, even though a few examples of better modern housing are included. The design of parapets is another subject about which more could have been written with impunity.

If in parts inclined to be patchy, however, there must be few other volumes or groups of volumes which tackle so vast a subject so well. The work is profusely illustrated, and although the seven Folding Plates in Colour, six Double Plates, four Charts and 1,369 Illustrations in these two parts alone vary somewhat in quality, they are all easily readable and certainly comprehensive.

G. B. H.

THE ABBEY

Westminster Abbey. Its Worship and Ornaments. Vol. I. By Jocelyn Perkins, M.A., D.C.L., F.S.A. Oxford University Press. Price £2 2s.

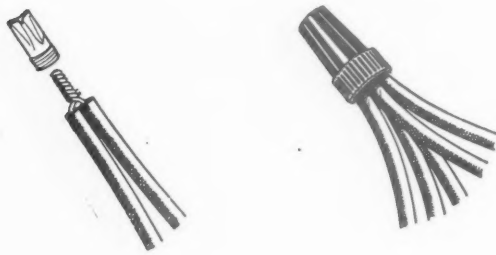
THROUGH the labours of such men as Neale and Brayley, Professor Lethaby, Dean Stanley, and many another, the student already has at his disposal what might seem almost a sufficiency of literature relating to the Abbey, historical, architectural and archaeological. Mr. Perkins approaches the subject from a new angle, and the contents of this book are the result of exceptional archaeological knowledge. Much of the information is quite fresh.

We are told that the illustrations are a careful selection from thousands of prints, photographs, newspaper and book illustrations. This one can readily believe, for the text is very aptly augmented. Take, for instance, the photograph of the exquisite drawing of the Obsequies of John of Islip, who was Abbot of Westminster in 1532, and read what Mr. Perkins has to say about it.

He makes it clear that the original drawing not only has great merit as a work of art, but is also a valuable record of the practices prevailing and ornament in use at the time it was made.

The amazing history of the treatment of the High Altar makes good reading. It would be difficult to understand how anybody could be so devoid of artistic or devotional feeling as to have conceived some of the enormities that were actually perpetrated, but for Mr. Perkins's lucid explanations of causes and effects.

G. E. C.



TRADE NOTES

[BY PHILIP SCHOLBERG]

More Noise Prevention

THE Notes in this JOURNAL of a fortnight ago, devoted to Silence, remind me that the François Cementation people have a whole range of fittings for sound absorption of all kinds which they sell under the general trade name of Muffelite. Starting with foundations where the insulation cannot be easily renewed they recommend Elascor plates, in which raw cork strips are held together in a metal frame. For lighter machinery and the insulation of the sides of foundation blocks they have two types of plate made of pressed cork, while for machines installed above ground level there are highly resilient rubber mats specially impregnated to give long life. Rubber bars and buffers are good for the damping of vibrations but less good at absorbing shocks, and should be used wherever it is difficult to provide the necessary compensating masses. The buffers consist of a pair of metal plates with a layer of vulcanized rubber sandwiched between them, the lower plate being laid in the subsoil and the upper one connected to the machine. Spring insulators are recommended for the absorption of low frequency oscillations, but it is essential that the spring dimensions shall be calculated not only according to the load to be carried but also to the speed, and consideration must also be given to the relationship between the exciter force and the dimensions of the foundation, as well as the centre of gravity of the combined installation. Correct installation should give an insulation efficiency of between 80 and 95 per cent., and it is sometimes possible to eliminate the foundation block entirely, thus showing a considerable saving in cost.

All the insulating materials so far referred to have been for use with machinery, but the same firm also makes a series of cushions and plates for the more straightforward types of sound absorption, such as the lining of pipe ducts and partitions. Sundry application of these and the machine absorbents are shown on this page.—*(The François Cementation Co., Ltd., Bentley Works, Doncaster.)*

The Weather-resistance of Wallboard

While one instinctively thinks of wallboard as a material for interiors it is none the less interesting to read a report by the Forest Research Institute of India on three samples of Sundeala board which have

been buried with the bottom half in the earth in an open test yard for the last 12 years. The report describes the boards as having remained "practically sound," which seems a good deal more than one would expect in a district where the rainfall is over 100 inches per annum, particularly as the sample boards are now the oldest inhabitants of the test yard. The report adds that the boards "do not seem to be relished very much by white ants" a useful feature in tropical countries, for there is at least one other wallboard which is said to be very popular with insects of all kinds.—*(The Patent Impermeable Millboard Co., Ltd., Millboard Works, Sunbury-on-Thames.)*

A Standard for Galvanized Corrugated Sheet

I gather that the steel industry has for some years been getting more and more worried about the poor quality of standard galvanized steel sheet, and now the Iron and Steel Industry Committee, at the request of the British Steelwork Association, has been the moving spirit in the production of a new British Standard Specification for these sheets. The specification is primarily intended for the use of the building trade in this country, and establishes a higher standard of quality than the ordinary commercial brand hitherto in general use.

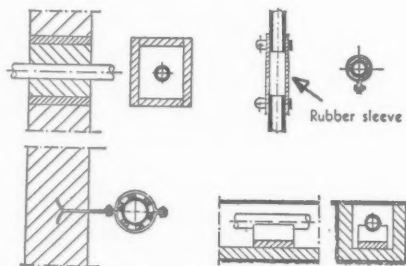
The specification is not a standard of dimensions but a standard of quality, and applies to sheets of any size in the three- and five-inch corrugations and in British Tile pattern. There are the usual clauses

covering testing and inspection, but from the architects' point of view the most important is that there shall be a minimum coating of spelter of 1.75 ounces per square foot of sheet, this figure including the coating on both sides of the sheet; this standard should ensure that the appearance will be good and the life of the sheet should be greatly prolonged. The thickness of the black sheet before galvanizing will generally be 24 B.G., but heavier gauges can be obtained if desired. The new sheets will be marketed under the trade name of "one-seven-five" and will be manufactured by all the sheet makers in the country. The number of the specification, by the way, is 798-1938, and the price is 2s.

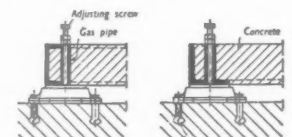
Here is another instance of an industry doing its best to put its own house in order and supply something which is up to the required standard. The British Standards Institution is sometimes accused of producing specifications which nobody very much wants, but this particular effort seems to be a good one, and judging from the long list of Government departments and industrial organizations like Lloyds and the railway companies, all of whom have co-operated in the production of it, it is a standard based largely on what the user wants and not on what the manufacturer wants to make. An important distinction which is not always appreciated.—*(The British Standards Institution, 28 Victoria Street, London, S.W.1.)*

Connectors for Wiring

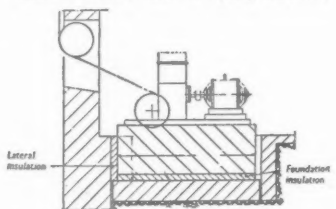
Nearly everybody nowadays is familiar with the thimble-shaped porcelain connector for joints in wiring. The ends of the wire are bared and lightly twisted together, after which the thimble, which has a coarse internal thread, is screwed over the ends, thus giving a good electrical contact and at the same time insulating the bare ends. This method is generally quite satisfactory, but the helmets have occasionally been known to come loose with vibration and may sometimes crack or chip if they are screwed up too tight. The two drawings at the head of these notes show a modification of this connector which has recently been marketed by Philips Lamps—a firm, I believe Dutch in origin, which has been connected with the electrical industry in this country for a good many years now. The principle of this connector is the same



Pipe insulation and two machinery insulating details showing the use of Muffelite.



Method of fixing bolts for Spring Insulators



Insulation of Foundation for Lift Motor Sunk Type on Compensating Mass Foundation

as the porcelain thimble, the difference being that the connector is made in two halves, an inner member of brass which does the actual connecting, and which can be screwed up tight with a special tool, and an outer cap which does the insulating and is screwed on afterwards. The connectors can be used to join up to five 3/036 cables and the result should be slightly better than with the ordinary porcelain type, though all these things generally boil down to the old question of cost. Price is 24s. a gross.

There remains one criticism. The leaflet describing these fittings gives all the information in a plain and straightforward way, but omits the rather important detail of the manufacturer's address. True, it came with the usual circular letter, but nobody ever bothers to keep letters of this kind anyway, and most people never read them at all. Few things create more ill-will than the leaflet which tells you about something you would like to use and then doesn't tell you where you can get it. I have consulted the London telephone directory and the address below is given in the belief that it is the right one, but without any guarantee of accuracy.—(*Philips Lamps, Ltd., 145 Charing Cross Road, London, W.C.2.*)

Roots Kept at Bay

I do not know how many architects in this country suffer from the roots of trees growing through the joints and choking drains, but I see in the *Architectural Record* that an American firm has discovered what should be a cheap and simple remedy. The idea is based on the fact that copper, in the presence of moisture, forms copper carbonate, and this is apparently poisonous to tree roots or any other form of plant growth. All you have to do, therefore, is to insert a corrugated copper washer in each spigot joint and the copper carbonate will do the rest. I commend the idea to the Copper Development Association, who doubtless know all about it already.

Electric Motor Data

Some months ago I referred in these notes to a pocket book of electric motor data produced by Brook Motors. I have just received a revised edition of it and it gives a lot of information in a handy form. Some space is taken up in explaining that these motors are cheap and that the manufacturers are not connected with any ring, but the rest is definitely of value and there are useful notes on installation and maintenance. At the end there are some 15 pages of tables giving the supply voltages of different electricity companies in the British Isles.—(*Brook Motors, Ltd., Empress Works, Huddersfield.*)

LAW REPORT

DEVELOPMENT OF BUILDING ESTATE. TENANCY OF LAND POINT

Jarrett v. Cooté and another.—Chancery Division. Before Mr. Justice Morton.

THIS was an action by Mr. Charles Arthur Jarrett, a blacksmith and cattle dealer, of Limsfield, against Mr. Lionel F. Russell Cooté and Mr. Aubrey Russell Cooté for £100 damages and an injunction to restrain alleged trespass and breaches of covenant for quiet enjoyment.

There was a counter-claim by the defendants for possession of land and an injunction and damages for trespass.

The dispute was in regard to 15 acres of land on the Lurchwood estate at Limsfield.

Mr. C. Stevens, K.C., appeared for the plaintiff, and Mr. Gray, K.C., for the defendants.

The case for the plaintiff was that in 1930 he was granted an under-tenancy of the land from a Mrs. Armstrong, who had the head lease from Mr. Russell Cooté, the freeholder.

Plaintiff alleged that since 1936 the defendants, in whom the freehold was vested, had enclosed part of the land for a building estate and had built a house and started the construction of sewers and a road. Under these circumstances he started his action.

The defendants by their defence pleaded that the head lease of Mrs. Armstrong ended in March, 1936, and they contended that the under-tenancy terminated also. They pleaded that the plaintiff had since become a trespasser and had interfered with the development of the estate.

Plaintiff, in reply, pleaded that after the expiration of the head lease he was asked to stay on and that the defendants had acquiesced in his tenancy, and that the acceptance of rent from him had created a tenancy and that he had become a yearly tenant.

His lordship, after hearing the evidence, in giving judgment, said the plaintiff claimed that he was a yearly tenant and in the alternative that he was a tenant from quarter to quarter. Defendants admitted that they had done all the things alleged against them, and the only question was whether the acts done by the defendants were lawfully done by them or not. Was the plaintiff a tenant of the land from 1936, or was he a trespasser? In May, 1936, plaintiff paid his quarter's rent for the land to Mrs. Armstrong. About that time the defendants commenced operations on the land. There was no shred of evidence that the plaintiff was a tenant of the defendants at that time. It was argued that the receipt given by Mr. Lionel Cooté to Mrs. Armstrong for £5 odd for grazing rights created a tenancy between defendants and plaintiff. His lordship did not take that view. His lordship was satisfied that plaintiff never looked upon any other person as his lessor than Mrs. Armstrong. From start to finish plaintiff had never agreed to become the tenant of the defendants. He could not find that plaintiff had established any legal tenancy. The only tenancy was one on sufferance. The acts complained of were not wrongful acts, and therefore the action failed and must be dismissed with costs. With regard to the counter-claim, he gave judgment for defendants for the sum of £12 damages and for possession and for an injunction.

THE BUILDINGS ILLUSTRATED

MUNICIPAL HALLS, WOLVERHAMPTON (pages 939-944). Architects: E. D. Lyons and L. Israel. The general contractors were Henry Wilcox & Co., Ltd., and the sub-contractors and suppliers included: Rubery Owen & Co., Ltd., constructional steelwork; Shaw's Glazed

Brick Co., Ltd., external faience work; Troughton and Young, Ltd., electrical work; Manley and Regulus, Ltd., mechanical services, heating and ventilation; W. Wadsworth, Ltd., lifts; Waygood Otis, Ltd., hand power lifts; Horsley Smith & Co., Ltd., dance flooring; James Gibbons, Ltd., metal windows, doors and ironmongery; Baldwins (Birmingham), Ltd., sanitary fittings; Potter Rax, Ltd., shutters; Gimson & Co. (Leicester), Ltd., stage equipment; Haywards, Ltd., saucer lights in cloak-rooms; Tentest Fibre Board Co., Ltd., wall boarding; Henry Miller, Ltd., chair lifts; Carron Co., Ltd., staircase and kitchen equipment; Art Pavements, Ltd., terrazzo floors; Fenning & Co., Ltd., marble panelling; H. H. Martyn & Co., Ltd., handrail, balustrading, grilles, etc.; Starkie, Gardner & Co., Ltd., screens and cloakroom fittings; James Walker, Ltd., fibrous plaster; W. J. Furze & Co., Ltd., curtain tracks, steel shutters, projector room, etc.; Carter & Co., decorative tiling; Dunlop Rubber Co., Ltd. (per Charles Hunter), rubber flooring; Eric Munday, lettering, motifs, etc.; G. H. Turner & Co., lighting fittings; John Compton Organ Co., Ltd., organ; James Clark and Sons, mirrors; Stourbridge Glazed Brick Co., Ltd., wall tiling; W. Beddows & Co., Ltd., Venesta flush doors; Rivers Moore Radio, Ltd., public address equipment and deaf-aid system; Pel, Ltd., chairs; Kinematograph Equipment Co., Ltd., projection-room equipment, carpets and stage equipment; Braby & Co., ventilators; Heal and Son, Ltd., furniture; Marion Dorn, Ltd., and Peter Jones, curtains; Kingfisher, Ltd., chairs for orchestra; John Lewis & Co., Ltd. (Peter Jones), linoleum; W. Smith & Co., carpet druggists; J. Avery & Co., blinds.

ST. LUKE'S CHURCH HALL, WATFORD (pages 953-955). Architects: H. A. Welch and F. J. Lander. The general contractors were Pitchers, Ltd., and the craftsmen, sub-contractors and suppliers included: Eric Munday and William Pickford, foundation stone; J. Alfred Pratt & Co., Ltd., tiles; Field and Palmer, special roofings; White, Bays and White, central heating; Watford and St. Albans Gas Co., gasfitting; J. W. Russell, Ltd., electric wiring; Speirs & Co., sanitary fittings, door and window furniture; Geo. W. King, Ltd., sliding doors; Pharos (Distributors), Ltd., 1/2" Insulite for boxing in the steel girders, walls and ceiling in the vestry. Insulite hardboard for sliding screens, front of the stage, casings in heating pipes and panelling on the front of the balcony.

HOUSING SCHEME, UNION STREET, SOUTHWARK (pages 956-959). Architect: Edward Armstrong. The general contractors, first operation, were E. H. Smith (Croydon), Ltd., and the general contractors, second operation, were Holliday and Greenwood, Ltd. The sub-contractors and suppliers included: Ragusa Asphalte Co., Ltd., asphalt; W. T. Lamb and Sons, Ltd., bricks; Austin Veneer and Panel Co., Ltd., doors; Stuart's Granolithic Co., Ltd., artificial stone; Frazzi, Ltd., Paropa roofing; Acme Flooring and Paving Co., Ltd., woodblock flooring (first operation); Jos. F. Ebner, Ltd., woodblock flooring (second operation); Diespeker & Co., Ltd., flooring (second operation); Helical Bar and Engineering Co., Ltd., flooring (first operation); Cornes and Haigh-ton, Ltd., hot water installation; O'Brien, Thomas & Co., Ltd., fireplace surrounds; South Metropolitan Gas Co., gasfitting; City of London Electric Supply Co., Ltd., electric wiring; John Knowles & Co. (London), Ltd., sanitary fittings; Adrian Stokes & Co., door furniture and window furniture (first operation); Nettlefold and Sons, Ltd., door furniture and window furniture (second operation); Crittall Manufacturing Co., Ltd., steel casements; Fredk. Braby & Co., Ltd., steel door frames; Light Steelwork (1925), Ltd., balcony railings; Modern Surfaces, Ltd., decorative plaster—"Muroglaze"; Eric Munday, name plates.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

BROMLEY. *Municipal Offices.* The Bromley Corporation has obtained sanction to borrow £74,145 for purposes of municipal offices.

CAMBERWELL. *Re-housing.* The L.C.C. is to clear an area in Albany Road, Camberwell, and provide re-housing at a cost of £104,000.

CHINGFORD. *School.* The Essex Education Committee has obtained sanction to borrow £23,333 for the erection of a junior school at Yardley Lane, North Chingford.

EALING. *School.* The Ealing Education Committee has obtained sanction to borrow £31,619 for the erection of a council school at North Hanwell.

LEWISHAM. *Houses.* Plans passed by the Lewisham B.C.: 79 houses, Catford Park Estate, Wates, Ltd.

MOLESEY. *School.* The Surrey Education Committee has approved an estimate of £50,584, for the erection of a school at Molesey.

MORDEN. *School.* The Surrey Education Committee has obtained sanction for a loan of £71,167 for the erection of an elementary school on the Farm estate, Morden.

SUTTON. *Court House.* The Surrey C.C. is to proceed with the erection of the new Court House in Lodge Road, Sutton, at a cost of £16,480.

SUTTON. *School.* The Surrey Education Committee has approved an estimate of £25,023, for the erection of a new boys' central school in Thorneycroft Road, Sutton.

PROVINCIAL

BARNSELY. *Houses.* The Barnsley Corporation is to erect 130 houses on Park House Estate, at a cost of £45,016.

BARROW-IN-FURNESS. *Houses.* Plans passed by the Barrow-in-Furness Corporation: 92 houses, Moor Tarn Lane, Styles and Bates, Ltd.

BIRMINGHAM. *School.* The Birmingham Education Committee has obtained sanction to borrow £72,380, for the erection of a public elementary school at Perry Barr.

BOREHAM WOOD. *School.* The Hertfordshire Education Committee is to erect an elementary school for senior children at Boreham Wood, at a cost of £43,121.

BRADFORD. *School Extensions.* The Bradford Education Committee has approved plans by the City Architect for extensions at Woodroyd modern school at a cost of £15,100.

BRADFORD. *School Extensions.* The Bradford Education Committee has approved revised plans for extensions at Great Horton School at a cost of £9,000.

BRADFORD. *Schools.* The Bradford Education Committee is to obtain sites in the Haworth and Fairweather Green districts for the erection of elementary schools.

BRADFORD. *School.* The Bradford Corporation is to sell land in Avenue Road to the R.C. authorities for the erection of an elementary school.

BRAINTREE. *Houses.* The Braintree and Bocking U.D.C. is to erect 82 houses on the Panfield Lane Estate, at a cost of £27,855.

CARDIFF. *Houses.* The Cardiff Corporation is to invite tenders for the erection of 104 houses on the Highmead Estate.

CHELMSFORD. *School.* The Chelmsford Education Committee has acquired a site on the Melbourne Park Estate for the Rainsford Senior School.

CHELTHAM. *Houses.* Plans passed by the Cheltenham Corporation: 22 houses, Bafford Farm, Charlton Kings, Mr. J. Holborrow; 19 houses, off Noverton Lane, Prestbury, Mr. A. Wiggett.

CHERTSEY. *School Enlargement.* The Surrey Education Committee is to enlarge the New Haw School, Chertsey, at a cost of £8,844.

CHESHIRE. *School.* The Cheshire C.C. is to erect premises for the Helsby County School for Girls and Boys, at a cost of £65,704.

CHESTER. *Houses.* The Chester Corporation has obtained sanction for a loan of £29,921 for the erection of 80 houses on the Lache estate.

CHESTER. *School, etc.* The Chester Diocesan Church Schools Association is to erect a senior

school for 320 girls and enlarge the College School, Chester.

CHURCH EATON. *Small Holdings.* The Staffordshire County Council is to provide small holdings at Upper Woollaston Farm, Church Eaton, at a cost of £16,535.

CIRENCESTER. *Houses.* The Cirencester U.D.C. is to erect 150 houses on the Chesterton site, at a cost of £57,870.

DROYLESDEN. *School.* The Lancashire Education Committee has approved an estimate of £91,433 for the erection of a senior school at Droylesden.

DUDLEY. *School.* The Dudley Education Committee has acquired a site at Holly Hall for the erection of an elementary school.

DUKINFIELD. *Houses.* The Dukinfield Corporation is to erect 266 houses on the Inverness and Stanley estates, at a cost of £107,984.

DURHAM. *Hospital.* The Durham County Council has approved a joint report of the County Medical Officer and the County Architect, with respect to the proposed hospital at Dryburn. The estimated cost of the scheme amounts to £345,000, including the estimate of £79,500, for the proposed engineering equipment and services.

DURHAM. *School Clinic, etc.* The Durham County Council is to provide a combined school clinic, maternity and child welfare centre at Durham.

ECCLES. *Houses.* Plans passed by the Eccles Corporation: 18 houses, Fairless Road, Grimshaw (Builders), Ltd.; 158 houses, Worsley Road, Winton, for the Corporation.

ECCLES. *Houses.* The Eccles Corporation has arranged with Mr. J. W. France to erect 45 houses off Bradburn Street, Patricroft.

EXETER. *Houses.* The Exeter Corporation is to erect 64 houses on the Buddle Lane Estate, at a cost of £25,701.

FAIRSWORTH. *School.* The Lancashire Education Committee is to erect an elementary school for boys at Fairsworth, at a cost of £24,700.

FARINGTON. *School.* The Lancashire Education Committee is to erect a junior school at Farington at a cost of £24,070.

FELLING. *Houses, etc.* The Felling U.D.C. is to erect 79 houses and bungalows at Bill Quay, 114 houses at Nest House, and 10 houses at Felling House, at a cost of £62,600.

GREAT HARWOOD. *Clinic, etc.* The Lancashire C.C. has purchased a site at Great Harwood for the erection of a clinic and welfare centre.

GUILDFORD. *Additions to School.* The Surrey Education Committee has approved plans for the erection of additional buildings at the Royal Grammar School, Guildford, at an estimated cost of £32,000.

GWYRFAL. *Houses.* The Gwyrfai R.D.C. is to erect 60 houses on the Blaenyddol, Llanberis site, at a cost of £24,710.

HASTINGS. *School Extensions.* The Hastings Education Committee has approved plans by the Borough Engineer for extensions at the High School for Girls, at a cost of £17,159.

HOVE. *Houses, etc.* Plans submitted to the Hove Corporation: 42 flats, Kingsthorpe Road; swimming pool, Cottesmore School, The Upper Drive; 20 houses, 1-20 Hangleton Road, Mr. H. J. Paris; 20 houses, 219-221 Nevill Road, and 1-35 Goldstone Way, Messrs. Cook (Brighton), Ltd.

ILKESTON. *Houses.* Plans passed by the Ilkeston Corporation: Ten houses, Longfield Crescent, Mr. A. Wheatley.

KEIGHLEY. *Houses, etc.* Plans passed by the Keighley Corporation: 61 houses, and 46 bungalows, Guard House Estate, Housing Committee.

LLANTRISANT. *Houses.* The Llantrisant and Llantwit Fardre R.D.C. is to erect 20 houses at Penygawsi, 20 houses at Church Village and 18 houses at Tynybryn, at a cost of £26,229.

MORPETH. *Houses.* The Morpeth Corporation is to erect 100 houses on the Stobhill Housing Estate, at a cost of £35,854.

OLDBURY. *Houses.* The Oldbury Corporation has approved revised plans for the erection of 90 houses, by the direct labour dept., on the Moat Farm Estate, at a cost of £36,500.

OLDBURY. *Houses.* Plans passed by the Oldbury Corporation: 13 houses, Kingsway, Quinton, Rudge Bros.

PENWORTHAN. *School.* The Lancashire Education Committee is to erect a junior school at Penworthan at a cost of £12,872.

PLYMOUTH. *Flats, etc.* The Plymouth Corporation has obtained sanction to borrow £24,101 for the erection of 42 flats at Prospect Row, Devonport, and the demolition of existing buildings on the site.

SALFORD. *Houses.* The Salford Corporation is to erect 50 houses on the Sommerville estate at a cost of £19,700.

SALFORD. *Schools.* The Salford Education Committee has purchased sites for new senior schools in the Trafford Road area.

SEAHAM. *Houses.* The Seaham U.D.C. is to erect 274 houses on the West Park Estate, at a cost of £103,850.

SHEFFIELD. *Houses, etc.* Plans passed by the Sheffield Corporation: 14 houses, Sandycote Road, Thos. Knowles and Sons (Builders), Ltd.; six houses, Norton Park View, Mr. C. H. Beardow & 12 houses, Norton Park Road, Mr. J. T. Redmile; 40 houses, Studfield Hill, J. Copley & Sons, Ltd.; cinema and eight shops, Barnsley Road, M. J. Gleeson, Ltd.; 71 flats, Clarkehouse Road, Mr. C. B. M. Wilson; six houses, Norton Park Road, Mr. A. G. Redmile; 44 houses, Manor Laithe Road, Mr. M. Bonner; 130 houses, Hollinsend Road, Mr. R. Oliver; 12 houses, Mansfield Road, Mr. A. Clegg.

SHEFFIELD. *School.* The Sheffield Education Committee is to erect a secondary school for girls in Hurlfield Road, at a cost of £96,870.

SUNDERLAND. *Schools, etc.* The Sunderland Education Authority is to provide a new public elementary school for 300 junior children, 350 infant children, and a nursery block for 80 children on the Marley Potts Estate and a new public elementary school for 440 senior boys, 440 senior girls, 500 junior children, 250 infant children, and a nursery block for 80 children on the Plains Farm Estate, Humbleton.

SUTTON COLDFIELD. *Houses.* Plans passed by the Sutton Coldfield Corporation: 29 houses, Ashurst Road, etc., Mr. T. Goodman; ten houses, Park Hill Road, Howell and Skinner; 14 houses, Donegal Road, H. J. Major; 20 houses, Donegal Road, Mrs. F. Chester; ten houses, Ashurst Road, County Estates (Derby), Ltd.

TOTTINGTON. *Branch Library.* The Lancashire C.C. has purchased a site at Tottington for a branch library.

TURTON. *Clinic, etc.* The Lancashire C.C. is to erect a clinic and welfare centre at Bromley Cross, Turton, at a cost of £7,000.

ULVERSTON. *Hospital.* The Lancashire C.C. has purchased part of Todbusk Estate, Ulverston, for the erection of a hospital.

WALTON. *School Improvements.* The Surrey Education Committee has approved an estimate of £8,255, for extensive improvements at the junior school, Walton.

WEDNESBURY. *Houses.* The Wednesbury Corporation is to erect 104 houses on the Crankhall Lane site, at a cost of £35,620.

WORTHING. *Houses.* Plans passed by the Worthing Corporation: Houses, Crowborough Drive, West Sussex Coast Development Co., Ltd.; 18 houses, Ringmer Road, Nunns Estates; house, Lancaster Road, Associated Rural Structures, Ltd.; 19 houses, Bernard Road, Novaeon Homes (Worthing), Ltd.; 14 houses, Ringmer Road, Cook and Burrows; 52 houses, Sompting Manor Estate, Sompting Manor Estates (Worthing), Ltd.

WREXHAM. *Houses.* The Wrexham Corporation is to erect 151 houses on the Whitegate Farm Estate, at a cost of £53,190.

YARMOUTH. *Houses.* The Great Yarmouth Corporation has obtained sanction to borrow £64,243 for the erection of 148 houses on the North Dene Estate.

YORK. *Houses, etc.* Plans passed by the York Corporation: 13 houses, Walney Road, Mr. R. A. Cattle; eight houses, Chudleigh Road, Mr. J. N. Dunn; 12 houses and 32 flats, Dale Street and Swann Street, York Corporation.

P R I C E S

On the following pages appears Prices for Measured Work—Part I, with prices last published on May 5, brought up to date.

★ ANSWERS TO QUESTIONS

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

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

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

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

PART 3

CURRENT PRICES FOR MEASURED WORK—I

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

PRELIMINARIES

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

EXCAVATOR

	Ordinary Ground	Clay
Surface digging average 9" deep and wheeling and depositing on spoil heap, not exceeding two runs per yard super	-/9	1/1

EXCAVATOR—(continued)

	Ordinary Ground	Clay
Excavating not exceeding 5' 0" deep to form basement and getting out .. per yard cube	1/11	2/10½
Ditto, exceeding 5' 0" deep and not exceeding 10' 0" deep per yard cube	2/5	3/6
Excavating not exceeding 5' 0" deep, to form surface trenches and getting out .. per yard cube	2/7	3/10
Ditto, exceeding 5' 0" deep and not exceeding 10' 0" deep per yard cube	3/7	5/0
Ditto, not exceeding 5' 0" deep to form basement trench excavation commencing 10' 0" deep, and getting out per yard cube	3/4½	4/6
Returning, filling in and ramming around foundations per yard cube	1/1	1/5

CURRENT PRICES

EXCAVATOR, CONCRETOR AND BRICKLAYER

EXCAVATOR—(continued)

	Ordinary Ground	Clay
Filling barrows and wheeling and depositing excavated soil not exceeding two runs per yard cube	1/1	1/5
Spreading and levelling from excavated heaps in layers not exceeding 12" per yard cube	-/9	1/-
Filling into carts or lorries and carting away per yard cube	4/6	4/10
Planking and strutting to sides of basement, excavation, including strutting per foot super	1/-	-/9
Planking and strutting to surface trenches (both sides measured) per foot super	-/4½	-/3
Hardcore, broken brick, filled in under floors and well rammed and consolidated per yard cube	6/6	
Hardcore, broken brick, deposited, spread and levelled, and rammed to a true surface 6" thick per yard super	1/4	

CONCRETOR

Foundations and Mass Concrete

Portland cement concrete 1 : 6 with unscreened ballast, in foundations and masses exceeding 12" thick per yard cube	20/6
Ditto, 1 : 3 : 6, with one part of cement and three parts of sand and six parts of clean gravel per yard cube	21/-
Ditto, 1 : 2 : 4 with one part of cement, two parts of sand and four parts of ¾" crushed graded shingle per yard cube	25/10
Add if mixed by hand labour per yard cube	2/-
Add if in foundations not exceeding 12" thick per yard cube	2/3
Add for mechanical hoisting per yard cube	1/6
Add for hand hoisting per 10 feet per yard cube	2/3

Surface Beds

Portland cement concrete 1 : 6, bed 6" thick, spread and levelled per yard super	3/11
Add or deduct for each inch over or under 6" in thickness per yard super	-/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	5/3½
Add or deduct for each inch over or under 6" in thickness per yard super	-/7½

Casings

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

Walls in Situ

Portland cement concrete 1 : 6 with unscreened ballast in 9" walls packed around rods (m/s) per yard super	6/7
Ditto, in 12" walls ditto per yard super	8/-

Reinforcement

¾" diameter and upwards mild steel rod reinforcement, cut to lengths, including bends and hooked ends and embedding in concrete lintols per cwt.	23/6
Under ¾" diameter ditto per cwt.	25/-

Formwork

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

BRICKLAYER

	Flettons £ s. d.	Second Stocks £ s. d.	Blue Staffordshire Wirecuts £ s. d.
Reduced brickwork in lime mortar 1 : 3 with ½" joints per rod	23 0 4	32 9 0	
Ditto, ¾" joints per rod	22 13 4	31 7 3	
Reduced brickwork in cement mortar 1 : 3 with ½" joints per rod	24 15 4	34 3 8	51 15 8
Ditto with ¾" joints per rod	24 14 0	33 7 0	50 6 4
Add if lime mortar hand mixed per rod	5/8	5/8	
Ditto cement mortar per rod	12/9	12/9	9/-
Half brick walls in lime mortar 1 : 3 ½" joints per yard super	5/1	7/2	
Ditto in cement mortar 1 : 3 per yard super	5/5½	7/6½	11/3
Labour forming 2" cavity to hollow walls including wall ties, etc. per yard super			9d.

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

Extra for Internal fairface and flush jointing per yard super	1/1½
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Extra for grooved bricks as key for plaster per yard super	3d.
Raking out joints ditto per yard super	4½d.
Hacking concrete ditto per yard super	6d.

Horizontal double slate damp-proof course 4½" wide bedded in cement mortar per foot run	4d.
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Ditto exceeding 4½" in width per foot super	10d.
Vertical ditto per foot super	1/-

"Ledkore" (Grade B) D.P.C. per foot super	9d.
Plumbing angles per foot run	1d.

Rake out joints and point to lead flashings per foot run	2d.
Ditto stepped per foot run	3d.

Bedding door frames per foot run	1d.
Ditto and pointing one side per foot run	2d.

Ditto and pointing both sides per foot run	3d.
Parge and core flues per each	4/-
Set and flaunch only chimney pots per each	5/-

Hoisting and fixing metal windows size 3' 6" x 4' including cutting and pinning lugs to brickwork and bedding frames in cement mortar and pointing in mastic on one side per each	5/-
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Ditto, including screwing to wood frame (measured separately) per each	3/-
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Form opening for air brick including slate lintol and render around in cement and sand to 13½" 9" x 3" 9" x 6" wall and build in Terra Cotta air brick per each	2/6	3/3
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Galvanized cast iron School Board pattern air bricks and building in per each	9d.	1/3
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Fixing only fireplace simple interior and surround each	27/6
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Partitions

	2"	2½"	3"	4"
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Breeze set in cement mortar per yard super	2/11	3/5	4/1½	5/1½
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Clay tile ditto per yard super	4/5	4/11	5/8	6/4½
Pumice ditto per yard super	4/6	5/2½	6/3	7/2
Plaster ditto per yard super	4/-	4/11	6/-	7/2

White glazed both sides best quality bricks, set in cement mortar and pointed in Parian cement per yard super		42/5		
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Facings

Prices are extra over Fletton brickwork and are for raking out joints and pointing with a neat struck weathered ½" 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
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Stock facings p.c. 95/- per yard super	5/1	5/6	4/2
Rustic Flettons p.c. 70/6 per yard super	3/4	3/6	2/11
Blue pressed p.c. 174/- per yard super	11/3	12/6	8/10

Sand faced hand made reds p.c. 120/- per yard super	8/-	8/7	6/4
White glazed, headers p.c. 470/- and stretchers 480/- per yard super	32/-	36/-	24/8

For a variation of 10/- per M. in p.c. of facing bricks size 8½" x 2½" on face with ½" joints add or deduct per yard super	9d.	10d.	6½d.
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CURRENT PRICES

BRICKLAYER, DRAINLAYER, ASPHALTER AND PAVIOR

BRICKLAYER—(continued)

Facings—(continued)

	Rustic Flettons	Stock Facings	Sand Faced Hand Made Reds
Half brick wall stretcher bond in cement mortar built fair and joints raked out and pointed in cement mortar on one side per yard super	8/7½	9/10½	12/-
Ditto and pointed both sides per yd. super	10/6	11/9	13/10
One brick wall in cement mortar built fair and joints raked out and pointed in cement mortar on one side per yard super	15/5	17/11	22/1
Ditto and pointed both sides per yd. super	17/3	19/9	23/10
Half brick wall built in best quality white glazed one side bricks, stretcher bond, in cement mortar built fair and pointed in parian cement per yard super			31/-
Ditto white glazed both sides and pointed both sides per yard super			41/9
Labour and material in hand made sand faced red brick on end window head and pointing to face and 4½" soffit per foot run			1/3
Hand made, sand faced brick on edge coping including double course of tile creasing with two cement angle fillets to one brick wall per foot run			2/3

DRAINLAYER

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

	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
6" thick Portland cement concrete bed 6:1, 12"	4"	6"
wider than diameter of pipe, and flunched		pipes
halfway up sides of pipe per foot run	-8½	-10
6" ditto, and completely encasing per foot run	1/7	1/11

	2"	3"	4"	6"
Agricultural land drain pipes, laid complete with butted joints, exclusive of digging per yard run	-4	-6	-8	1/1

British Standard Quality Salt Glazed Socketed Stoneware Drainpipes and Fittings

	4" pipes	6" pipes	9" pipes
Under	Under	Under	Under
2 tons,	2 tons,	2 tons,	2 tons,
100	100	100	100
Over	Over	Over	Over
2-ton up-	2-ton up-	2-ton up-	2-ton up-
lots	lots	lots	lots
wards	wards	wards	wards
Pipes jointed in 1:1 cement and sand per foot run	1/1	1/3	1/7
Extra for bends each	1/4	1/7	2/-
Ditto, single junction each	1/10	2/2	2/-
Trapped yard gulleys with galvanized iron gratings, and setting in concrete and jointing to drain each	9/-	11/6	13/-
Ditto, with horizontal back inlet each	10/6	13/3	14/6
Ditto, with vertical back inlet each	11/3	14/-	15/3
Intercepting trap with Stanford stopper and setting in manhole and making good each	20/6	24/-	25/6

Coated Cast Iron Socketed Drain Pipes

	4"	6"	9"
Pipes in 9' 0" lengths and laying in trench, including caulked lead joints per foot run	3/6	5/3	9/3
Cutting and waste each	1/9	3/6	—
Extra for bends, including extra joints and cutting and waste on pipe each	10/10	20/9	59/5
Ditto, junction ditto each	17/5	32/6	99/5
Intercepting trap each	49/-	79/4	183/4

DRAINLAYER—(continued)

	4"	6"	9"
H.M.O.W. large socket gulley trap with 9" gulley top and heavy grating and one back inlet	45/5	79/6	—
H.M.O.W. gulley trap with 9" inlet with high invert outlet for use with raising pieces	33/5	48/-	—
4" inspection chamber with one 4" branch each			66/-
4" ditto with two 4" branches one side each			99/-
6" ditto with one 4" branch each			95/3
6" ditto with two 6" branches one side each			140/-
9" ditto with one 9" branch each			212/6
9" ditto with two 9" branches one side each			326/-
4" half-round straight main channel 24" long each	5/10		
Ditto, channel bends (ordinary) each	8/6		3/-
4" Three-quarter round branch bends (short) each		8/6	6/9
Manhole covers and frame bedded in grease and set in cement mortar each			4/-

ASPHALTER

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

	Natural Rock Asphalte	Best Quality	Second Quality
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Basement (Tanking).

1½" horizontal d.p.c. in three layers on concrete per yard super	8/5	6/10
¾" vertical ditto in three coats on brickwork or concrete per yard super	11/6½	10/-
Double angle fillet per foot run	-6½	-5½

Hard Graded Paving.

1" thick per yard super	7/4	6/3½
¾" thick per yard super	6/3½	5/3½
½" dampcourse finish, with smooth surface to receive lino or other floor covering	5/3	4/8½

Roofing (Flat).

¾" thick in 2 layers per yard super	6/3½	5/3
1" ditto per yard super	7/4	6/3½

Extras.

Felt supplied and fixed per yard super	-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	3/6	4/7
Add for dusting with carborundum powder per yard super			-9
Cement and sand paving (1:3) per yard super	1/10	2/4½	—
½" Jointless flooring, red, buff or brown, finished to a smooth trowelled surface, on concrete sub floors per yard super			5/3
¾" Ditto, in two coats on spade faced concrete or wood sub floors			6/7
½" thick ditto, reinforced with laths and galvanised wire netting per yard super			6/0½
Add for polishing per yard super			-6½
Terrazzo paving, white chips set in white cement, panelled into squares with 1½" x ½" deep ebonite strips, on and including cement and sand screed. Total thickness 1½" per yard super			19/5
Ditto, but white chips set in grey Portland cement per yard super			17/4
Terrazzo tiles, white chips set in white cement:—			
Size 9" x 9" x ¾" per yard super	20/6		
Size 12" x 12" x 1" per yard super	18/8		
Ditto, but white chips set in grey Portland cement:—			
Size 9" x 9" x ¾" per yard super	18/11		
Size 12" x 12" x 1" per yard super	17/1		
Sheet rubber per yard super	12/1	15/3	18/4½
Rubber tiles per yard super	15/3	18/4½	21/6
Cork tiles, polished per yard super	12/10½	11/-	10/-

CURRENT PRICES

MASON, SLATER, TILER AND ROOFER, AND CARPENTER

PAVIOR—(continued)

Hard red paving bricks laid flat ($9" \times 4\frac{1}{2}" \times 2\frac{1}{8}"$)	per yard super	9/-
Ditto, laid on edge	per yard super	11/9
	thick	thick
$6" \times 6"$ best quality red quarry tiles	per yard super	10/- 11/-
$6" \times 6"$ best quality buff quarry tiles	per yard super	10/6 11/6
$2"$ Yorkshire stone paving, square joints and bedding	per yard super	22/-
$2"$ Finished path of coarse gravel finished with good binding	per yard super	1/7½
$3\frac{1}{2}"$ Path of clean hard clinker and $1\frac{1}{2}"$ gravel finished to slight camber	per yard super	2/3
$7\frac{1}{2}"$ Carriage drive of $3"$ clinker, $3"$ coarse gravel and $1\frac{1}{2}"$ binding gravel finished to slight camber	per yard super	3/9
$2\frac{1}{2}"$ Tar paving in two layers finished with Derbyshire spar	per yard super	4/9

MASON

	Bath	Portland
Stone and all labours of usual character covering $7"$ on bed, roughly squared at back, fixed and cleaned down complete	per foot cube	11/9 17/-

Yorkstone

	Thickness		
	3"	4"	6"
Templates tooled on exposed faces, sawn beds and joints, and set in cement mortar:—			
Size $9" \times 9"$	each	1/8 2/3	3/4½
" $14" \times 9"$	each	2/7½ 3/6	5/3
" $18" \times 14"$	each	5/3 7/-	10/6
" $22\frac{1}{2}" \times 14"$	each	6/6 8/8	13/-
" $27" \times 14"$	each	7/10½ 10/6	15/9

Artificial Stone

In steps, copings, band courses, etc., per foot cube, from	9/-
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Reconstructed Stone

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

	1"	1½"	1½"
Slate slabs, sawn to size, not exceeding 10 ft. sup. and planed, with rubbed face and fixing as shelving, etc.	per foot super	4/6 5/-	6/-
Ditto, not exceeding 20 ft. sup.	per foot super	5/4 5/10	7/-
Rubbed edges	per foot run	-4½ -4½	-4½

SLATER, TILER AND ROOFER

Bangor and Portmadoc Slates

	20" x 10"	16" x 8"	24" x 12"
Slates laid to a 3" lap and fixed with zinc nails	per square	79/- 77/-	80/-

Old Delabole Slates

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

Randoms

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

Westmorland Green Slates

Randoms		Bests 24" to 12" long proportion- ate widths
No. 1 Buttermere, fine light green	per square	122/9
No. 2 Buttermere, light green (coarse grained)	per square	120/9
No. 5 Buttermere, olive green (coarse grained)	per square	117/6

SLATER, TILER AND ROOFER—(continued)

Tiles

Hand made sand faced $10\frac{1}{2}" \times 6\frac{1}{2}"$ 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	65/-
Bridgewater double Roman laid dry	48/3

Sundries

Stripping, slating down to and including, $18" \times 9"$	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 $18" \times 9"$	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
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Asbestos

Russet brown asbestos cement roofing tiles $15\frac{1}{2}" \times 15\frac{1}{2}"$ laid diagonally with $2\frac{1}{2}"$ lap, per square	38/-
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CARPENTER

Centering

Turning piece to flat soffits $4\frac{1}{2}"$ wide	per foot run	-/4
(For Formwork see "Concretor.")		

Fir Sawn and Fixed

Plates, dragon ties, sleeper joists and lintols, ground floor ($4" \times 2"$ and $4" \times 3"$)	per foot cube	3/9
Upper floor ditto ($7" \times 2"$)	per foot cube	4/4
Partitions (stud) ($4" \times 2"$ and $4" \times 3"$)	per foot cube	5/-
Rafters and ceiling joists ($4" \times 2"$ and $4" \times 3"$)	per foot cube	4/9
Purlins ($6" \times 4"$)	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
$1\frac{1}{2}" \times 9"$ ridge	per foot run	-6½
$1\frac{1}{2}" \times 11"$ hips or valleys, including cutting ends of rafters against same	per foot run	-8½
Extra labour trimming $6" \times 2"$ 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

$2" \times 1"$ spaced for Countess ($20" \times 10"$) slates to 3" lap	per square	11/-
$2" \times 1"$ ditto for Ladies ($16" \times 8"$)	per square	14/6
$2" \times 1"$ ditto for Duchess ($24" \times 12"$) ditto	per square	9/-
$2" \times 1"$ ditto for randoms $24"/22"$ to $12"/10"$	per square	12/2
* $1\frac{1}{2}" \times \frac{3}{4}"$ ditto for plain tiles ($10\frac{1}{2}" \times 6\frac{1}{2}"$) to a 4" gauge	per square	13/7
$1\frac{1}{2}" \times 1"$ ditto for pantiles to approximately $11\frac{1}{2}"$ gauge	per square	6/7

Roof Boarding

	¾"	1"
Deal roof boarding in batten widths close jointed	per square	29/2 35/6
Ditto, prepared for patent flat roofing and including firrings to falls	per square	39/7 45/10
Small tilting fillet	per foot run	-/2
Large ditto	per foot run	-/4

Felt

Sarking or slaters felt, fixed with 2" side laps and 6" end laps	per yard super	-/10½
Roofing felt ditto	per yard super	1/1
Bituminous hair felt ditto	per yard super	2/-

Weather Boarding

Rough deal feather edge boarding in batten widths ½"	per square	31/3
average with $1\frac{1}{2}"$ laps	per square	32/10
Western Red Cedar ditto	per square	

Fascia and Soffite Boards

1" x 6" deal splayed fascia fixed to rafter feet per foot run	-/4½
1" x 9" deal soffit tongued both edges, including grooves	per foot run
	-/7½

(To be continued in next issue)

* Items marked thus have fallen in price since May 5.