# NEARING COMPLETION

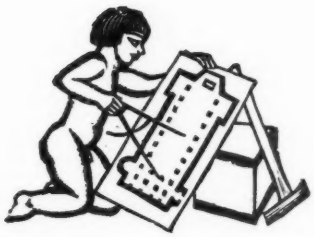
## *NEW BUILDING IN PRAGUE*

*AT the end of June an International Housing Congress (promoted by the International Housing Association) was held in Prague, under the chairmanship of Dr. F. M. Wibaut, of Amsterdam. In addition to papers read by delegates from various countries, the programme of the Congress included a tour of some of the new buildings in the city: above is a general view of the new Isolation Block (now nearing completion) at the Masaryk Homes, situated on the outskirts of the city.*

*This group of buildings was erected about three years ago by the Municipality of Prague, for the accommodation of aged persons who have lived in the City over ten years; and for children under twelve years of age who are (1) under-nourished; or (2) living in bad social conditions. The total maximum accommodation is: 3,000 adults and 500 children. The buildings were the subject of an open competition and the estimated cost was £950,000.*

## SILVER JUBILEE MODEL THEATRE

*Constructed for exhibition in aid of theatrical charities, the theatre is executed to a scale of $\frac{5}{8}$ in. to one foot. Approximately fourteen feet square, the model has been designed to give a detailed and comprehensive view of the working of a theatre, glass being substituted for walls where necessary. Care has been taken that all fittings and equipment should be complete and as accurate as possible. The walls are of plywood and cardboard designed to avoid distortion from the heat of the concealed lighting. The model was designed by Mr. George E. Tonge and constructed by Messrs. Clark and Fenn. Above is a detail of the main entrance façade.*



# TWO MODERN PROBLEMS

THE Fourteenth International Congress of Housing and Town Planning. The two-fold title of the assembly which is meeting in London this week is in keeping with a world that can move largely and widely about its business. And that assembly has come together with the patronage and encouragement of the greatest names and most powerful authorities in the country, to seek the solution of two problems which must be solved by civilization before civilization's progress is ended by those two problems.

It would indeed seem that rare good fortune has come once more to a proverbially lucky people. A small country, far too thickly populated, in which an annual production of a quarter of a million houses is showing every sign of rising to half a million, whilst the families most acutely needing new houses still continue to lack them, should provide more than full material for the discussions of the one half of the Congress. A small country, the same far too thickly populated small country, is building so furiously as to rehouse itself completely in fifty years (supposing that the poorest families can afford to live in the new houses), and is busily abandoning large desolations of industrial areas in order to create them afresh elsewhere. And all the time town-planning acts, town and country planning acts, housing and town planning acts—in platoons if not battalions—both constitute exact examples of suspended animation and moulder quietly in pigeon-holed complication.

To the eminent physicians of the second half of the Congress the world cannot present a case in greater need of their diagnosis and of their prescription.

And the general subjects to be considered at the Congress are very much to the point of this country's special needs—needs which are more acute than elsewhere in Europe owing to our long start upon the road of intensive industrialism.

The housing section will have before it general replacement of unsatisfactory dwellings; the grave difficulty of bringing the new houses within the means of the poorest families; compulsory measures against overcrowding, and the advances recently made in working-class housing equipment.

The town planning section will have upon its agenda two subjects which, if granted a full-dress debate in the House of Commons, would not receive more than their due measure of attention. The first of these is "Positive Town Planning," by which is meant a planning, not merely restrictive, which abandons tentative and optional measures in favour of regulations coming into immediate force and working to a short time-table. The second subject is that of the wisdom or otherwise of a policy of decentralization and satellite towns.

The importance of international housing discussion is very great, as was recently stressed at Prague by Mr. Woodbury, first "Official Observer" to be appointed to such a discussion by the U.S.A. Federal Government. Opportunity for so broad a view of urgent problems is rare, and it would be well for our own sakes to see that the delegates can make the very best use of their time.

In England, somehow, we have found the doing of this for international gatherings very difficult. Still insular by conviction and inclination, we are far too tempted to get over the awkwardness of close contact with foreigners by the well-known expedient of diffident hostesses—that of packing the proceedings so fully with games and entertainments that dull moments are impossible.

But the dull moments of serious and full sessions for discussion are much needed in housing and town planning. And it might seem that a programme, covering a total period of a fortnight, which allows but five hours in two meetings for the discussion of housing shows more than a trace of a national failing.

We hope that as many informal meetings as the R.I.B.A. can accommodate will be arranged to supplement this meagreness, and that the country will try to learn from its distinguished guests as much as it possibly can.

It is not very often that the Congress meets in England. The Fourteenth Congress is the first to be held here since the war, and the supreme need for its organizers is the determination that it shall escape the blight of so many international gatherings—the vague goodwill, the general beneficent resolutions, the lack of results.

It is only from results—compact, cut and dried results—that we can pay to our Congress guests the high compliment of learning as much as we can from them.

*The Architects' Journal*
*Westminster, S.W.1*
*Telephones: Victoria*
*9212-7*
*Telegrams*
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*London*

# NOTES & TOPICS

INTERNATIONAL HOUSING CONGRESS

THERE was hardly a vacant seat in the large hall at the Friends House, Euston Road, on Tuesday morning when the inaugural meeting of the fourteenth International Housing and Town Planning Congress was held under the chairmanship of Mr. John Nolen of the United States.

*

I arrived a few minutes after the proceedings had started, just in time to hear the chairman make the disappointing announcement that Sir Kingsley Wood, the new Minister of Health, was unable to attend the meeting. This was a sad blow: I had hoped for great words from the lips of Sir Kingsley.

*

He has, after all, taken over the Ministry of Health at an appropriate time—the half-way stage in the five-year campaign against slums. Does he intend to continue with the methods adopted by his predecessor, Sir Hilton Young, or will the great mind that reorganized the Post Office—and gave us the sixpenny telegram—adopt a new method for the abolition of slum?

*

Sir Kingsley was represented by his Parliamentary Private Secretary, Sir E. T. Campbell, who has just returned from a trip round the world. He pointed out that 1935 was a year of more than ordinary significance in the progress of English housing and town planning.

*

Not only, he said, is it the year which marks the end of the first half of the campaign against slum, but it is the year when we are looking to the passage through Parliament of what is probably the biggest housing measure we have ever introduced—a measure which is designed to abate, by direct action, the evil of overcrowding and intolerable living conditions.

*

I might add that 1935 is also significant for another reason—the appointment of Sir Kingsley Wood to the Ministry of Health. He is faced with a gigantic task, but what he has done for the Post Office. . . .

*

Following the speech by Sir E. T. Campbell, Mr. Frank Hunt, chief valuer to the L.C.C., gave an excellent lantern lecture entitled "Twenty-Five Years of Town Planning in London." I cannot fail to remark, however, that there has been little, if any, *real* town planning in London during that period!

ARCHITECTURAL ALMSHOUSES

Amongst the more defenceless victims of brightly expanding commerce, shop fronts have always been accorded priority. The embryo architect's very first lesson in underpinning is of slipping in a couple of R.S.J's. And soon a few extra yards of plate-glass are helping to captivate a public that likes to look before it leaps.

*

And all this makes more interesting the old shop fronts now being re-erected at Hull in a street where they can pass a dignified old age all by themselves, with their decent feelings unoutraged by the immodest exhibitionism of younger generations.

*

It is really quite a good idea—besides a very paying one. A quiet *cul de sac* off Piccadilly containing Hatters to the Nobility and Tobacconists to the Gentry would not only be sure of huge patronage by visitors, but would also form a nice series of lessons in good taste.

RUINS—AND RUINS ALONE

One sentence of Mr. Ormsby-Gore's address to the National Trust last Monday should be well considered by those who are responsible for scheduling Ancient Monuments for protection by the Office of Works. In speaking of the country houses of Britain—which must surely be held one of our most valuable national possessions—the First Commissioner said that his department could only take them over when they became ruins.

*

He then added, "It seems a pity to have to wait for that." It does rather. However just the heavy taxation of their present owners may generally be considered, it should be possible to prepare a list of houses which are a national asset, and then to inaugurate between the owners and H.M.O.W. a scheme of co-operative repair.

PROFESSOR GROPIUS—

I can think of no more concise enunciation of what the New Architecture is, and its potentialities as a correlating force in the chaos of modern living, than is to be found in Professor Walter Gropius's new book, *The New Architecture and the Bauhaus*, which has just been published by Faber and Faber, excellently translated by P. Morton Shand.

*

It is a brief account of Professor Gropius's career as an architect and as the founder and organizer of the Bauhaus, told so that it demonstrates his own architectural beliefs.

*The Silver Jubilee Model Theatre. A general view of the auditorium from the stage.*

There is not much I can say about it except "read it." Professor Gropius played a far greater personal part in the genius of the Modern Movement than he would ever claim, and his experience and vision in all sorts of fields—housing, industrial design, architectural education—are just what this country needs.

*

The only tragedy is that this book was not published a few years ago, when his ideas might have been allowed to influence (and co-ordinate) all our new building—and particularly housing—plans ; I hope we will still make some use of our tremendous good fortune in having him in this country.

—AND THE "SUNDAY EXPRESS"

It was gratifying and surprising to see last Sunday's *Sunday Express* giving half a page to illustrations and quotations from Professor Gropius's book. Was ever anything more worth the space? That is preaching to the unconverted with a vengeance.

*

And it was comic to find in the same issue of that paper one of the most misconceived paragraphs about architecture —in the number of misconceptions to the line—that I have read for a long time. It occurred in Lord Castlerosse's weekly gossip column. Here is part of it : "Trousers were primarily sent into this world to be lived in." And now we get to my point—so were houses.

*

"Some houses, unfortunately, cannot be so described—Carlton House Terrace, for instance, and the Adelphi, which I trust will soon be demolished.

*

"Carlton House is a fine example of sugar-cake architecture on the outside—the work of a cook gone grandiose. It's puny, petty stuff, but there—if you wish to see a really fine street you have to leave Europe out of it, and visit Park Avenue, in New York, which is the finest street in the world."

*

There's not much I can say about that either, except :

(*a*) Lord Castlerosse ought to read Professor Gropius's book.

(*b*) Lord Castlerosse, if I may say so, doesn't know dignity —when of a suitable kind, the finest architectural quality there is—when he sees it.

(*c*) I have been to Park Avenue, New York City, and I can assure my readers that if *they* haven't they haven't missed much.

ALSO THE ADELPHI

Now, is the Adelphi out of date, or is it not? A correspondent (whose letter will be found on another page) takes me to task for my admittedly rather perfunctory remarks about the fate of the Adelphi, and seems to accuse me of not caring much what happens to it.

*

What I was feeling was resignation rather than apathy. I have spent so much time, energy and ink in recent months championing the fine monuments that "development" always threatens to destroy that I have been feeling that if I say another violent word about Carlton House Terrace, the Adelphi, Park Row, Bedford Square, Brighton Front, or Soane's Bank of England I shall be classed as one of these preservationists who would make the whole of England a museum.

*

I, personally, would like to see the Adelphi preserved ; but I have said all I can say about it. It seems as though the cause of its salvation needs support now from other quarters, and that the best thing I can do is to accept for the moment that we are to lose it, and plead for proper planning and dignified treatment of its site.

INSPIRATION IN PECKHAM

It might be thought that now we have finished admiring the Pioneer Health Centre's building at Peckham there is not much more for an architect to say about it.

*

But all architects ought to keep in touch with the experimental and regenerative work that is now in full swing at Peckham. As the leader-writer of this JOURNAL explained at the time the Centre was being illustrated, it is an ideal example of planning for fundamental needs, regardless of what is customary, tackled by the doctors in the same whole-hearted way that architects must tackle the problems of social salvation in their own province.

*

The Pioneer Health Centre held its annual meeting on Monday, at which progress was reported. During the three months the Centre has been operating the founders' expectations of the urgent need for the service they supply have been completely justified. The Centre in every way, particularly in the response of the local members, has been a great success. Funds are most urgently needed to pay off the rest of the capital cost of the building, for new equipment and to pay the running losses which are bound to exist while membership is being built up to the full number—at full capacity the Centre will be self-supporting.

ASTRAGAL

## SWIMMING POOLS

*In connection with the Information Supplement dealing with swimming pools, which will be found on pages 93-102 of this issue, we are publishing* four *Information Sheets, three of which illustrate different types of swimming pool construction and finishes. Next week's issue will, as usual, contain* two *Information Sheets. The Technical Section is also held over.*

# NEWS

## POINTS FROM THIS ISSUE



### BECONTREE ESTATE

To mark the completion of the Becontree Estate, Essex, stated to be the largest housing estate in the world, Dr. Addison, a former Minister of Health, on Saturday opened a 118-acre park in the centre of the district.

The estate has 25,000 houses, built at cost of about £14,000,000, for a population of 115,000. There are 30 schools and 27 churches or church halls, and over 500 acres of open spaces.

### MINISTER OF HEALTH ON OVERCROWDING

"If Britain is really to become an A1 nation a start must be made in the very near future on the overcrowding problem," said the Minister of Health, Sir Kingsley Wood, in an address last week to a study group from the Teachers' College, Colombia, New York. A great improvement had been achieved in housing standards, he added. Some people were afraid that if slum dwellers were rehoused they would take the slums with them. But he had been particularly gratified, during a recent visit to Liverpool, to see the pride the people took in their new houses.

### TOWN-PLANNING

In a recent paper read to the Town-Planning Institute Sir Raymond Unwin contrasted conditions in the planned town of Letchworth with those in unplanned towns. In the latter, he said, they were being encouraged by subsidy to pile families on top of one another in the crowded central areas, ostensibly that they might be near the work which too many of them had not got. Another State department was assisting the Friends and others to provide these people with allotment gardens to which they must tramp or travel from their homes; while the L.C.C. offered assistance to stimulate the provision still further out of a modest area of open space. At Letchworth the cottage home of every family stood in its garden, and ample workplaces and play spaces were within easy walking distance of all.

Such a definite basis of fact deserved careful study, and he trusted that a thorough research into the economic and social conditions at Letchworth might be undertaken by some competent body.

## THE ARCHITECTS' DIARY

**Thursday, July 18**

LIVERPOOL SCHOOL OF ARCHITECTURE. *Annual Exhibition of the Works of Students of the School. In the Leverhulme Building. Until July 27.*

THE ROYAL SANITARY INSTITUTE HEALTH EXHIBITION. *At Bournemouth. Open daily, 11.30 a.m. to 9 p.m. Until Saturday, July 20.*

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. *Annual Exhibition. At Winchester.*

CRYSTAL PALACE. *Celebration of the Restoration of the Architectural Court and Statuary, together with other Improvements, and Firework Display by Messrs. Brock. 8 p.m.*

INTERNATIONAL HOUSING AND TOWN-PLANNING CONGRESS. *At the R.I.B.A., 66, Portland Place, W.1. Until July 20.*

THE BUILDING CENTRE. *Silver Jubilee Theatre Model Exhibition. Theatre model designed by George Tonge, F.R.I.B.A. Until July 26.*

**Friday, July 19**

THE ARCHITECTURAL ASSOCIATION. *Annual Exhibition of Students Work. At 36, Bedford Square, W.C.1. Press view from 10 to 12 o'clock. Prize giving at 3.30 p.m.*

### OPEN SPACE IN PARLIAMENT SQUARE

M.P.s of all parties met at the House of Commons last week to discuss the future of Parliament Square and passed a resolution strongly urging the Government to join with the Middlesex and London county councils in securing as an open space the site adjoining the Canning enclosure, where office buildings are being demolished.

It was also decided to ask the Premier and the Chancellor of the Exchequer to receive a deputation.

### PUBLIC PARKS

Mr. D. Bliss, delivering his presidential address to the eighth annual conference of the Institute of Parks Superintendents, recently held at Swansea, said: "In no department of municipal activity has there been a greater awakening of the communal conscience than in the provision of parks and open spaces in our cities and towns.

Parks Departments must exhibit intelligent anticipation and visualise the needs of the community not only for to-day but for the years to come. The social life of the country is fast changing, and the problem of the wise enjoyment of the leisure hours of the workers has yet to be solved. Whether we like it or not, we are faced with the prospect of a shorter working day, as one of the factors in the solution of the unemployment problem. Allied with this is the extension of the leisure hours of the people, and Parks Committees will be called upon to make their contribution in supplying the necessary means of clean and healthy recreation.

Encouragement should be given to all outdoor entertainments, apart from sport, such as theatrical plays, concerts, cabarets, bands, dancing and the like. In fact, the slogan of Parks Departments should be "Park the People in the Parks."

### SOCIAL HYGIENE CONGRESS

The Seventh Imperial Social Hygiene Congress, organized by the British Social Hygiene Council, was held recently at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1.

Sir Basil Blackett, president of the council, was in the chair at the first session, when the congress was declared open by Lord Plymouth, Parliamentary Under-Secretary for the Colonies.

Reporting on the findings of a committee of investigation Captain F. A. Richardson said there was a general air of neglect in the administration of the dock districts of Great Britain.

"Slum and dilapidation is nearly always characteristic," he declared.

"Poorly lit streets, over-numerous public-houses, mean-type cafés—whose real purport is never left in doubt—are factors that appear in the detailed description of each of the dockland areas of which survey has been made."

Public houses and cafés formed practically the only forms of amusement to be had.

It was, accordingly, suggested that facilities for recreation and decent amusements would do more good than anything else, while a scheme of information bureaux and a good type of canteen close to the dock gates would help.

### NEW HOUSING PROGRAMME

Plymouth Corporation has approved a five-year housing programme at a cost of £527,440.

### EXHIBITION

An exhibition of the work of students of the School of Architecture, the London Polytechnic, will be held in the Great Portland Street extension, Little Titchfield Street, W., from Friday, July 19, until August 2. The exhibition includes the work of both day and evening schools, and is open to the public each day from 2.0 to 9.0 p.m., except Sundays.

### URBAN DISTRICT COUNCILS' CONFERENCE

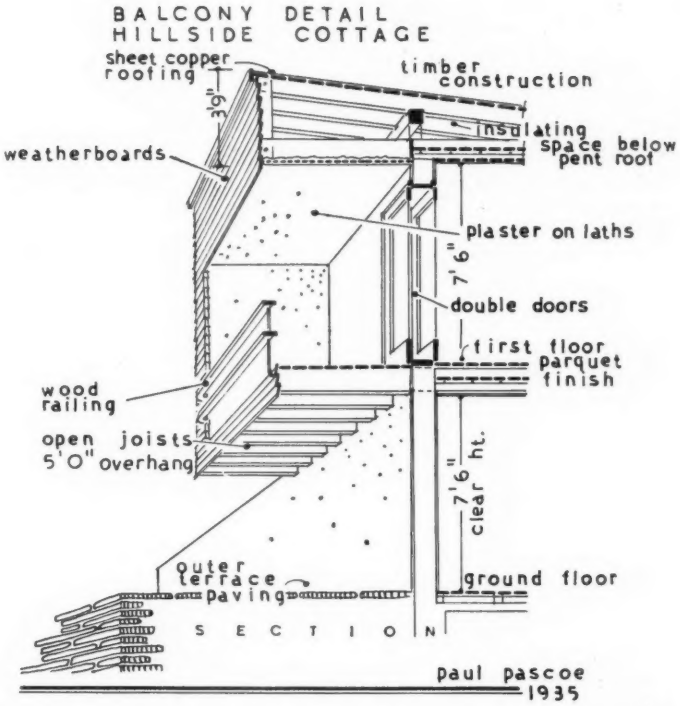
At the recent conference of the Urban District Councils' Association at Clacton, the Minister of Health (the Right Hon. Sir Kingsley Wood, M.P.) delivered a speech on housing and upon the steps the Government are taking to ensure adequate water supplies for all districts.

Sir Kingsley stressed the desirability of foresight so far as Councils and others were concerned in connection with the extensive

building operations going on, and suggested that the country had to pay bitterly in the past for neglect and absence of foresight in many of their building operations. Houses had been permitted to be erected which in many cases did not deserve the names of homes. Many had ruined the amenities of a neighbourhood, and others had become slums. They had greatly improved the standard of houses, and they must always have in mind that many of their workers required homes at low rentals. Housing cost was important in this connection, but it was a real duty upon our local authorities to exercise their rights to make inspections, and secure reasonable compliance with their by-laws. He was glad to say that another housing record had been achieved, and that a million houses had been erected in the past four years.

### *NEW CANTERBURY HOSPITAL*

The Duke of Kent on Friday laid the foundation stone of the new Kent and Canterbury Hospital. It is to cost £120,000 and has been designed by Mr. Cecil Burns, F.R.I.B.A. Its form is to be triangular, the sides facing south, east and west.




*A balcony detail from a cottage in Austria; designed by Lois Welzenbacher.*

# *SOCIETIES AND INSTITUTIONS*

THE BARTLETT SCHOOL OF ARCHITECTURE

The following awards have been made at University College, London, in the Bartlett School of Architecture :—

Entrance Exhibitions : J. R. Stammers (Whitgift School, Croydon) and A. P. B. G. Sutton (Latymer Upper School, Hammersmith).

Donaldson Silver Medal (awarded by the Royal Institute of British Architects) : N. E. Block.

Herbert Batsford Prize : L. F. Baker.

ARCHITECTS' JOURNAL Prize (for the best final design produced in the Day School by a 4th Year Degree or Diploma Student) : A. G. Ling.

*The Builder* Prizes (for the best sets of measured drawings of old work) : Senior, A. G. Ling and D. E. Morrison ; Junior, T. D. Oxley and J. K. Wearing (equal).

*Building* Prize (for best set of drawings, combining construction and design, by a 4th Year Student) : D. E. Morrison.

Prize for Design in Ferro-Concrete : G. E. Cassidy.

*Architecture Atelier :* Bossom Silver Medal A. J. Prior ; Bossom-Davis Silver Medal, N. K. Siang.

# OBITUARY

We regret to announce the death of Mr. Claude Waterlow Ferrier, F.R.I.B.A. Mr. Ferrier was the author of several large buildings in London, such as the Florence Nightingale Hospital, Trafalgar House, Waterloo Place, the National Institute for the Blind, and the Western Synagogue. The only son of the late Sir David Ferrier, M.D., F.R.S., and articled to the late Sir Aston Webb, P.R.A., he studied in Italy and Germany, and besides the works mentioned he was also responsible for a great many domestic and commercial buildings, in conjunction with Major William Bryce Binnie, F.R.I.B.A.

## Competitions Open

**August 31.**—Sending-in Day. Municipal offices, Swindon, for the Swindon Corporation. (Open to architects of British nationality, practising in the British Isles.) Assessor : Professor A. B. Knapp-Fisher, F.R.I.B.A. Premiums : £350, £250, and £150. May 25 was the last day for questions, and August 31 is the closing date. Conditions of the competition are obtainable from the Town Clerk, Town Hall, Swindon (deposit £1 1s.)

**October 1.**—Sending-in Day. Central county buildings, Hertford, for the Hertfordshire County Council. Assessor: Robert Atkinson, F.R.I.B.A. Premiums : £350, £250 and £150. Designs must not be submitted later than October 1. Particulars of the competition are obtainable from the Clerk of the County Council, Clerk of the Peace Office, Hertford. (Deposit £2 2s.)

**October 31.**—Sending-in Day. New technical college, Manchester Road, Bolton, for the Bolton Corporation. (Open to architects of British nationality.) Assessors : John Bradshaw Gass, F.R.I.B.A., and Arthur J. Hope, F.R.I.B.A. Premiums : £500, £250 and £100. Conditions, etc., are obtainable from Mr. John A. Cox, M.A., Director of Education, Education Offices, Bolton. (Deposit £2 2s.) The designs must be submitted to the Director of Education before October 31.

**November 1.**—Sending-in Day. Municipal offices, clinics, etc., proposed to be erected in the grounds of York Castle, for the Corporation of York. (Open to architects of British nationality domiciled in the United Kingdom.) Assessor : Henry V. Ashley, F.R.I.B.A. Premiums : £250, £150, £100 and £50. Applications for the conditions of the competition, etc., should be made on or before June 29 to Mr. Reginald Anderson, Town Clerk, Guildhall, York. The last date for receiving questions is July 29, 1935, and the last date for sending in designs is November 1.

## Competition Pending

Southall-Norwood Urban District Council is shortly to appoint an assessor in connection with a competition for designs for the new town hall.

●

MUNICIPAL OFFICES, BIRMINGHAM

The winning design in the above competition is reproduced on pages 80–83 of of this issue.

# THIS ARSHETECTURE

## CHANGE OF MIND BY COMMITTEE

NEW MATERNITY BLOCK PLANS

Some time ago Oldham Health Committee decided to ask local architects to submit

plans for a new maternity block at Oldham Municipal Hospital, but the minutes of the last meeting, which were presented to the committee meeting on Thursday, included a resolution rescinding that decision. The Mayor (Alderman T. Wrigley) questioned the change of view.

The Chairman (Alderman Bolton) replied that they asked the architects to compete and they wanted an assessor. The committee gathered it was going to cost a lot, and it was not wise to spend the money, seeing the Corporation had a department capable of making the block without going to that expense. A member of the committee had been told by the vice-chairman of the Surveyors Committee they had a man who could do the job satisfactorily.

The Mayor: You may think so, but I disagree. Continuing, he said he thought they ought to have a hospital worthy of comparison with other hospitals, and he questioned whether they would save any money by their own men drawing up the plans.

A FOOLISH IDEA

Councillor Low asked if the man had done any hospital work before.

The Chairman: I don't know.

Dr. Wilkinson: I don't think so.

Councillor Low thought it was a foolish idea. It was an expert's job.

Councillor Andrew considered that if they were building a church or theatre, the acoustic properties would be a strong consideration, but that did not apply to the building of a hospital. A good architect visited some of the most up-to-date hospitals and prepared his plans accordingly. In his opinion there had been too much letting out to architects.

Councillor Low asked why they should waste the time of some employee in the Surveyors' Department to go round hospitals when they had architects in the town capable of doing the work.

Councillor Andrew said the man was a craftsman.

The Mayor said the work would be more costly that way, but Councillor Andrew questioned this, and the Chairman said it would be an experience.

The Mayor: A costly one. He added that he objected to the minute being rescinded. The minutes, however, were passed.—*From an Oldham Paper.*

# LETTERS *FROM* READERS

*HAROLD FALKNER, F.R.I.B.A.*

*H. G. KNOWLES*

## *The Adelphi Again*

SIR,—It used to be supposed that "Astragal" was a respectable contemporary of mine. Recent observations lead one to suppose that he has been superseded by one of our "bright young men." The unsympathetic allusion to the Adelphi is an example.

This, the most deplorable piece of vandalism of our time, has been allowed to pass by the whole technical press with hardly a protest.

By an unfortunate series of accidents the Private Bill scraped through the House of Commons with scarcely a comment. The Government and the House being at that time occupied with misunderstanding the gold-and-sterling question.

In strange contrast to all the fuss which was made over a slight encroachment of the sky-line at Carlton House Terrace, the Adelphi question has been almost ignored, or discussed with the quaint consolation that more rates would be collectable from the new building, or that a building with "the more robust charm of imaginative youth" whatever that may mean, may supersede the present building.

This is not a case of preserving Tudorism or any sort of archaic structure, but an exceedingly restrained and sober building by certainly one of our most universally accepted architects.

What other nation, having any pretence to the title "civilized" would sacrifice the history crammed in this little square, of Boswell, Garrick, Reynolds, Goldsmith, Johnson and a host of others to a mere paltry quarter of a million shekels?

It has been said that the buildings have been marred by Victorian alterations; these are not particularly conspicuous and have been absorbed into the general "mellowness." Besides, the next generation will know so little about architecture that it would not notice them, and in any case a few hundreds would put the buildings back to their original condition.

The argument about "necessity" is a totally wrong one. A certain amount of office and shop accommodation is required in this neighbourhood; in the future that amount will be definitely limited, as the difficulty in letting new accommodation has shown and is showing. Every additional excess of supply over demand must make an equal (or possibly greater) reduction in value in the remaining accommodation, and in any case there are plenty of alternative (non-historical) sites on the other, if not on that, side of the river as near the heart of London.

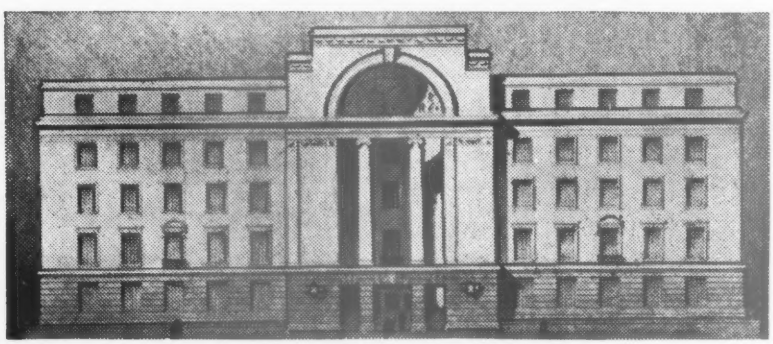
It was mentioned at the time of the passing of the Private Bill that any building erected on the site was to be to the approval of the "Fine Arts Commission." Is it too much to hope that that approval may be delayed at least until it can be seen what developments will be required with the removal of Charing Cross Station, which must be settled in the next few years?

HAROLD FALKNER
*Farnham*

## *Official versus Private Architects*

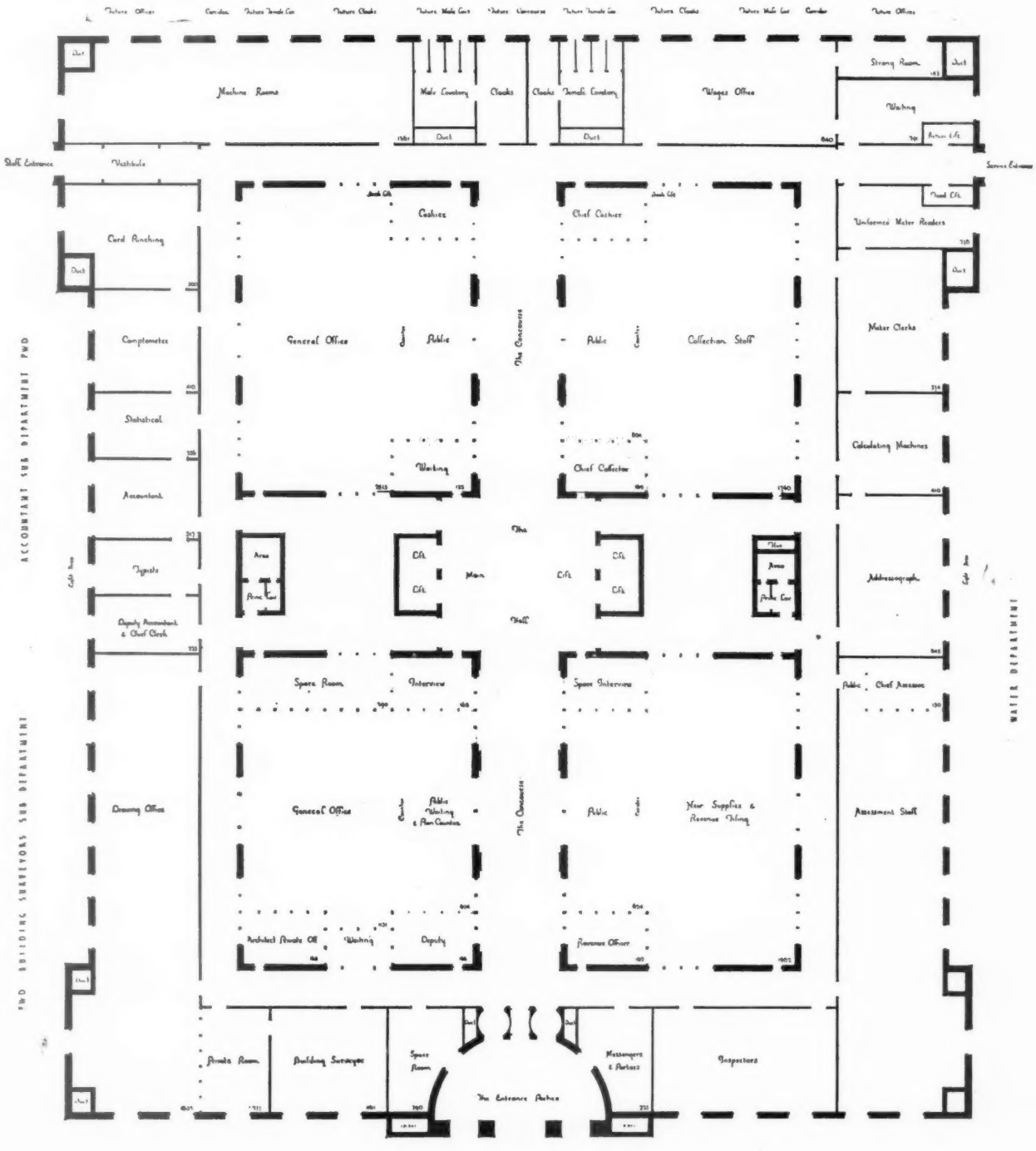
SIR,—Please find enclosed sample.

H. G. KNOWLES
(Qualified but official architect)
*Derby*



*See letter from Mr. H. G. Knowles.*

# BIRMINGHAM COMPETITION




Main Entrance

GROUND FLOOR PLAN

## THE WINNING DESIGN: BY T. CECIL HOWITT

*Sir Reginald Blomfield, R.A., PP.R.I.B.A., the assessor in the competition for new Municipal Buildings, Birmingham, has made his award as follows:*

*Design placed first (£1,000): Mr. T. Cecil Howitt, F.R.I.B.A., of Exchange Buildings East, Nottingham.*

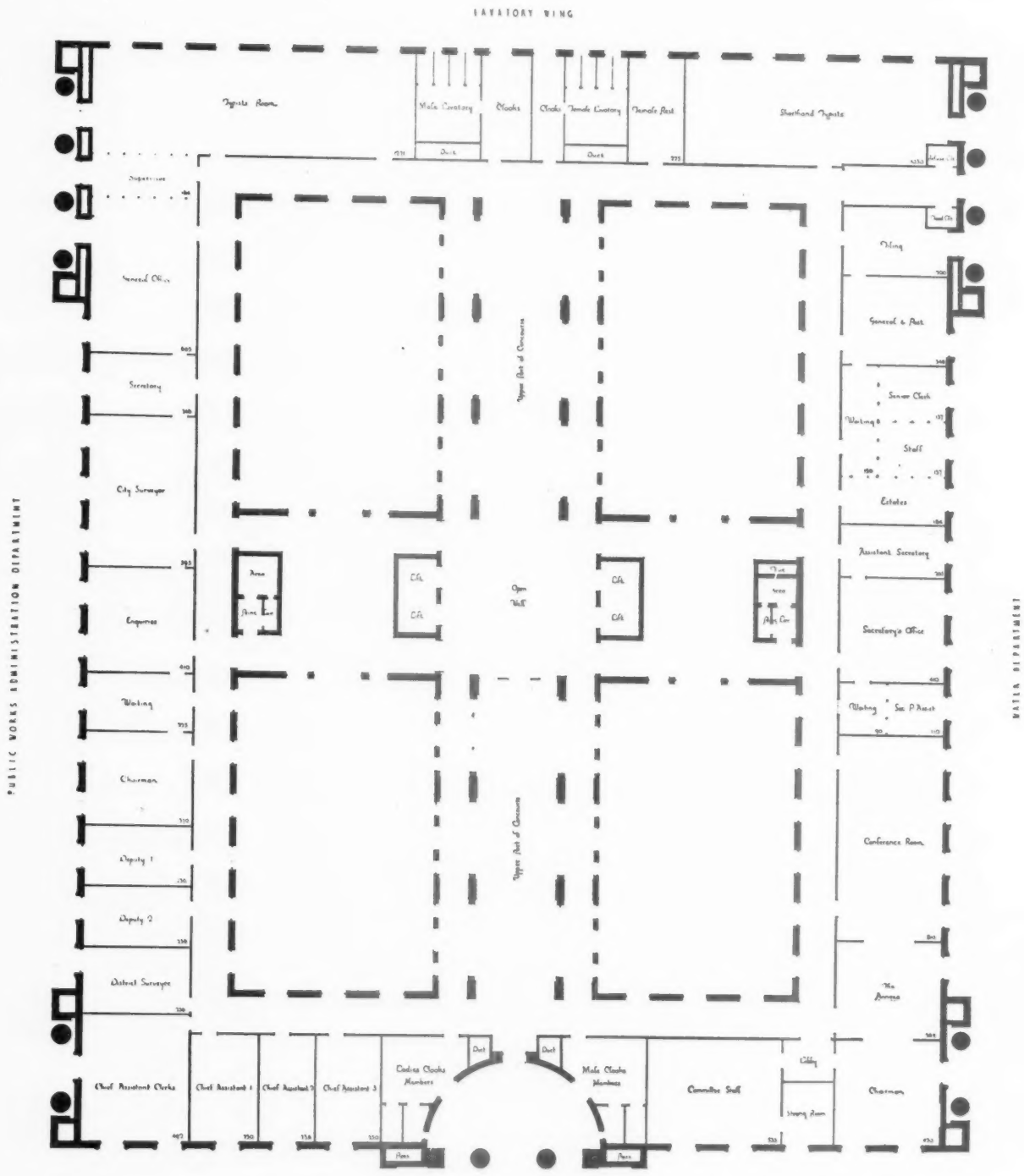
*Design placed second (£600): Messrs. Percy Thomas, P.R.I.B.A., and Mr. Ernest Prestwich, F.R.I.B.A., of Cardiff and Leigh, Lancs.*

*Design placed third (£400): Messrs. Herbert O. Ellis and Clarke, FF.R.I.B.A., of 5, Old Queen Street, S.W.1.*

*Design placed fourth (£250): Messrs. C. J. M. Young and Graham Young, A. and L.R.I.B.A., of Perth, Scotland.*

*The winning design is illustrated on this and the following three pages.*

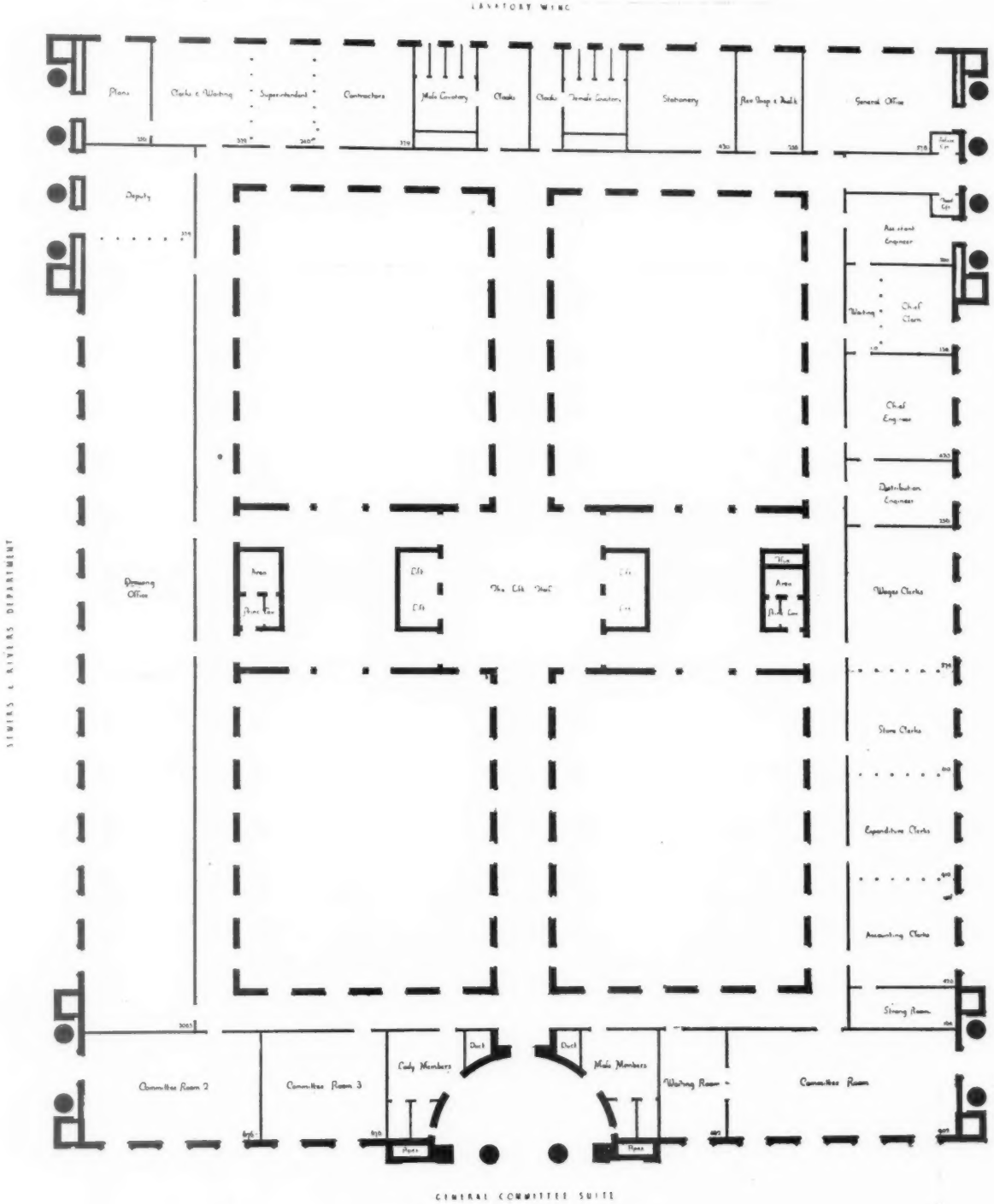
# COMPETITION FOR PROPOSED




FIRST FLOOR PLAN

*THE WINNING DESIGN:*

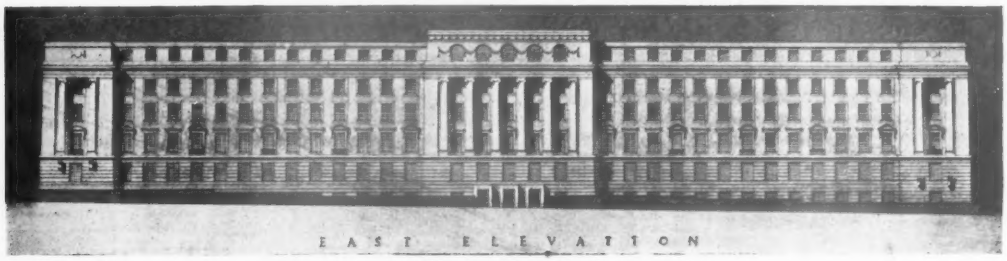
# MUNICIPAL OFFICES, BIRMINGHAM



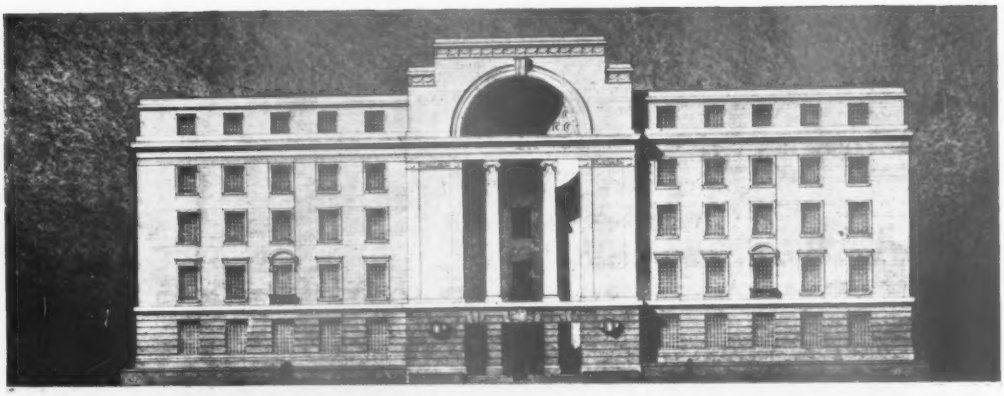

SECOND FLOOR PLAN

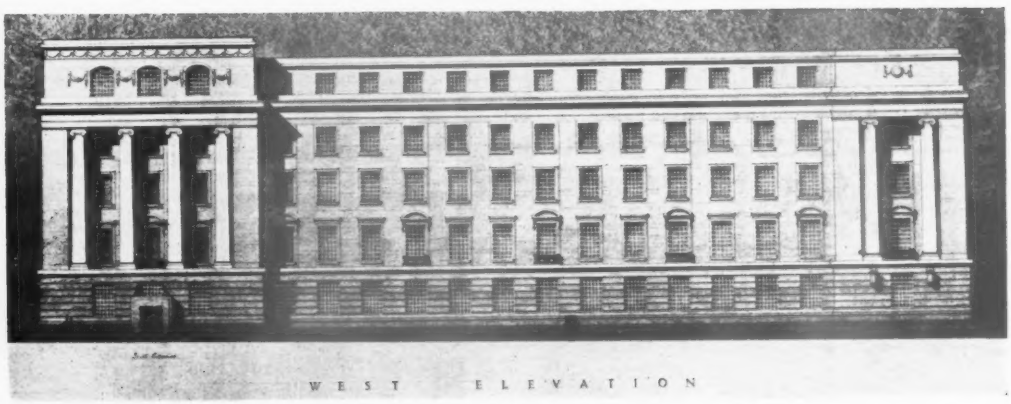
B Y T. C E C I L H O W I T T

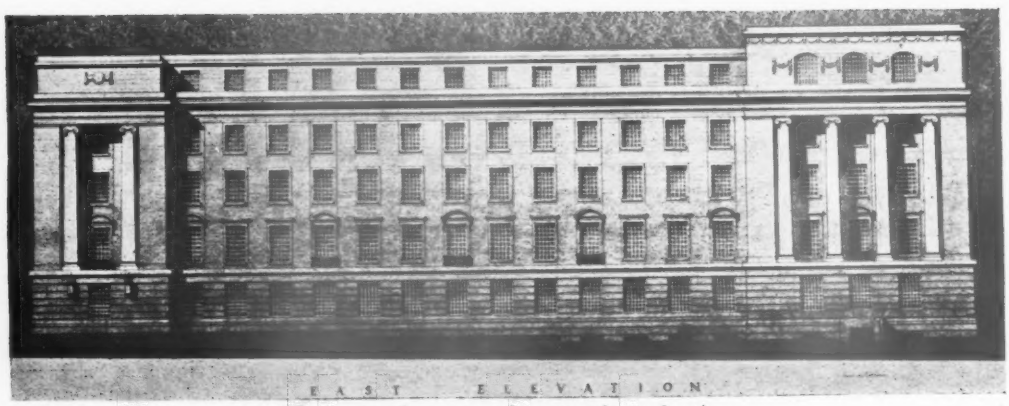
# BIRMINGHAM COMPETITION




*The complete design.*




*The present scheme : south, west and east elevations.*

# SCHOOL EXHIBITIONS

*[In the notices of the annual exhibitions of representative schools of architecture contained in this and the next issue of the* JOURNAL, *a new departure has been made in the method of review.*

*It has been considered that the work done, and the outlook possessed by the varions schools, is of most importance to the students themselves, and that therefore their views might be of interest both to themselves and to others.*

*The review in this and those in the following issues will be each by a student of another school, and must be taken only as expressing the opinions of their authors.*—ED., *A.J.*]

## LEEDS SCHOOL OF ARCHITECTURE

*Reviewed by*

*VINCENT J. ROTHER, B.Sc.*

*(Graduate: Massachusetts Institute of Technology, U.S.A.)*

PUBLIC appreciation of an expression tending to advance from the contemporary has always been slow, and when that appreciation has been repressive we find a retarded expression. The Leeds School of Architecture deserves this recognition : that it has the beginning of that outlook which for lack of a better word we term modern, and it has that in spite of the opposition tendered it both by the Yorkshire public and the professional group. If the school were given the wholehearted support of these two bodies it would provide unlimited possibilities not only for the education of men capable of understanding their social environment and of administering to its needs, but it would provide a testing ground for architectural and social theories.

But withal this the exhibition of work of the school is slightly reminiscent of a child's birthday party with its velveteen jackets and chocolate cakes—almost too much chocolate cake. If it had not the redeeming feature of a few intelligent thesis efforts it would certainly have had the nauseating effect of an excess of saccharinity. It is difficult at this late date to find an excuse for greater interest in presentation than in the many important problems of architecture.

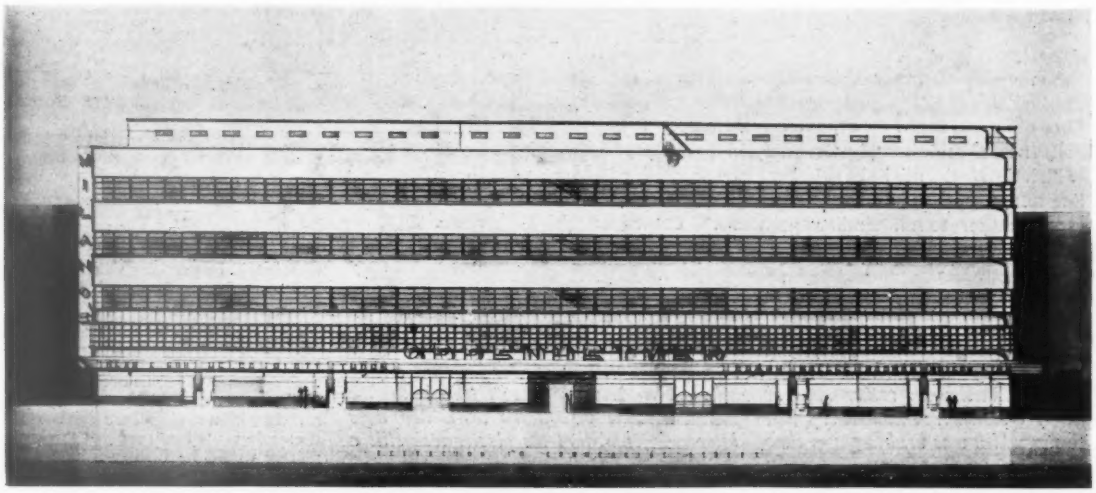
There appears in the design a definite tendency towards the "école moderne," but unfortunately there is very little apparent tendency towards related modern thought and spirit. That is largely where the exhibition falls down. There is a lack of realization that the fundamental concept of our expression is from contemporary civilization outwards, based on the understanding of a new living and experience and translated into a new architecture. It is not merely the superimposition of a façade on a traditional plan. The fault of this work might lie as much with the staff and the type of programme set as with the student, or perhaps more so. If that is the case an inhomogeneity is being created between an isolated modern tendency in design and a superseded social structure. That type of work leads to the superficiality so often met with in work today. Modern, denoting a stylistic representation, is not architecture.

This criticism does not presuppose that the exhibited work itself is superficial. In many cases the designs are thorough and well worked out. It is the basic relationship between society, environment and the expressed architecture which leaves much to be desired. A design that works in detail does not necessarily mean that a desirable environment is provided.

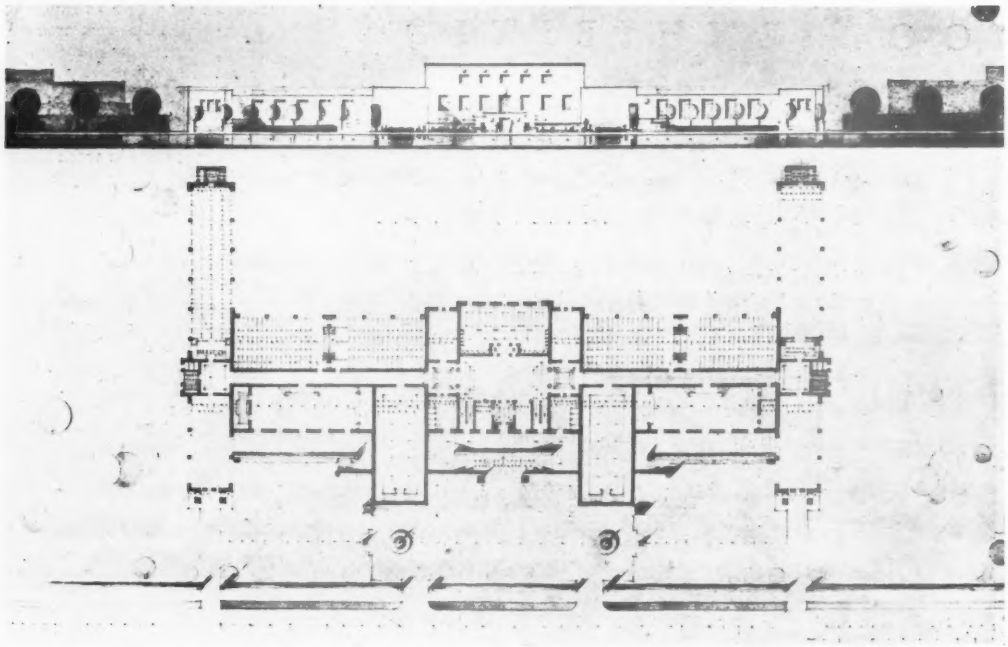
The same might be said of the construction work. There is certainly here every evidence of thoroughness and attention to detail, but as regards architecture that is insufficient. The broader aspects of structure, its value and relation to architectural design, seems either to be completely misunderstood or as yet undiscovered. The fault of this misunderstanding may in part be attributed to the profession which demands a student more cognizant with detail than one who is capable of thinking in terms of a related architecture. There must be a balance point between the two.

It is, however, in the thesis work of the fifth year students that one is able to see the beginnings of conscious and related thought on the problems of architecture both in the choice of problems and in their solutions. Among these subjects is "A Suggested Town Plan and Civic Centre for Castleford, Yorkshire," by H. Scatchard. Mr. Scatchard's plan shows considerable thought of a problem which is more or less beginning to take the interest of architects today. He has realized that a contemporary society cannot flourish in an environment created for what are now obsolete needs and activities, and in so doing has attempted a more compatible solution by the creation of a new environment. It is a praiseworthy effort and one which the school should attempt to foster.

Another design worth mention both for its



*A Film Institute by W. Bailey, 4th year student, Leeds School of Architecture.*



*A School of Architecture, by D. R. Middleton, 4th year student, Leeds School of Architecture.*

conception and solution is "An Educational System for Leeds," by H. Richards. It is the co-ordination of the various educational units in Leeds into one main centre on a site already owned by the town corporation which makes the project a direct possibility. This co-ordination facilitates administration and precludes the possibility of unnecessary repetition of units. The irregularity of the site chosen makes the solution an interesting one, but it is rather unfortunate that a more open type of planning was not attempted, rather in the detailed planning itself than in the disposition of the various units.

Other designs of interest and thoroughness of application were "A Sporting Club," by K. Warman; "A Film Institute Building," by W. Bailey, which has some very interesting elevations; "A Passenger Terminal for Bradford," by J. Dean; in which plan and surrounds are treated from the point of view of the environment in which the men work as well as the system of manufacture which largely controls the plan.

All these, as well as others, which space again prevents me from mentioning, show an awareness of existing conditions and a definite desire to advance those conditions for the building up of a more advanced culture.

# IN THAT CONTINGENCY

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

### *Fall of Plastered Ceiling*

¶ *A BUILDER'S merchant reported the fall of a plastered ceiling which was associated with rather unusual conditions. He stated that he had supplied casting plaster which was used to gauge lime in a ceiling about 20 ft. square. The mix used was 3 yards white hydrated lime and hair mixed with half a ton of best white casting plaster. The ceiling was put up in two coats, the second following rapidly over the first and then finished with a floating of Keene's cement. Four days later the ceiling fell. The trouble was reported to the merchant, who visited the work two days later and found that the plaster was still a wet mass.*

*The use of unretarded casting plaster of Paris was so unusual that confirmation of this was asked for. A mixture of this plaster with lime in roughly equal proportions would set in a few minutes only and would be impossible to use as ordinary coarse stuff, that is to say, to be mixed in a good sized batch on a board and then applied with hawk and trowel. This point was referred to the plasterer who said that the material was gauged and used in small quantities at a time, that this was a common practice and the only method of dealing with a lath ceiling if it is required to take all its coats and be finished within about 24 hours.*

The fall of the ceiling is probably due to a combination of factors:—

1. Destruction of the set of the plaster before application.
2. "Sweat out" due to hurried finishing.

An examination of the plaster confirmed the composition as stated (so far as the composition can be checked by analysis). The proportion of plaster was higher than would usually be found in a "gauged" lime plaster and the finishing coat was a hard, pink plaster of the type often described as "Keene's."

It is agreed that for special work the gauging of lime and sand coarse stuff with rapid setting plaster is practised, but only very small batches can be used and great speed in application is necessary to carry out work with success over a large area. If any material is mixed and not used up in a few minutes the set of the gauging plaster will be partially killed. This will result in a loss of strength and give rise to large contraction on drying out.

If the proportions of plaster mentioned in the inquiry were used and the mix remained wet and friable after six days, it strongly supports the suggestion that this occurred.

When the mass of plaster was sealed at the surface with a strong dense finishing coat, before the undercoats had even got "white-dry," the plaster would be further injured, even had a retarded gauging plaster been used. If the set in the undercoats was killed, as is very likely in this case, failure is almost certain.

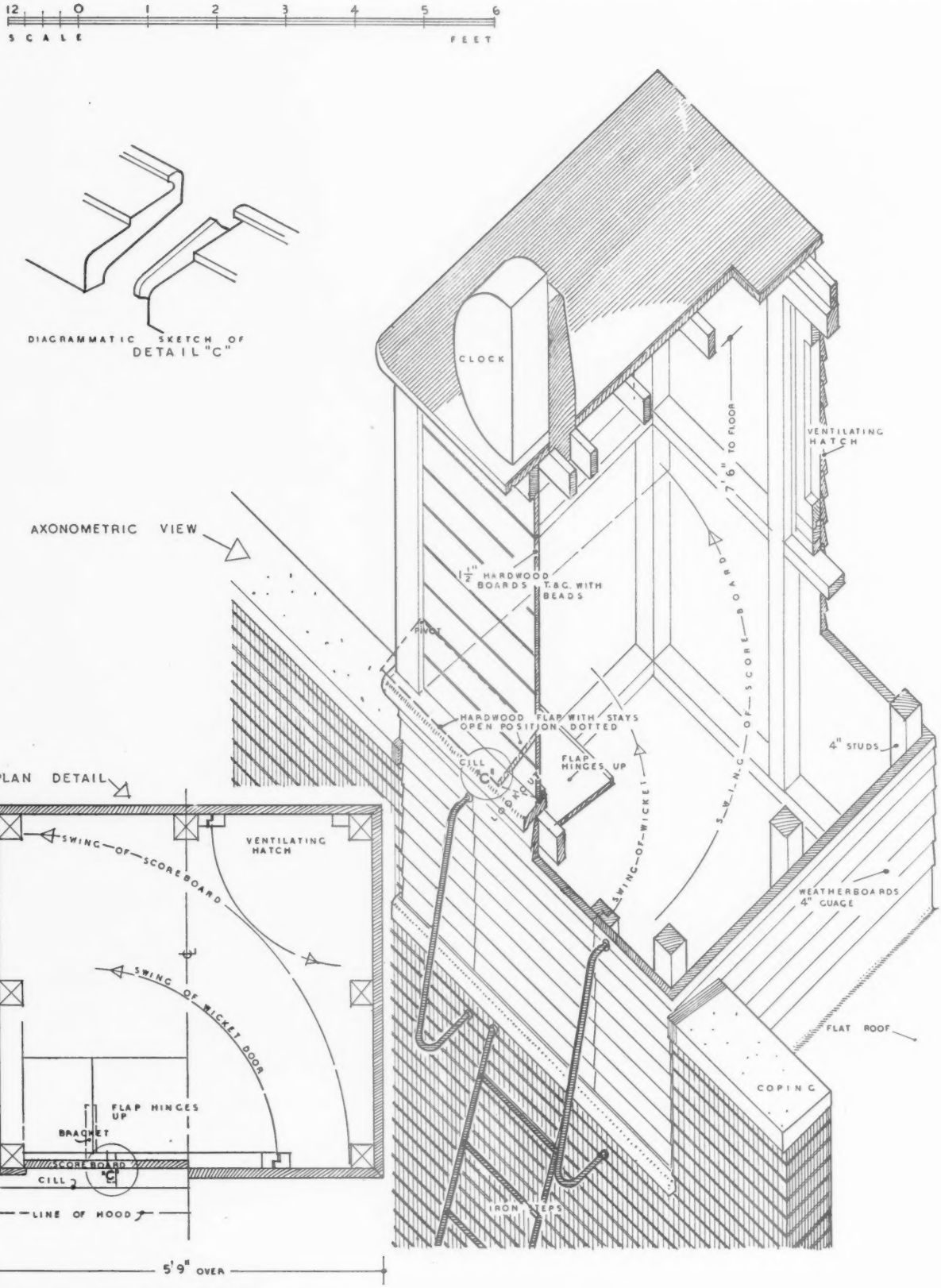
# WORKING DETAILS : 291

## SCORING BOX • PAVILION AT ACTON, W. • JOHN GREY AND G. A. JELLICOE

This scoring box in hardwood and weatherboarding is entered by swinging back the scoring board into the box, and opening the wicket below it. A rising flap at the base of the closed scoring board gives the scorer a view of the pitch and also provides protection from glare. Metal numbers are hung upon the face of the scoring board.

# WORKING DETAILS : 292

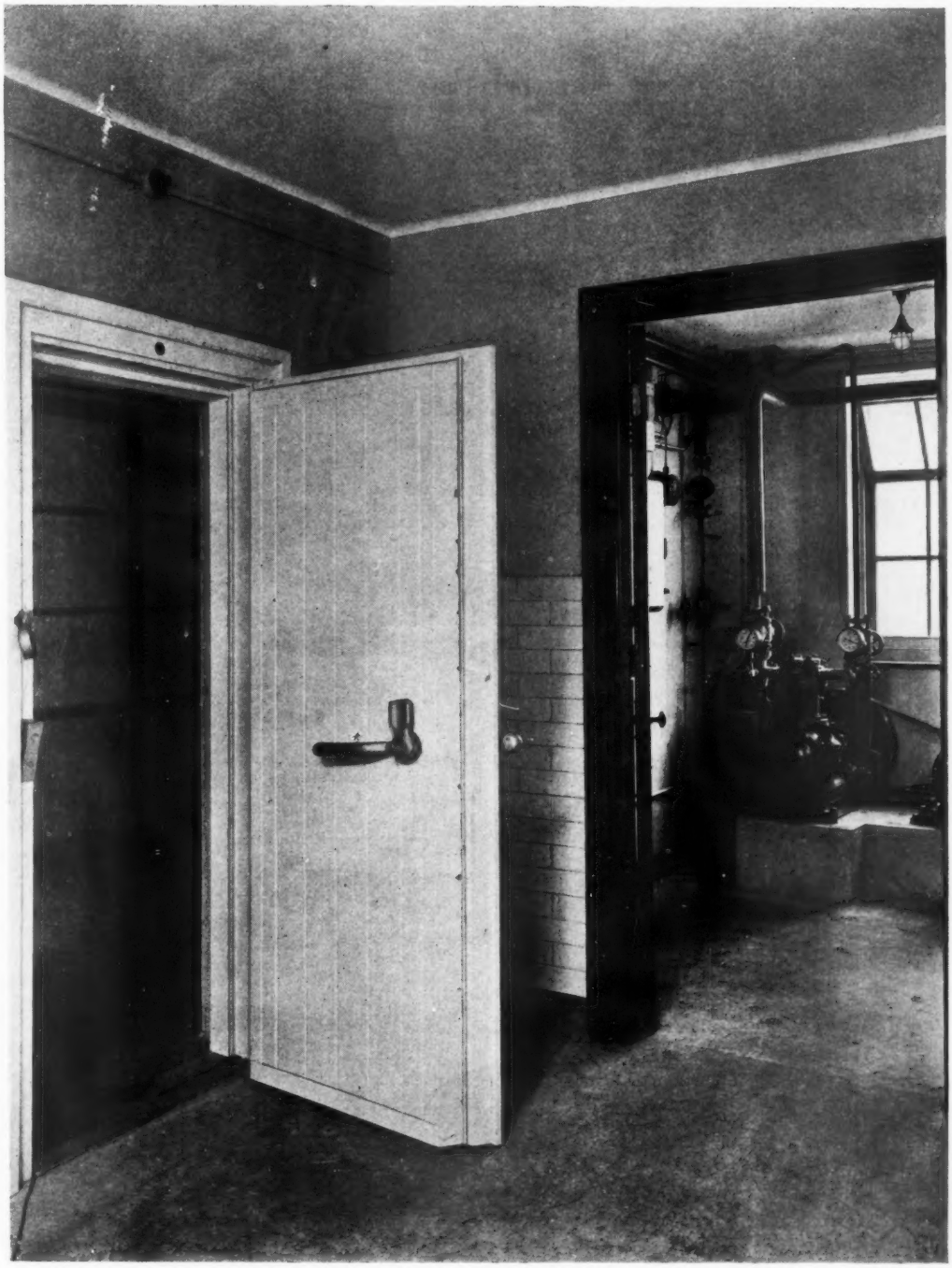
## SCORING BOX • PAVILION AT ACTON, W. • JOHN GREY AND G. A. JELLICOE




Axonometric, plan and details of the scoring box illustrated overleaf.

# WORKING DETAILS : 293

## COLD STORAGE PLANT • FOUNDLING HOSPITAL • J. M. SHEPPARD & PARTNERS

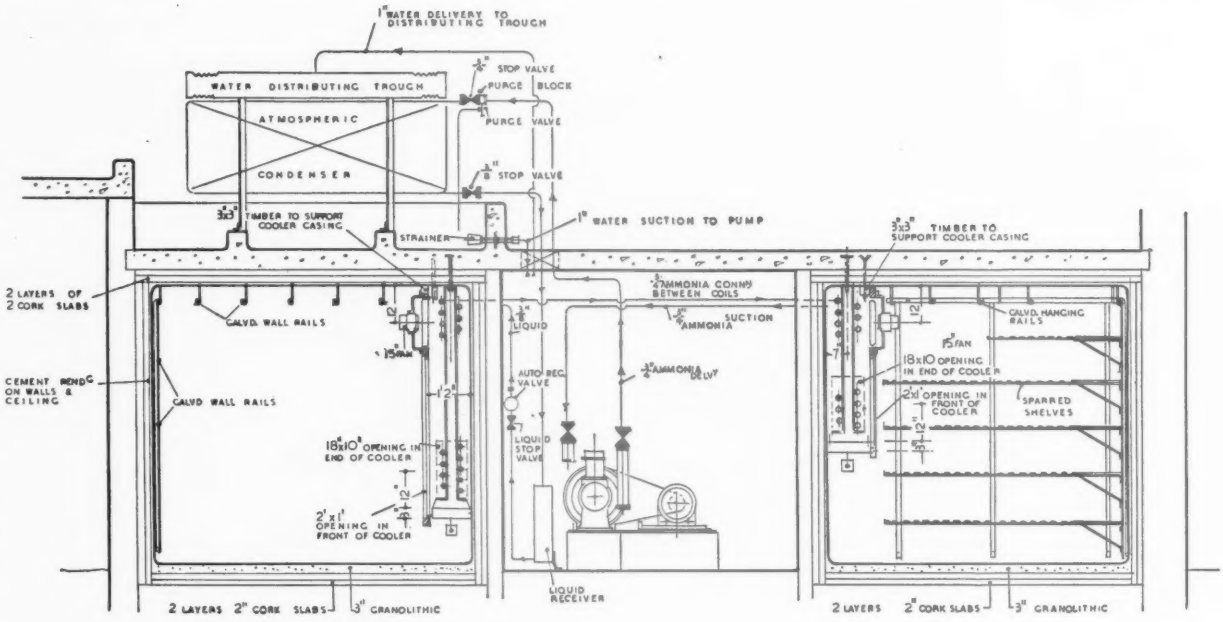


A detail of the refrigerating plant and the entrance to one of two cold storage rooms. The air coolers in the storage rooms are cased and the air circulated by fans, automatically controlled. The photograph shows the electrically driven compressor in the plant room. An atmospheric condenser on the roof over one of the stores reduces water consumption to that which is required to make up losses by evaporation.

FILING REFERENCE :

# WORKING DETAILS : 294

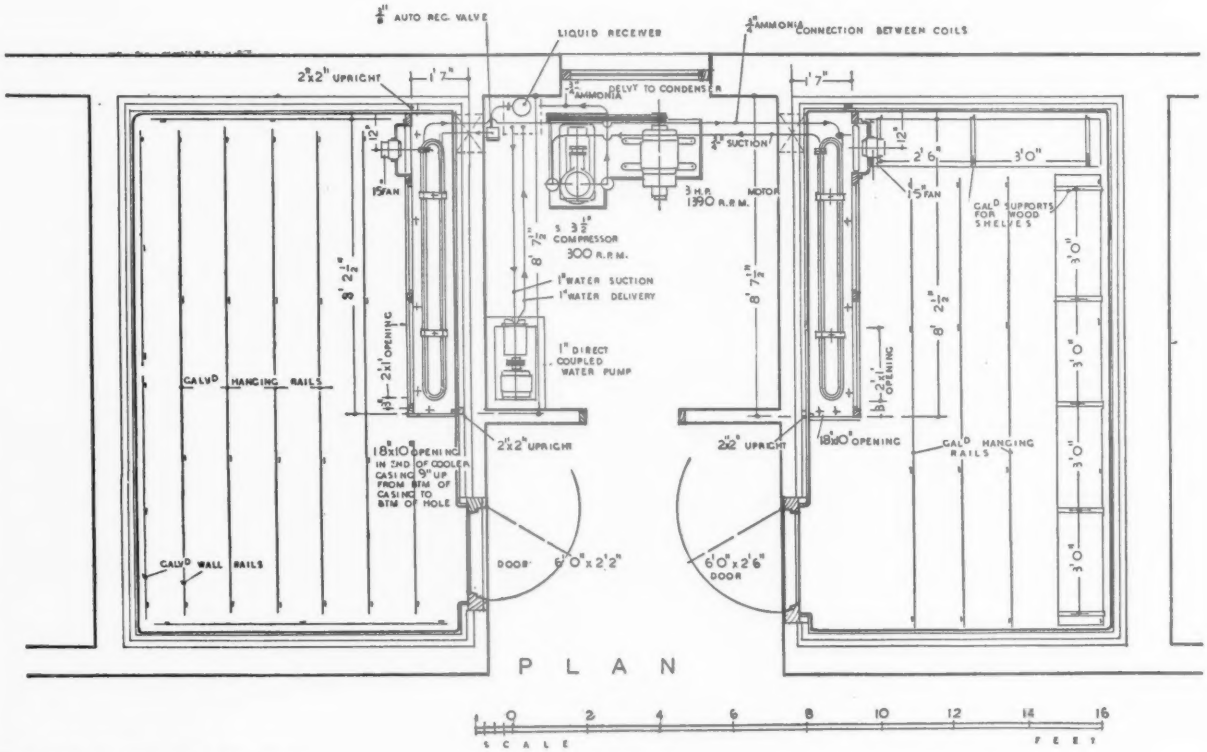
## COLD STORAGE PLANT • FOUNDLING HOSPITAL • J. M. SHEPPARD & PARTNERS




MEAT COLD ROOM
14' 8"x 8'8"x 7'6" HIGH
INSIDE CAPACITY 950 CU. FT.

SECTIONAL ELEVATION

DAIRY ROOM
14' 8"x 8'2"x 7'6" HIGH
INSIDE CAPACITY 900 CU. FT.




Plan and section of cold storage rooms illustrated overleaf.

# HOUSING SCHEME, STOKE NEWINGTON

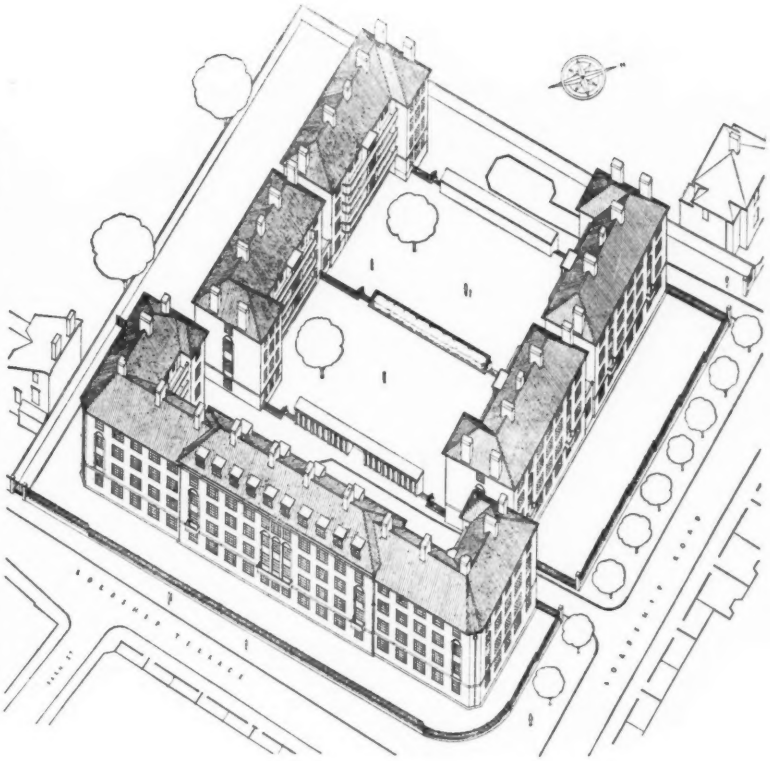
## *DESIGNED BY HOWES AND JACKMAN*

*This housing scheme was the subject of a limited competition in June, 1933. Building operations began in the following October and the work was completed in eleven months.*

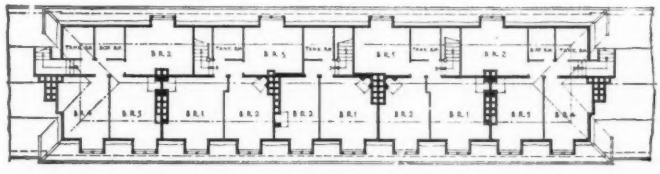
*The general lay-out is on the balcony approach principle, the common stairs being open to the air, but screened from wind and rain. Owing to the fall of about 12 ft. in the site towards the north, and to provide additional cross ventilation, the side blocks are divided into two halves at different levels, the yard being terraced to correspond.*

*The scheme consists of a hundred flats, each having a living-room, kitchenette, bathroom and fuel store, and from one to four bedrooms. One pram shed is provided to every three flats. The buildings are four storeys high except for the centre of Ormond House, which has maisonettes with bedrooms in the roof. The individual flats are planned with a minimum of internal corridors, some of the small bedrooms in the larger flats being entered from the living rooms.*

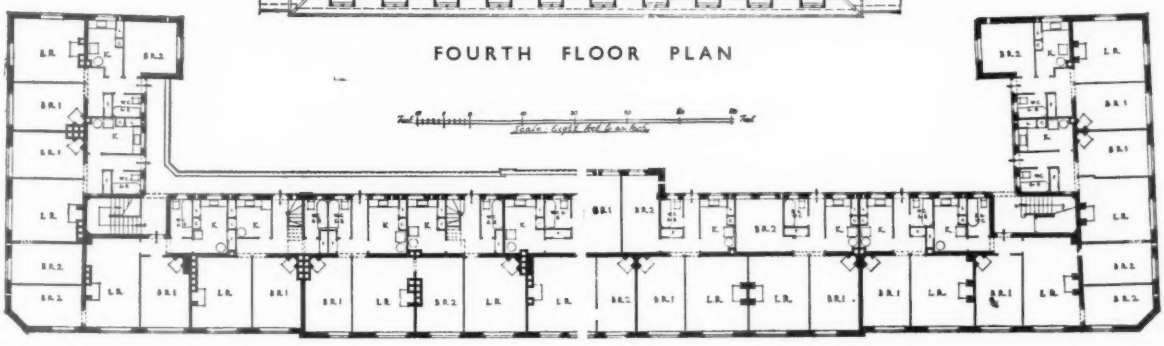
*The contract price was £45,550, the rate per cubic ft. being approximately 1s. 1d.*



*Axonometric view from south-east.*



FOURTH FLOOR PLAN



PART PLAN: THIRD FLOOR

PART PLAN: GROUND, FIRST AND SECOND FLOORS

D

# HOUSING SCHEME, STOKE NEWINGTON

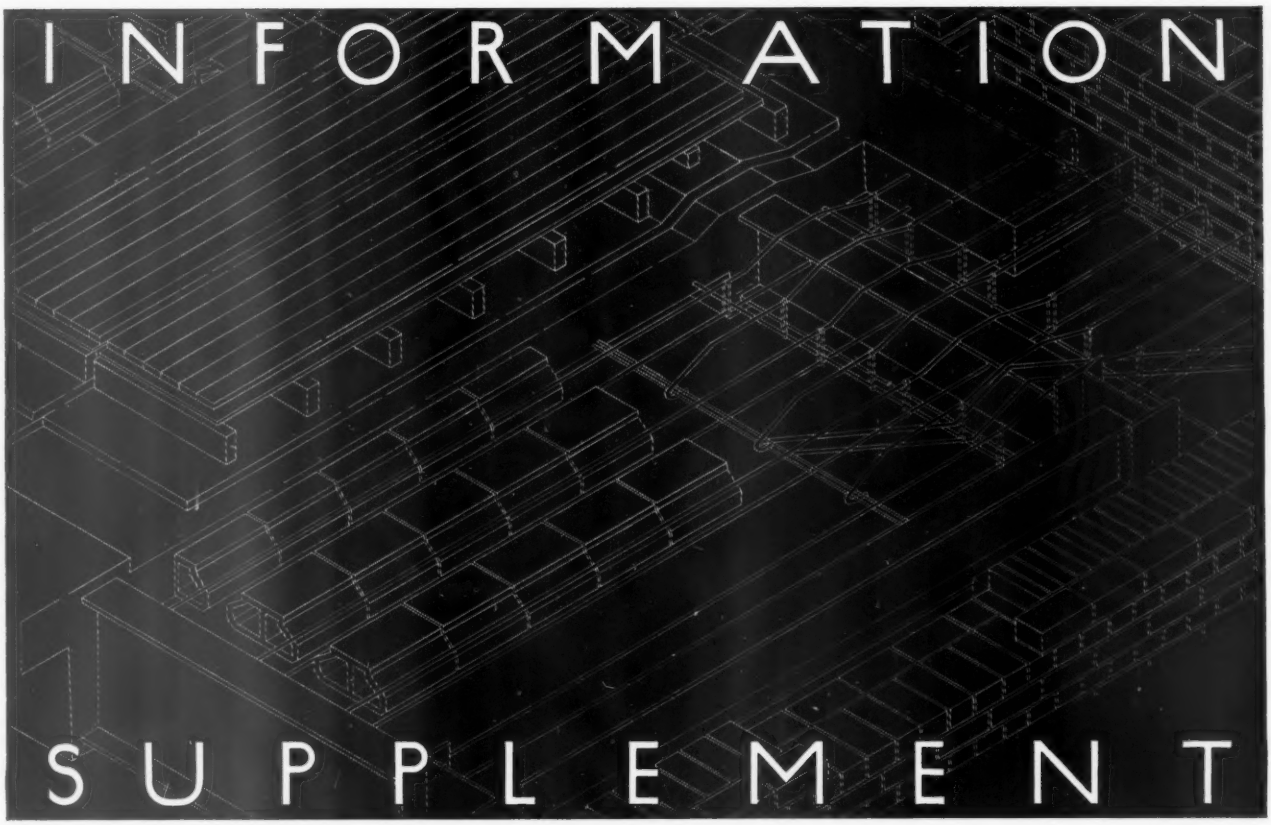
## *DESIGNED BY HOWES AND JACKMAN*

*Above, the principal elevation. Below, a detail of the balcony approaches from the north.*

*The construction is of fletton brickwork with multicolour facings, hollow tile floors, and patent pantile roofs. British Columbia pine is used throughout for all carpenters' and joiners' work, the windows being double-hung sashes. The partitions are of hollow blocks.*

*The finish throughout is designed to facilitate cleaning and minimize dust-collecting ledges and mouldings. For this reason composition floors are used with coved skirtings, and walls of kitchenettes and bathrooms are finished in glazed cement; the doors are single panel and the picture rails consist of a $\frac{1}{8}$ in. by 1 in. strip of metal fixed $\frac{3}{4}$ in. from the wall face. The common stairs have hard brick dadoes, with glazed cement or gault bricks above.*

*Each flat has its own hot water supply, provided by a stove in the living-room, and the pipes throughout are of copper. Most bedrooms have an open coal fireplace, the remainder being fitted with an electric heating point. The clothes posts are in concrete with galvanized steel lines on pulleys, and a loading deck at the rear of the pram sheds obviates the use of "props." The end posts are designed to carry spherical fittings for the general lighting of the courtyard.*




# 8: SWIMMING POOLS

CONTENTS



See also Information Sheets.

*The popularity of the Road House and kindred centres of entertainment has led, during the past two or three years, to the construction of a large number of open air swimming pools, either planned as isolated units, for swimming only, or as a unit in the lay-out of the larger country club or sports ground. This Information Supplement is designed to draw attention to the numerous special requirements of swimming pools, the necessary circulations, orientation, sizes and finishes, the mechanical equipment necessary to maintain the bath water at a proper degree of purity, and the other essential devices required to produce the high standard of efficiency nowadays demanded by visitors.*

## LAY-OUT AND PLANNING

*BY REGINALD J. DUKE*

DURING the last few years the public has been intensively educated in matters of health, with the result that former opinions have undergone a revolutionary change. The benefits to be obtained from exposure to sunlight and fresh air are now generally appreciated, giving rise to the phenomenal popularity of all forms of outdoor sports and pastimes. The outcome is a general exodus from the towns during leisure hours, with the consequent demand for facilities for recreation. This is being met by the establishment of centres, both municipal and private, catering for sports of all kinds, and especially open-air bathing.

### *SITE*

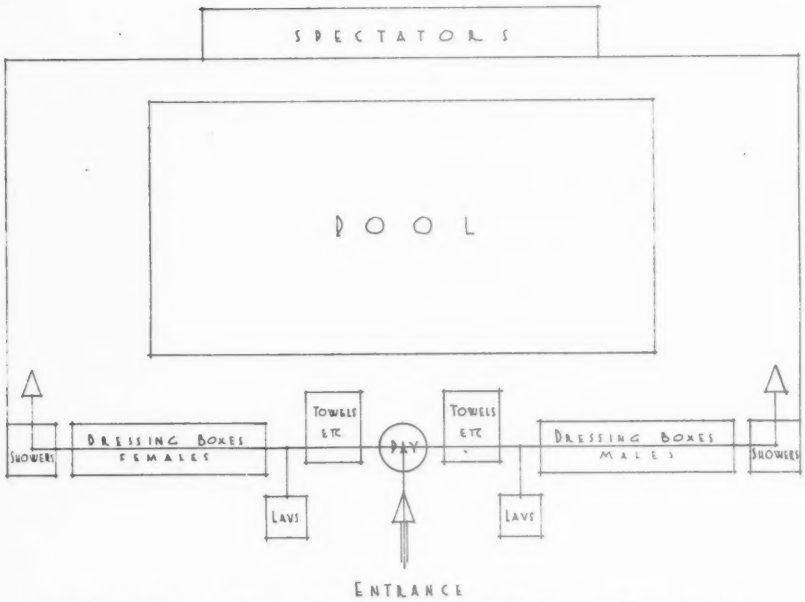
This should be extensive, to allow for tennis courts, putting greens, sunbathing area, lawns, pavilions, and car parking space, etc., to be planned as adjuncts to the pool itself.

The site should be open to the South and West, and the pool must obtain unobstructed sunlight. It is undesirable that trees should be too near the water on account of the shade and nuisance from falling leaves.

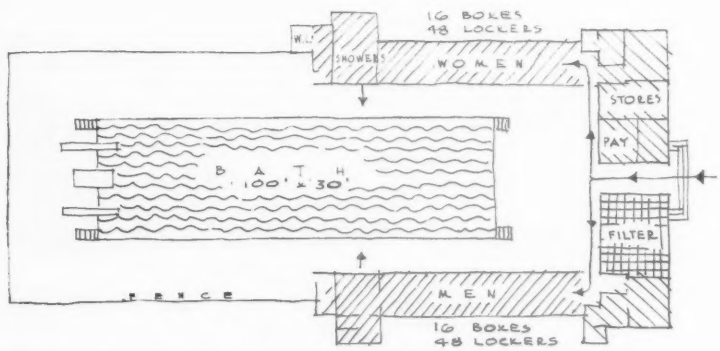
### *LAY-OUT*

The general plan must be arranged so that the bathers have no alternative but to follow the circulation arrangements, which should be on the lines of the sketch diagram (page 94).

The dressing boxes, etc., may be planned on the North and East sides of the pool, to give shelter from cool winds, and a good position for the sun-




*Circulation diagram of open-air swimming pool; not indicative of sizes or aspect.*




*Pool at Yiewsley, West Drayton; W. T. Morgan, engineer and surveyor. Dressing box and locker system, with access to pool via showers only.*

bathing area is between these buildings and the pool, so arranged that the entrances and exits are unobstructed. Some municipal authorities disapprove of grass or sand for sun-bathing areas, on the ground that earth and other material may be carried back into the bath, tending to clog the filters, but privately owned pools are scarcely in a position to be dictatorial to their visitors, and the filtration plant must be arranged accordingly.

Spectators' accommodation should be on the south side, so that the sun is behind, and is preferably arranged in tiers.

In order to maintain the standard of purity of the water, it is essential that the bathing area be restricted to bathers only, and that access to it must be through the cleansing rooms. A direct exit may be provided, preferably through the entrance hall, for convenient supervision, but, to return, the bathers must be compelled to re-pass through the cleansing rooms. Elevations should be light and cheerful in character, as befits a place of recreation, and something of the garden atmosphere is desirable.

*PLAN*

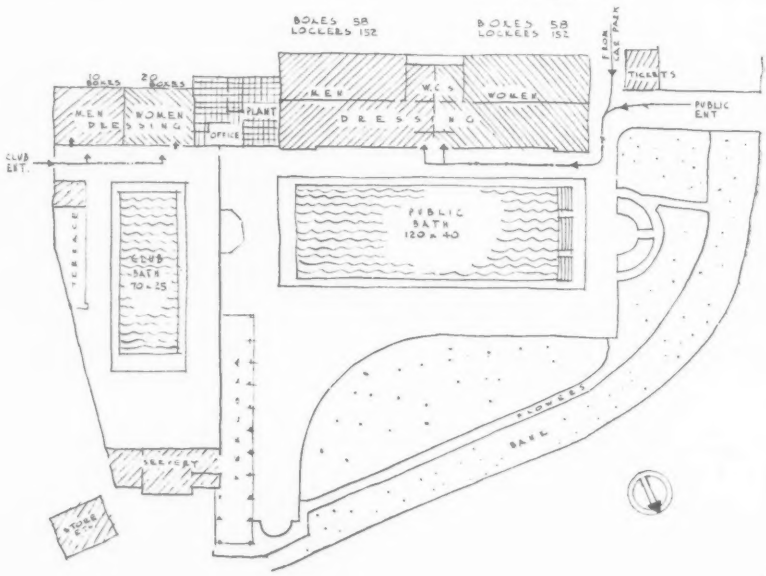
Mixed bathing now being general, dressing boxes, lavatories, and cleansing rooms must be duplicated. The boxes should be planned adjacent to the entrance, and must be well ventilated. This may be arranged by having a continuous unglazed opening on each side between the top of the external walls and the roof. Each box requires a fixed seat and a light door or curtain.

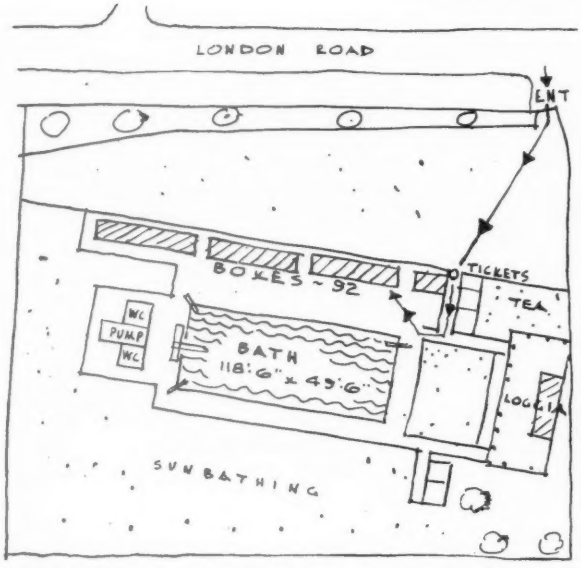
The clothes locker system is now generally adopted, under which a bather places his clothes in a locker, the key of which he retains until his return, when he regains his clothes and dresses in any vacant box. Thus the cubicles are engaged only during the few minutes of dressing and undressing, and a considerable saving in accommodation is effected. About three lockers should be provided for each dressing box.

An office for the issue of towels and tickets must be provided at the entrance.

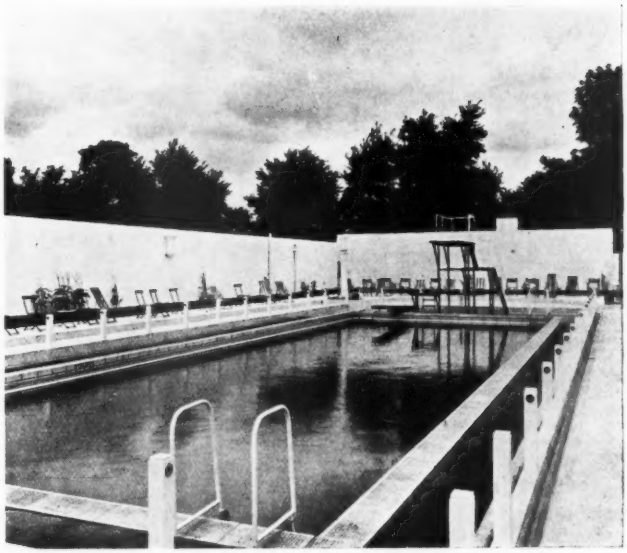
Some form of footbath is essential, and should be placed with the showers in a separate compartment at the exit end of each range of boxes. The best form of footbath is one which the bathers are compelled to use, and this can be provided by sinking the floor of the cleansing room to form a shallow paddle, through which it is necessary to walk to reach the pool.

*Roehampton Club Pool: G. W. Smith, architect. A private and a public pool with separate access; large area for sunbathing and spectators.*

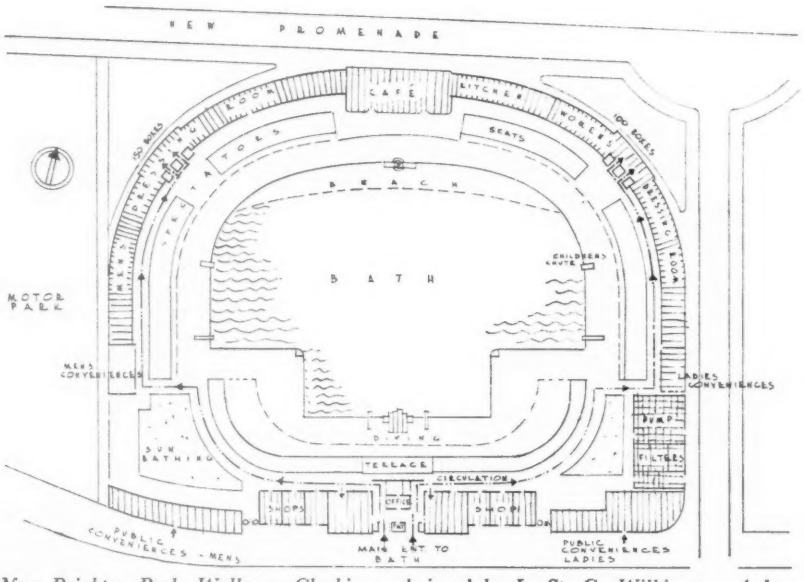





*The Blue Pool, Camberley; Coleridge, Jennings and Soimenow, architects. Dressing boxes only without lockers.*



*The private pool at Roehampton; G. W. Smith, architect. Ropes between the posts keep spectators away from the bath surround.*




*New Brighton Pool, Wallasey, Cheshire; designed by L. St. G. Wilkinson. A large municipal scheme with complete separation of spectators and bathers.*

Water is supplied by the showers, and an overflow is required.

A room of about 200 ft. super must be provided to house the filtration and heating plant.

The pool may be almost any shape, but, if it is to be used for competitive events, the swimming area must be rectangular, and meet with the regulations of the Amateur Swimming Association. These require a minimum water area of 100 ft. by 42 ft., but a larger area is to be preferred. Long distance championship races exceeding 440 yards, which are usually held in open-air pools, are not permitted in baths less than 55 yds. long. No championships of the Amateur Swimming Association may be held in a pool less than 75 ft. long.

The water depth may vary from 3 ft. or 3 ft. 6 in., to a maximum of about 8 ft. 6 in., where high diving is not to be provided for; the deepest point being from 10 ft. to 20 ft. from the end of the bath.

Diving boards for competitive events must comply with the International Rules. (See page 97.)

Water polo requires a playing area between 19 yds. and 30 yds. in length, and not more than 20 yds. in width, with a minimum depth of 4 ft.

# CARCASSING AND FINISHES

*BY OSCAR A. BAYNE*

For the carcassing of the bath the simplest and most generally used material is reinforced concrete, for it has the obvious advantage of monolithic structure, and expansion joints are not necessary unless the bath is more than 100 ft. long. The most usual type of retaining wall may be considered as being cantilevered from the bottom of the pool, and this wall is generally designed to be strong enough to take the internal water pressure without any external support, though some designers make an allowance for the external earth pressure, which may be offset against the load produced by the water.

It may be true to say that given concrete work by specialists, executed by skilled workmen under proper supervision, waterproofing is not really necessary, yet it is reasonable to suppose that the average pool will be built by a local contractor whose concrete work will be competent rather than inspired, and in such cases the addition of one or other of the usual waterproofing compounds will probably be a piece of very necessary insurance against any unfortunate errors in concrete mixing or insufficient ramming.

It is generally accepted that the success or otherwise of a job is largely determined by the care and thought devoted to the numerous questions of detailing that have to be dealt with during the course of the work; with the subject of detailing is bound up the whole question of finishes, and in

*The Hastings pool, designed by S. Little. The surround is edged with non-slip carborundum tiles and is laid to a fall of 1 in 60 away from the bath.*

buildings of this type the materials are all important.

More than usually so, they must fulfil definite practical requirements as well as satisfying the usual whims and preferences which weigh so much in the choice of materials.

### *POOL*

In the pool itself are large areas of plain surface, the bottom and sides, which offer particular problems, and, in addition, there are two important fittings which must be considered separately – the scum trough and the ladders.

The main requirements of the plain surfaces are that they should be :

1. Easily cleaned ;
2. Not affected by water ;
3. Non-fading if coloured ;
4. Of good appearance ;
5. And, in the case of the bottom of the pool, moderately non-slip.

Probably the most common lining for indoor pools is glazed tiles, which are very satisfactory in all respects, although crazing sometimes occurs even with good tiles after a period of years.

It has been common practice in the past to provide a structural wall and floor and a separate thin wall, with asphalt between, a method which has several advantages, in that a good wall surface was obtained on which to apply the asphalt, which, when the second wall was built, was amply protected on both sides.

Recently a single thin concrete wall has become common practice, and this in turn has its effect on the application of the lining material. If the asphalt is applied to the inner face of a concrete wall it must be covered with a screed to take the tiling.

A good key to the asphalt is obtained by embedding in it wedge-shaped rubber keys ; these are pulled out before the application of the screed, leaving a recess which provides the key, and on this screed the tiling is laid in the usual way.

Where integral waterproofers are used in the concrete there is, of course, no occasion for any special key for the screed or rendering.

Various forms of precast slab, terrazzo and similar materials may be used, and they have the advantage of being obtainable in large units. In these, as in the renderings which are sometimes used, particularly in outdoor pools, cement colours are mixed. It is important that only good cement colours should be used, as many cases have occurred of fading and other troubles through the use of inferior pigments. To obtain satisfactory results with the lighter shades, a white cement and good clean sand are essential. Ordinary coarse cement rendering is not considered a good finish for the interior of a swimming pool, although it is sometimes used.

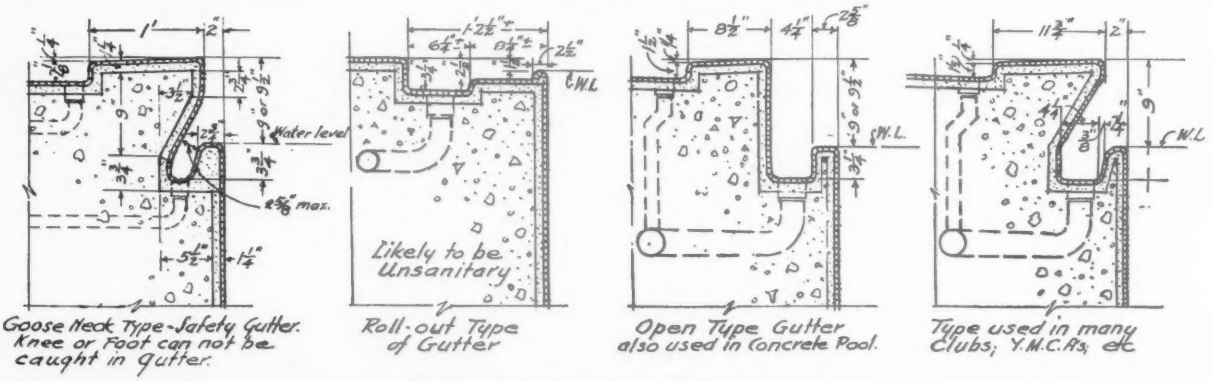
Marble slabs were used a great deal at one time, and although they are, from a practical point of view, very satisfactory, they are not now used to any great extent.

Vitreous mosaic gives one of the very best finishes and could well be used to a far greater extent ; its cost is a little greater than some finishes, but it is not so expensive as is generally supposed.

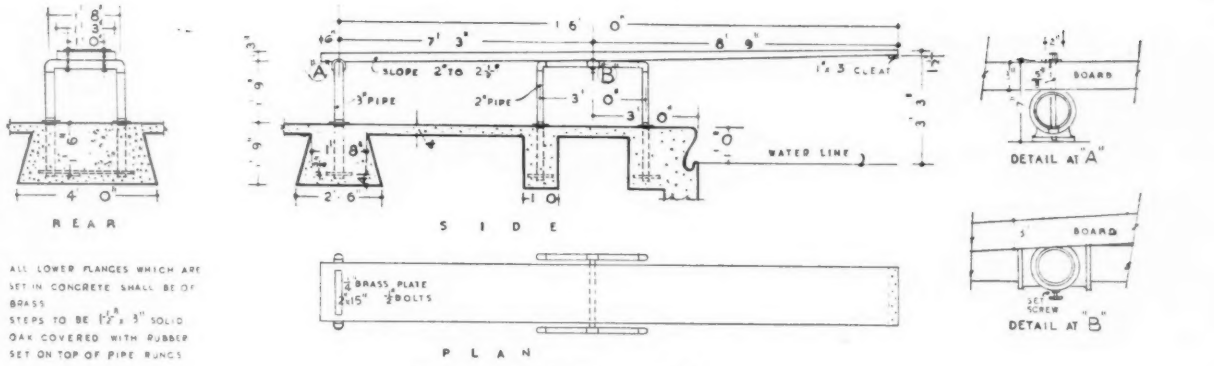
*Markings.*—The markings required in a pool should be considered in selecting a suitable lining ; the lines on the floor of the pool, depth signs and warning notices are permanent markings, which, in tile work, may be formed in coloured tile, or painted on and burnt into the glaze of the tile, or they may be formed in mosaic. With cement finishes precast panels are inserted wherever required, the figures or notices having been formed in the casting, either in coloured cement or by embedded vitrolite or similar material.

*Scum troughs* are sometimes formed in situ and the concrete surface either rendered or rubbed down with a carborundum wheel. Precast cement scum trough units are probably more satisfactory, and are obtainable in standard shapes or may be cast to detail. Very good scum troughs are obtainable in faience, or a combination of faience and tile or faience and mosaic, the material lending itself to rather more precise shaping and a finer finish than other materials.

*Ladders.*—The commonest form of ladder used is the teak removable ladder, which, when in use, projects into the

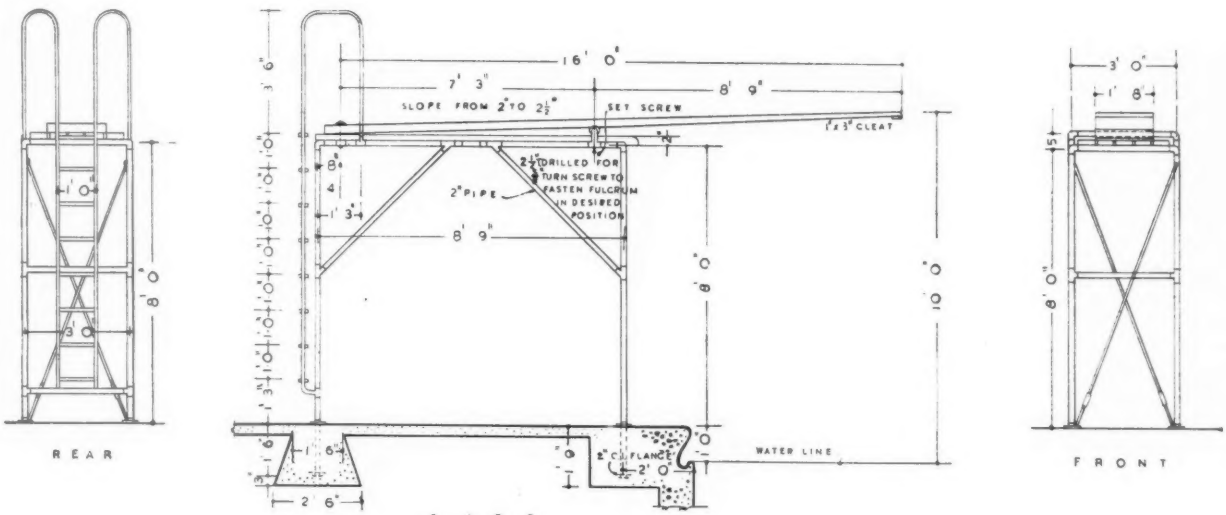


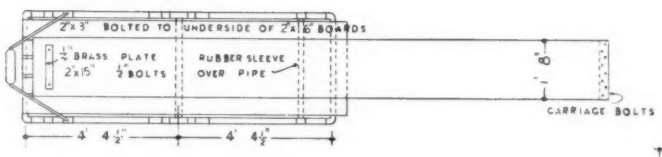

*Typical scum trough and pool surround sections.*



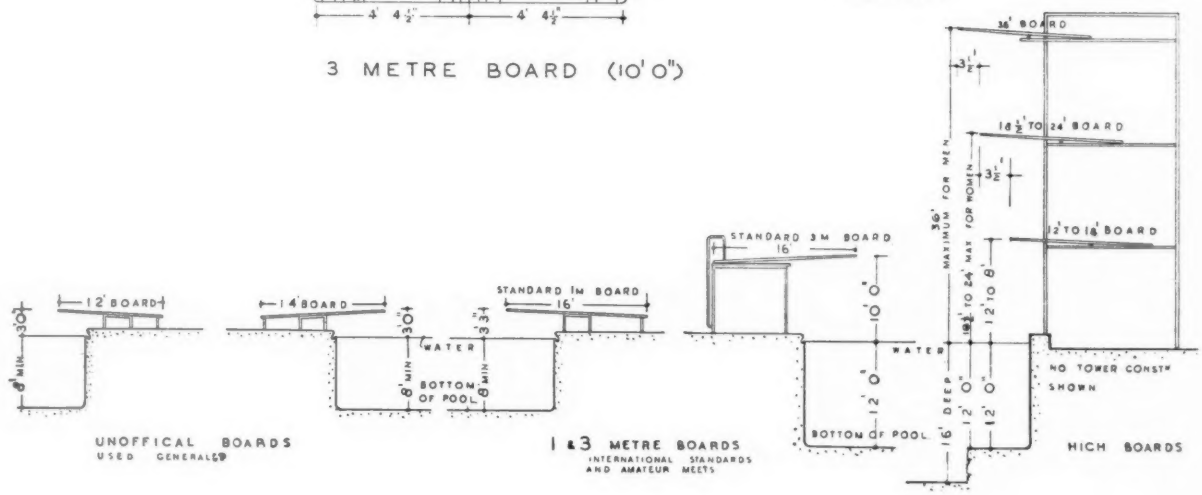

ALL LOWER FLANGES WHICH ARE SET IN CONCRETE SHALL BE OF BRASS
STEPS TO BE 1⅛" x 3" SOLID OAK COVERED WITH RUBBER SET ON TOP OF PIPE RUNGS

## 1 METRE BOARD (3'3")

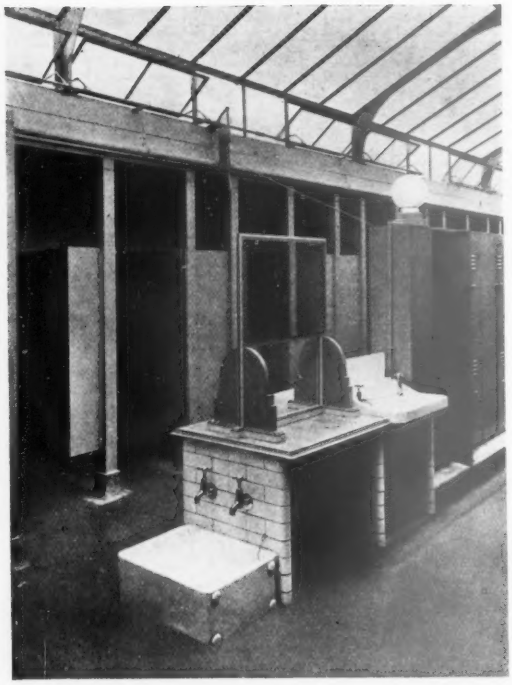



## 3 METRE BOARD (10'0")




*Standard dimensions and water depths required for International Standard diving boards.*



*A changing room planned with dressing boxes down the sides and a double row of two-tiered lockers in the centre. G. W. Smith, architect.*

pool, and must be removed for all races and other events. Probably its only advantage is that it can be made of low pitch, more like a stair than a ladder; in other respects it is unsatisfactory both for the swimmers and for the attendants. Metal ladders recessed into the side of the pool may be used, but the selection of a suitable metal is a problem, the most satisfactory probably being stainless steel, which is rather expensive. The objection to a ladder is that a swimmer's foot may slip through the rungs and be caught or hurt if the swimmer falls backwards into the pool.

This objection applies also to the tile or mosaic ladder built into the wall of the pool, but in this case the broader tread and the nearness of the back of the tread to the wall are a safeguard. A good recessed built-in ladder formed in glazed and non-slip tiles is obtainable, the shaped core of which is cast as part of the wall; glazed tile risers sloping up from the back of one tread to the nosing of the next prevent any possibility of feet being caught, and the non-slip tread tile gives a firm foothold even below water level. They are easier to clean than ladders or wood steps.

*Handrails.*—Teak ladders or steps of the sloping type are usually set at a considerable angle, and are often not provided with handrails, except at the top, as it is found that the swimmer climbing out of the pool uses the treads or rungs for a hand grip.

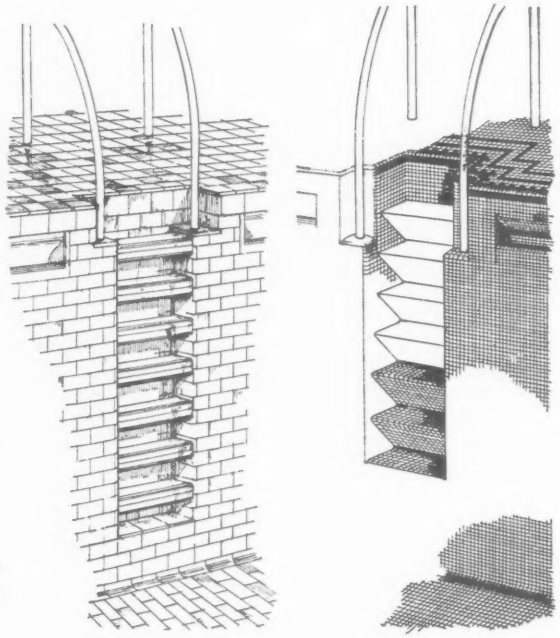
With vertical ladders in metal or wood the strings serve as the handrail, and are continued on at the top for the purpose. In the recessed types a separate handrail is provided, which should be taken down below water level, as a swimmer coming to the ladder usually first grasps the rail at or below the water level.

Rails which are above water level may be in wrought iron, brass or copper, but where they are continued down below water level stainless steel is the best material for combined appearance and durability.

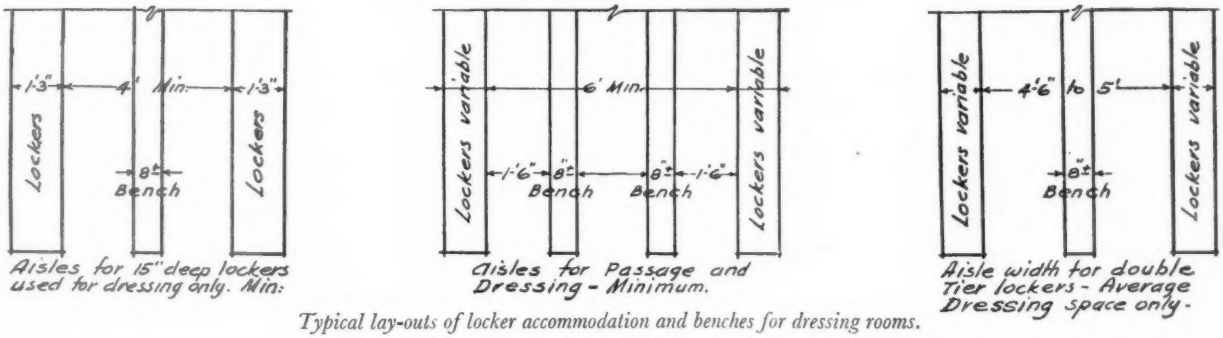
*Surrounds.*—Here the most important consideration for the paving is its non-slip quality, and it is remarkable how frequently insufficiently non-slip materials are used. A very great variety of materials is available, in varying degrees of non-slip, many of them depend on alundum or carborundum additions, and many on the indented or ribbed surface with which they are provided. Tile, mosaic, cement slabs and terrazzo are common, but it is doubtful if the ideal material has yet been found. Asphalt tiles also are now made in colours with an indented non-slip surface, in sizes 8 in. by 8 in. and 8 in. by 4 in. Prices range from 11/6 to 16/- per square yard, and a five-year guarantee is given, but the use of this material for this purpose is too recent for any data based on actual experience to be available. The conditions call for more varied qualities than other parts of the pool, as the paving of the surround must be sympathetic and non-slip to bare feet, and non-slip to shoes as well; it must stand hard wear from spectators and be easily cleaned and drained.

It is possible that some combination of materials such as rubber and granulated cork, or rubber and wood fibre suitably compressed into slabs or tiles may prove to be more satisfactory than those at present available, but there are various difficulties to be overcome before they can be considered as more than experimental.

Rubber mats are not non-slip unless surfaced with alundum, but an open-work rubber mat suitably grooved or ribbed on the back might give a very good non-slip surface, while allowing all surplus water to run through to the floor and thence away between the



*Two different types of built-in swimming pool ladder.*




*Typical lay-outs of locker accommodation and benches for dressing rooms.*

grooves on the back of the rubber. Such a mat could be laid on a well-finished concrete floor or screed and the margins formed to give the correct recess.

*Foot Baths and Sprays* in the entrances to a pool should be finished in much the same material as the pool, and especial care must be taken that the floor material is completely non-slip, particularly if the foot bath is of the channel type with abruptly dished sides.

### *DRESSING ROOMS*

It should be remembered that dressing room and lavatory floors are liable at times to become quite as wet as the surround to the pool itself, and that a film of water may turn a usually safe surface into a very slippery and dangerous one.

*Boxes.*—Dressing boxes of the large type are built up in teak, metal-covered plywood, terrazzo slabs, or even of thin partitions tiled, and in cheap work are sometimes in painted asbestos cement sheet.

Pressed steel, painted or stove-enamelled, is used for the smaller type of dressing box or stall, and there is no reason why its use should not be extended to the larger boxes also. Standard lockers are obtainable in pressed steel and wood for common dressing rooms, when wood bench seats are usually provided.

*Box-cum-locker System.*—Nearly all new pools are arranged on this system, though the working of it may vary in detail. A recent conversion scheme may be of interest, as giving some idea of the greater use that may be obtained from the same site area. The Cliftonville sea water pool originally had 414 dressing boxes, and these have now been replaced by 196 boxes and 1,408 lockers, thus more than trebling the number of bathers that can be admitted at any one time.

The walls and ceilings of indoor pools should be finished with due regard to the prevention of condensation, which otherwise will cause a great deal of trouble, the atmosphere being, of course, extemely humid, especially in heated pools.

Insulating board left with the natural surface finish gives a good interior wall where out of reach, but wherever the structural walls have themselves high insulating value an absorbent plaster is all that is necessary. The lower part of the wall should, of course, be in a hard sanitary finish which can be easily cleaned. Windows should be either double-glazed or should have carefully placed heating coils to prevent excessive condensation.

### *SEATING*

Seats for spectators are often of the wood bench type, but the tendency is to provide better and more comfortable accommodation, probably padded and covered. The covering material, if of a non-absorbent character, tends to condense the moisture in the air, and if absorbent tends to remain permanently damp.

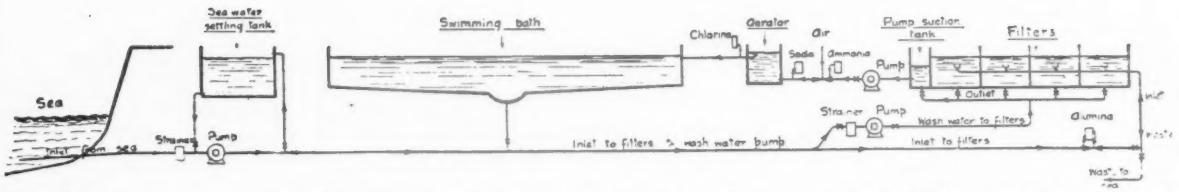
## EQUIPMENT

*BY H. P. MILES*

The main equipment problem of any swimming bath consists of arranging a straightforward and economical lay-out for the water purification and aerating plant. Untreated bath water is unpopular with bathers, who tend to swim only on "clean water days," and American investigations have shown that numerous diseases are attributable to bathing in impure water; it is probable, too, that the proprietor of a swimming bath might be held to be legally liable for any illnesses directly traceable to infected bath water.

Save in exceptional conditions, where a large supply of pure water is available for a continuous feed to the pool, a

*Cascade aerator used as a decorative feature in the end wall of a swimming pool. G. W. Smith, architect.*




*Lay-out of the filtration plant of the Hastings pool. Sea water is used and the settling tank is needed for the removal of sand and other suspended matter.*

filtration plant may now be regarded as standard equipment.

### *FILTRATION PROCESSES*

The water in the bath is continuously circulated, being drawn through a large area screened outlet and passed first of all through a strainer to remove solid debris, such as wool and buttons ; these strainers should be arranged in pairs, so that the plant need not be stopped for cleaning. The next stage is aeration, though this is sometimes omitted when there is a cascade fountain through which the water passes on its return to the pool ; this last is nearly always done for the sake of its decorative value and to give the water "sparkle."

The filters themselves are of the pressure type filled with graded quartz sand, and the water, before it reaches them, is dosed with a uniform proportion of sulphate of alumina which, reacting with the alkaline salts in the water, forms a coagulant jelly on the surface of the filter, thus enabling it to remove the remaining suspended matter, and a certain number of bacteria. The filters themselves should have an area sufficient to give a water rate of about 200 gallons per hour per sq. ft. of filtering surface. The number of gallons to be filtered per hour varies with the capacity of the bath and the turnover rate, which should be about eight hours for an open air pool, though this may vary from five to nine hours, according to the probable number of bathers and local conditions, such as polluted atmosphere.

The filters are cleaned by reversing the flow of water through them and at the same time agitating the sand by means of an air scour (or rotating mechanical arms), the resultant effluent being passed to waste. Filters, like the strainers, should always be arranged in pairs.

### *STERILIZING*

After filtration, the water is sterilized by means of chlorine or a chlorinated derivative of ammonia, by ultra-violet rays, or by the "katadyn" process. Chlorine is the most commonly used process, but suffers from the disadvantage that it has to be accurately regulated, otherwise the bathers will complain of smarting eyes and sore throats. The katadyn process has been recently introduced and depends on the introduction of minute quantities of silver ions, any accidental over-dosage being free from unpleasant results.

The aeration process is generally carried out in an open air cascade of the type illustrated on page 99 and the water is finally returned to the bath by separate inlets at the shallow end, this method, in conjunction with the deep end extract, giving a slight directional flow to the water in the pool and thus avoiding stagnant areas.

### *SWEEPERS*

In connection with the filtration plant it is common practice to arrange a suction sweeper ; this consists of a rubber faced suction head, which is drawn along the bottom of the bath to remove any deposited dirt not carried away by the normal water flow. The head is connected to the bath water suction main by means of a flexible tube.

### *COSTS*

The cost of any filtration plant depends upon the rate of filtration, and no hard and fast rules can be given. An actual example,* however, may be of interest.

INITIAL COSTS.—50,000 gallons per hour.

| | |
|---|---|
| All plant, pipework and erection | £1,640 |
| Filter house, foundations for machinery | 650 |
| Trench excavation and re-instatement | 50 |
| Cascade aerator | 60 |
| Total | £2,400 |

RUNNING COSTS must include power consumption of pumps, cost of chemicals, labour, etc. Below is a typical example :—

| | |
|---|---|
| Capacity of bath | 250,000 gallons |
| Pumping rate per hour | 50,000 ,, |
| Turnover rate | 5 hours |
| Season | April-October (closed Sunday) |
| Total hours of pumping | 2,200 hours |
| Water pumped | 110,000,000 gallons |
| Wash water | 900,000 ,, |
| Number of bathers | 180,000 |
| Electricity used | 36,000 units |

* Wilkinson and Forty. See *Bibliography*, page 102.

MATERIALS.

| | Quantity | Rate | Cost | | |
|---|---|---|---|---|---|
| Electricity | 36,000 units | 1d. | 150 | 0 | 0 |
| Sulphate of Alumina | 4,480 lb. | £8 per ton | 16 | 0 | 0 |
| Soda Ash | 2,240 ,, | £7 3s. ,, | 7 | 3 | 0 |
| Chlorine | 700 ,, | £25 ,, | 7 | 16 | 3 |
| Wash Water | 900,000 galls. | 1s. per 1,000 | 45 | 0 | 0 |
| Total | | | £225 | 19 | 3 |

LABOUR.

| | | | |
|---|---|---|---|
| Allocation of time, say | 20 | 0 | 0 |
| Initial filling, emptying at end of season | 12 | 10 | 0 |
| 15 year loan and repayments on plant | 216 | 0 | 0 |
| Maintenance and repairs, say | 15 | 0 | 0 |
| Total | £489 | 9 | 3 |

It may be pointed out that, with the fill and draw system without a filtration plant, the cost for a twice-weekly refill for 26 weeks would be £650 with water at 1s. per thousand gallons, apart from labour costs of emptying, cleaning and refilling, all at overtime rates, since the work must be done at night to save loss of revenue.

### *HEATING*

That it is financially worth while to heat open-air swimming pools is evident from the number of pools that are now being equipped with heating apparatus; this is being done even with the pools attached to small road houses, where it is found that the installation of proper heating equipment is essential if full advantage is to be taken of the out-door season.

The advantage of heated pools is that bathing can be begun much earlier and finished later. Unwarmed pools are not usually in full commission for much more than three months in the year—from the middle of June until the middle of September. The addition of heating plant will add at least two months to the season : equivalent to an increase of 60 per cent. in its earning capacity.

The water temperature should be maintained at between 68 deg. F. and 72 deg. F. Water in closed baths, where the room temperature is kept at 60 deg. F., loses heat at the rate of from 2 deg. F. to 3 deg. F. per twenty-four hours. With open-air baths a much larger temperature drop must be

provided for, and the bath should be screened as much as possible from the wind ; efficient screening results in fuel economy as well as protecting the bathers from chapped skin. Swimming pools are usually heated by means of a calorifier or boiler in circuit with the filtration plant. For open-air pools it is usual to make provision for a temperature rise of 5 deg. F. between the water entering the heating installation and the warmed water returning to the pool. Sometimes, in the case of very exposed pools, or when rapid water heating is required, such as with a pool used at week-ends only, a rise of as much as 10 deg. F. is allowed for.

### *FUELS*

*Coal.*—A pool, 100 ft. by 60 ft., of an average depth of 6 ft., holds about 225,000 gallons or 2,250,000 lb. of water ; usually the water is completely changed twice per day. On this basis and allowing for heat losses, a boiler rated at 1,125,000 B.Th.U.'s per hour would be required. With coal at 12,500 B.Th.U.'s per lb., the fuel consumption would be 90 lb. $\left(\frac{1,125,000}{12,500}\right)$ per hour with the heating full on, or about 6 cwt. of coal per change of water. On the other hand it must not be assumed that heating is necessary all the time ; even in cold weather it is not usually necessary to run the heating for more than 16 hours per day, and with coal at 25s. a ton it will be seen that the fuel bill will not be excessive. The great value of coal as a fuel for this purpose is that by keeping a low fire burning continuously a constant stream of freshly heated water at a comparatively low temperature can be kept flowing at a minimum cost. Intermittent heating too often tends to produce hot currents in the bath, and these are most objectionable to bathers.

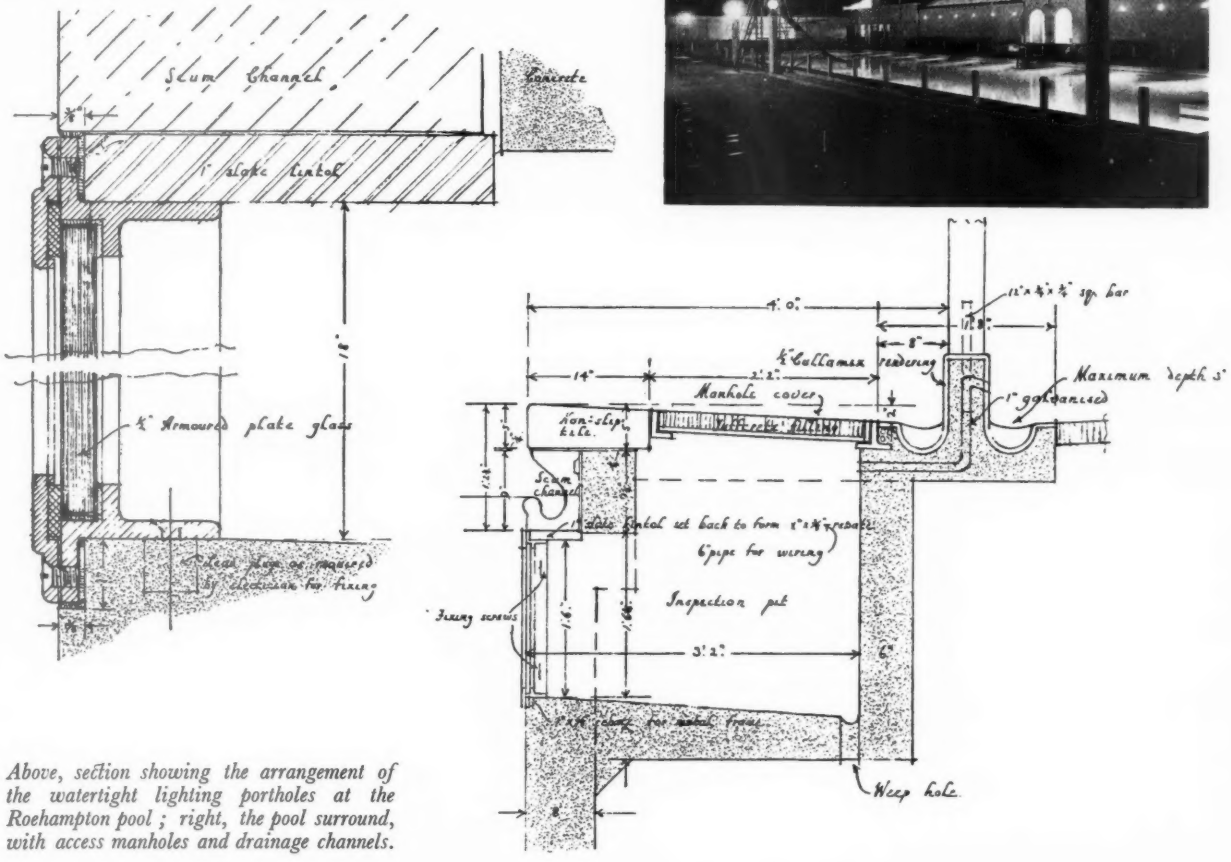
Standard sectional boilers can be used for heating swimming pools and fitted with automatic stokers thermostatically controlled to react to air temperatures. With this arrangement perfect automatic control is assured and difficulties of time lag are obviated.

*Electricity.*—The use of electricity for heating is, at present, by no means general, although there are signs of growing interest in this matter, and several pools now use electricity for heating. The heating requirements usually comprise the heating of the pool and the provision of hot water for showers and lavatories.

The actual heating of the pool can be confined to the night or off-peak hours without the necessity for thermal storage equipment, as the pool itself has sufficient thermal capacity to carry over the day without an undue drop in temperature. An electric heater or boiler takes up little space and, in the case of a small pool, can usually be accommodated in the filter and pump room without any increase in dimensions being required. In the case of a large pool an extension with a floor area of about 6 ft. by 6 ft. will easily accommodate the electric boiler.

The capital cost of an electric boiler is higher than that of a coke or coal fired boiler, but when the omission of the boiler house, fuel store and

*A night view of the Roehampton pool.*




*Above, section showing the arrangement of the watertight lighting portholes at the Roehampton pool ; right, the pool surround, with access manholes and drainage channels.*

*Dressing room arranged with two-tier lockers and benches only, no separate dressing boxes. Each tier of lockers is provided with two mirrors.*

chimney are credited, the electrical scheme will probably be cheaper in first cost.

Running costs vary with the size of the pool and with the weather. Very little reliable information regarding the heat losses from open air pools is available, so that general figures cannot be given. It can, however, be assumed that if a favourable off-peak tariff is available the saving in attendance charges effected by the use of automatic electric heating equipment will make the running costs competitive with other fuels. Each specific job should be investigated on its own merits.

*Gas.*—The use of gas-fired plant with thermostatic control reduces labour and supervision to a minimum ; maintenance costs are low and the boilers have a long life ; the plant occupies little space, no storage room being necessary for the fuel ; and gas itself, besides being reliable, gives the necessary speed of operation to deal with quickly changing weather conditions. As a result, the water can be soon brought up to the required temperature at which point the temperature can generally be maintained on a reduced gas consumption.

The Gosford Park swimming pool, Coventry, has a capacity of 200,000 gallons, and the installation consists of gas-fired boilers, thermostatically controlled, with a rated output per hour of 800,000 B.Th.U.'s. The entire water from the pool is pumped through the boilers, after passing through the filtering plant, at the rate of 30,000 gallons per hour.

The dressing rooms are heated by means of hot water pipes served by a gas-fired boiler with a rated output of 250,000 B.Th.U.'s per hour. This also heats a hot water storage tank to supply service hot water and tepid showers.

Some 3,000 to 4,000 bathers use the pool weekly, and a test over a period of 19 weeks showed a gas consumption, including the heating of cubicles and showers, of 1,915,000 c. ft. Gas is supplied at 2s. per thousand cubic ft.

## *LIGHTING*

The lighting of such parts of the pool buildings as dressing rooms and ticket offices calls for no special comment. the main problem being the pool itself. General illumination is, as a rule, provided by spheres or floods on posts at the side of the pool, care being necessary to prevent spectators being dazzled either directly or by reflections from the water if the pool is to be used for races or displays at night.

*Underwater lighting* is now widely used and gives very pleasing results, particularly if the lining of the bath is coloured. The installation involves watertight portholes below water level with floodlamps inside arranged to give a wide lateral throw. Access to the lamps may be provided by manholes in the bath surround, and care must be taken to see that these are watertight. (See page 101.)

*Aeration cascades* are also floodlit, frequently in colour.

## *ARTIFICIAL WAVES*

Wave making by mechanical means is a popular feature of Continental pools, but has not, so far, been much used in this country. The apparatus consists essentially of one or more large slow moving piston-type pumps which produce a rhythmical wave at the deep end of the bath by alternately withdrawing and returning a large volume of water. Running costs are difficult to estimate, but one open air pool at Zurich about 120 ft. by 60 ft., requires a 40 h.p. motor to produce waves approximately 3 ft. high.

The carcase of the bath should be stiffened to allow for the impact load of the waves, and the top of the surround should be raised above the level of the water to avoid flooding and waste of water.

## *ADMISSION*

The ticket office should be equipped with an automatic recording machine for the issue of tickets, a three-way machine for bathers, spectators, and towel tickets being probably all that is required.

*Turnstiles* will probably be necessary at the entrance and may also be used to control circulation at strategic points such as the entrance to the dressing boxes, but their excessive use is not popular with bathers.

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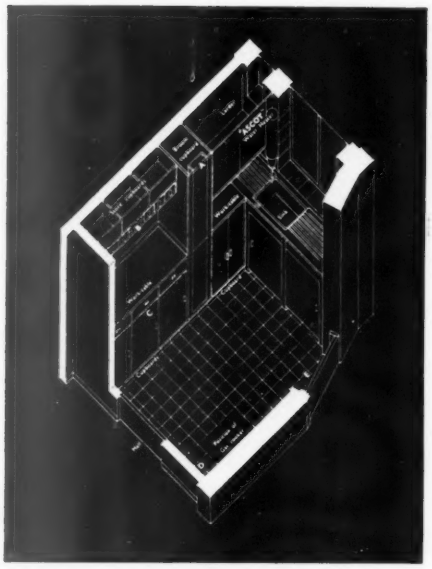


# TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

*Domestic Hot Water*

A NEW book entitled *Gas the National Fuel*, obtainable on application to Messrs. Ascot Gas Water Heaters, is concerned with the use of gas for domestic water heating, and particularly with the Ascot heater. Altogether it is pleasant to find that the proprietary product with which the publication is concerned is not forcibly thrust upon one in big letters on each page, as happens in the case of many publications of a similar kind.

•

The evolution of the process of obtaining hot water, the fundamental principles of water heating for domestic use, the problems of water heating in the house and in the flat are discussed by experts in articles admirably illustrated by typical flat and house plans, kitchen lay-outs, bathroom lay-outs, and typical installations showing pipe runs in plan and isometric projection.

•

There are various types of Ascot gas water heaters: the multi-point, a single unit supplying adjacent and remote points; the bath water heater, with or without flexible hand shower and swivel spout; the sink water heater and the storage water heater for handbasins and similar purposes.

•

The diagram alongside shows a multi-point heater in a kitchen, working in combination with an ordinary boiler, and avoids overheating the kitchen, because it gives off heat only when actually at work, and even then very little; and since it is only in use for a few minutes every day the heating effect is negligible.

•

The diagram shows a central supply boiler (A) and a storage tank or cylinder (B) (here shown as a square tank), a supply cistern (C) and a gas heater (D). The pipe-connections may be arranged as shown. A full-bore stop cock (a) must be provided to the cold water intlet pipe of the gas water heater and a similar cock (b) must be provided between the expansion pipe and the nearest hot water tap. A stop cock (c) is provided to shut off the main cold water supply when necessary.

•

The incoming cold water supply from the main is at (E), the cold supply to the cylinder is at (F), the primary circulating or draw-off pipes are (I), (J) and (L). It will be seen from this drawing that we can either draw hot water from the storage without the use of any gas or, if the storage water is cold, the water can be heated immediately by the gas heater alone.

•

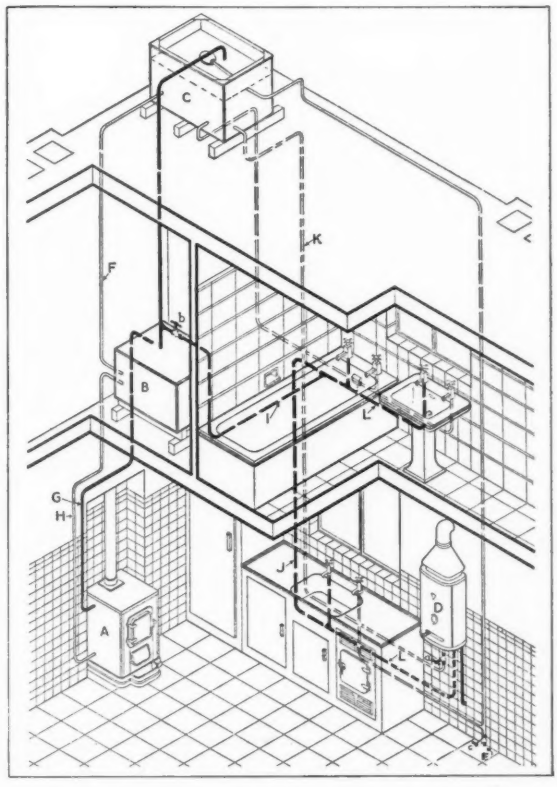
In this case the cold water passes down pipe (K), through the heater, thence through pipes (L) and (J), serving either the bath, the lavatory basin or the kitchen sink at will; but in this case hot water would not be drawn so rapidly into the bath as from the central supply system, in which a large mass is already heated in the tank (B) and can at once be drawn off into the bath through pipe (I) at a great rate.

•

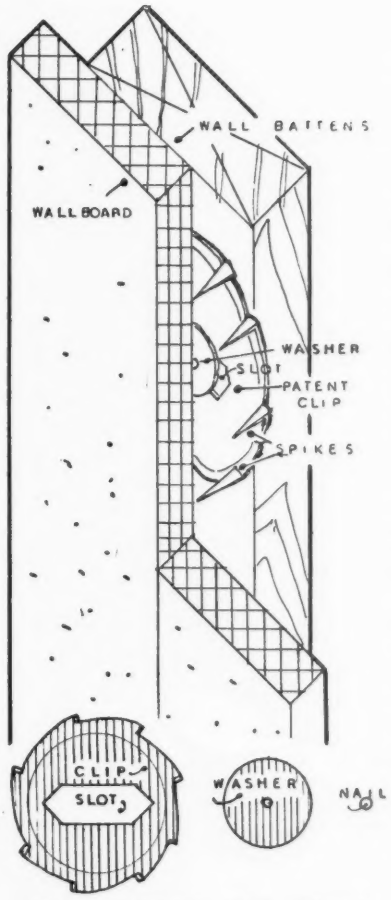
When the multi-point gas water heater (D) is to be used the stop cock (a) must be opened and the stop cock (b) closed. When the central supply boiler (A) is to be used the stop cock (a) must be closed and the stop cock (b) open.

*Fixing Wallboard*

Ensoklyp is a new patent fixing device for holding insulating board securely to joists or wall battens. A sample of the fixing has been sent to me by Messrs. Wood




*Instantaneous water heater used in conjunction with an ordinary boiler. (See note on "Domestic Hot Water.")*




*The "Ensoklyp," for fixing wallboard.*

Products, and a sketch of it is reproduced here.

•

The clip itself is a pressed and pierced piece of steel, roughly circular, and approximately 2 in. in diameter. It has eight sharply pointed spikes on its perimeter, and a slot across its centre.

•

The clips are fixed to battens by nailing through separate discs or washers, so that the nails pass first through holes in the washers, then through the slots in the clips. The slots are so placed that they run with the width of the board.

•

The boards are hammered home on to the clips, so that there is an immovable butt joint between the boards, the design of the clip being such that any movement of the boards is taken up in the slot.

# LAW REPORT

### ACTION AGAINST BUILDING OWNER—ARCHITECT EXONERATED

*Harold Cornish Ltd.* v. *Bohannan.—King's Bench Division. Before Mr. Justice Porter.*

THIS was an action by Messrs. Harold Cornish, Ltd., builders and contractors, of Watford Road, Harrow, Middlesex, to recover from Mr. F. W. Bohannan, of Lillieshall Road, Clapham Common, £1,375, payment alleged to be due to them for work done and materials supplied in and about the erection of six flats at Rugby Avenue, Wembley, or in the alternative for the sum of £550, being two instalments due in respect thereof under a contract made between the parties in January, 1934. The plaintiffs' case was that by the contract in question they agreed to erect the flats for defendant for the sum of £1,900, and that they in and about the erection of the flats had done work to the value of £1,375. It was an express condition of the contract that the defendant's architect, Mr. A. B. Richardson, of St. James's Street, S.W., should issue certificates in accordance with the schedule affixed to the contract and that the plaintiffs should be entitled to payment by the defendant of the amounts of such certificates. The plaintiffs alleged that Mr. Richardson, after payment of the first instalment due, had wrongfully refused to give plaintiffs any certificates in respect of further instalments due to them. The plaintiffs further alleged that the architect had wrongfully demanded the removal and substitution or re-execution of materials and work without addressing himself properly to determine whether such removal and substitution or re-execution was necessary or proper. On May 30, 1934, the defendant, through his solicitors, by letter had refused to allow plaintiffs to continue the execution of works, and in further alternative they claimed to be entitled to be paid by the defendant a fair and reasonable price for the work they did and for the materials they supplied, contending that such reasonable price was £1,375, less £150 already paid, viz., £1,225.

The defendant pleaded a denial that the plaintiffs did work in or about the erection of the flats to the value of £1,375, and that if and so far as the plaintiffs did any work exceeding in value the sum of £150, for which amount the architect had issued his certificate, any such excess was done with materials and workmanship not in accordance with the contract.

Mr. Tucker, K.C., and Mr. E. Holroyd Pearce appeared for the plaintiffs, and Mr. J. W. Morris, K.C., and Mr. Graham Mould for the defendants.

Mr. Tucker, having stated the nature of the action, said he did not wish to assert that there was anything in the nature of collusion between the defendant and Mr. Richardson, but what he did say was that Mr. Richardson was overborne by the defendant. The defendant, who was constantly on the site, made frequent complaints as the work proceeded, such as about the footings, the damp-course and the quality of certain bricks, etc. When the building got as far as the floor joists, interference by the defendant was so great that the men threatened to leave the job.

Mr. Harold Cornish, managing director of the plaintiff company, gave evidence to the effect that the work had been carried out in accordance with the terms of the contract and specifications and that the company had always been willing to complete the work if they had been allowed to do so. Any defects which had occurred in the course of the work had always been rectified.

Mr. Charles Beresford Marshall, of Marshall and Tweedy, architects, of Cavendish Place, W., and Mr. C. Harman Hunt F.S.I., of R. C. Rees-Reynolds, of Lincoln's Inn Fields, gave expert evidence on behalf of the plaintiffs, as to the quality of the work and materials used on the job.

At the close of the plaintiffs' case Mr. Morris, for the defendant, said the case was one of the greatest importance both to the defendant and his architect, Mr. Richardson, and especially to Mr. Richardson, because of the charges made against him. In the pleadings it was suggested or stated that he had made requirements which he well knew were unfounded. The imputation against Mr. Richardson was that he was dishonest in requiring certain things to be done by the plaintiffs, and therefore counsel submitted that was a serious charge against Mr. Richardson. If it was found by his lordship that Mr. Richardson had exercised his discretion as architect properly in the matters before the Court, then there was no case made out against the defendant. The evidence had disclosed that Mr. Cornish had not been in the building trade at all. It had been seriously suggested by Mr. Cornish that when the contract was signed there was a blank left in it which was afterwards filled in. It was suggested that some person filled it in after the contract was signed, that the plaintiffs were liable to £1 a day penalty if work was not completed within the time limit.

Mr. Arthur B. Richardson was called, and in evidence said he was a Fellow of the Surveyors' Institute, and had been in practice since 1899. He had also had considerable architectural experience. The contract in the present case was signed on January 31, 1934, and he saw it before it was signed, although he was not present when it was actually signed. Mr. Cornish saw the proposed contract at his office on January 30, 1934, and took it away with him for consideration. The date of completion was put in that day, and also the words, "£1 a day as liquidated damages." He had no doubt that when Mr. Cornish took the document away on that day the words in question were properly filled in in ink. Witness had previously filled them in in pencil. He had had no conversation with Mr. Cornish saying that he was not binding him to time and nothing like it. After the contract was signed he had never altered anything in it, and so far as he knew nobody had altered the contract after it was signed.

Mr. Richardson then gave detailed evidence as to the complaints he had made with regard to the plaintiffs' work and the action he took in consequence.

Cross-examined, Mr. Richardson said he had done everything he could during the progress of the work to put the plaintiffs right, but there came a time when he had to put his foot down.

Mr. R. J. Yorke, of Hood and Huggins, chartered surveyors, of Oxford Street, W., gave expert evidence as to the nature of the work the plaintiffs had executed, and supporting the action which Mr. Richardson had taken in the matter.

#### JUDGMENT

His lordship, in the course of his judgment, said he found that when the contract was signed it contained the £1 per day penalty clause, and that the contract was then as it now appeared. After the contract was signed disputes arose during the course

of the work with reference in particular to the joists, bonding of walls, and as to certain lintels. As a consequence several notices were served by Mr. Richardson, the defendants' architect, and ultimately the builders were ordered off the site.

Having reviewed the evidence given his lordship found that the work which Mr. Richardson complained of was bad and that Mr. Richardson was honest in the orders he gave and had honestly believed they ought to be carried out. His lordship found that the plaintiffs' claim failed, and he entered judgment for the defendant with costs.

## Manufacturers' Items

The telephone number of Messrs. Holland & Hannen and Cubitts Ltd., has been changed to Whitehall 3111.

*

The Kleine Company has secured the contract for 45,000 superficial yards of flooring at the Manchester Town Hall extension, which is now in course of erection to the designs of Mr. Vincent Harris.

*

Recent cable orders received by British Insulated Cables, Ltd., include 24,000 yds. of various E.H.T., H.T. and L.T. cables for Norwich; 16,600 yds. of H.T. and L.T. cables for the Midland Electric Corporation and the supply and laying of 7,200 yds. of L.T. cable for a development company in West London. Overseas orders include 250 miles of twin twisted rubber insulated wire for New Zealand, and 4,760 yards of Vicma grade tough rubber sheathed cables, single, twin, three-core and ten-core in various sizes for West Africa.

*

The British Plaster Board, Ltd., the Gotham Co., Ltd. of Nottingham, Thos. McGhie and Sons, Ltd., and the Carlisle Plaster and Cement Co., have recently amalgamated, with Northern sales and service offices at Wallasey, Cheshire; in the Midlands at Bentinck Buildings, Wheeler Gate, Nottingham; and in the South at Brettenham House, Lancaster Place, Strand, W.C.2. The technical and laboratory advice which has always been a feature of the companies' sales campaign will be continued.

## THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the subcontractors for the building illustrated in this issue :—

Housing Scheme, Lordship Road, N.16 (pages 91-92). Rowley Bros., Ltd., general contractors Nutbourne Brickworks, Ltd., facing bricks; Kleine Co., Ltd., fire-resisting floors; Robert Adlard & Co., Ltd., pinion pantiles; Moler Products, Ltd., fosalsil partition blocks; W. T. Lamb and Sons, Ltd., gault bricks to stairs; A. D. Wire & Co., composition floors; Turner Hall & Co., Ltd., cold cement glaze; Stuart's Granolithic Co., Ltd., artificial stone and pre-cast steps; Interoven Stove Co., Ltd., living-room stoves; Cornes and Haighton, Ltd., hot and cold water services in copper with Kontite joints; General Light Castings, Ltd., sinks and baths; Geo. Wright (London), Ltd., mantel registers and w.c.'s; Nettlefold and Sons, Ltd., ironmongery; Cromwells, Ltd., Crommoid Bakelite furniture, letter boxes and notice plates; S. W. Farmer and Sons, Ltd., wrought iron railings and gates; Thos. Elsley, Ltd., rainwater heads; W. B. and H. C. Cables, Ltd., electrical installation; Royde and Tucker, Ltd., sash chains and pulleys; Greenwoods Ventilating Co., larder lights.

# THE WEEK'S BUILDING NEWS

### LONDON & DISTRICTS (15-MILES RADIUS)

ACTON. *Flats.* Messrs. Marshall and Tweedy are to develop a further section of the St. Catherine's school site, Acton, by the erection of 60 flats on five floors.

BARKING. *School.* The Corporation has decided to erect the new Manor School by direct labour at a cost of £43,000.

BARKING. *Shops.* A range of shops is to be erected at the corner of Forterie Gardens, Longbridge Road, by the London Co-operative Society.

FINCHLEY. *Municipal Offices.* It has been decided that the proposed new municipal buildings should comprise municipal offices, town hall, reference library and electricity showrooms.

FINCHLEY. *Flats.* Mr. Morris Joseph has prepared a scheme for the erection of 18 shops and flats on the Sherwood House site, East End Road, Finchley.

HOUNSLOW. *Houses.* Messrs. Clifford and Clifford, Ltd., 28 Ealing, Wembley, are to erect 110 houses in New Road off Bishop Road.

HOUNSLOW. *Cinema.* The B.C. has approved plans submitted by Mr. W. J. King, 16-17 Jermyn Street, S.W.1, for the proposed erection of a cinema and seven shops with flats at Bath Road, opposite Hounslow West Station.

HOUNSLOW. *Houses.* The Ministry of Health has now approved the acceptance of the tender of the Unit Construction Company at £59,741 for the erection of 183 houses on the Worton Road Housing Estate No. 2.

MARYLEBONE. Plans passed by the Borough Council: 36-8 Finchley Road, for Mr. F. H. Webb; block of flats, 13-18 St. Edmunds Terrace and 17-22 St. James Mews, for Mr. A. V. Pilichowski; block of flats, 27 Grove End Road, for Messrs. Gunton and Gunton; rebuilding D. H. Evan's premises, Oxford Street, for Mr. Louis Blanc.

MARYLEBONE. *Houses.* The L.C.C. propose to acquire further sites for development as cottage estates at Kenton and Hammersmith. The St. Marylebone Borough Council decided that application should be made for 100 houses on each of the new estates to be allocated to the Borough Council. The Council have already made application for 200 houses on the County Council Estate at Hanwell; 200 on that at Wandsworth Road, Clapham, and 200 on the Pembury Road, Hackney, Estate.

SOUTHWARK. *Houses.* The Council has recommended the tender, £23,864, of Messrs. Henry Boot and Sons, Ltd., for the erection of dwellings on the Doddington Grove area.

ST. PANCRAS. *Schools.* The L.C.C. is to reconstruct the Lyulph Stanley and the Acland Central Schools.

WATFORD. *Houses.* Plans passed by the Corporation include the following: 120 houses on the Leavesden Green Estate by the borough engineer; 12 houses in Balmoral Road and 24 houses in Westfield Avenue for Messrs. Brightman and Pleasants; 23 houses in First Avenue for Messrs. A. and L. Wilkins; 50 houses in Tudor Drive for Messrs. W. J. Rice and Son.

WESTMINSTER. *Extensions.* Sir Aston Webb and Son are to erect a double-decker bridge at the Army and Navy Stores, Howick Place.

WOOD GREEN. Plans passed by the Corporation: Baptist Chapel, Eldon Road, for Mr. F. G. Faunch; four houses in Gordon Road, for Mr. F. F. Tomlin; 31 flats, site of 593-9 Lordship Lane, for Mr. D. E. Roberts; extensions, Printers' Almshouses, High Road, for Mr. G. Jury.

### SOUTHERN COUNTIES

BOURNEMOUTH. *Houses.* The Corporation has asked the borough engineer to prepare plans for the erection of 200 houses on the Kinson Estate.

SURREY. *Schools.* The Roman Catholic Community is to erect a school for 240 at Worcester Park. The Surrey Education Committee has accepted the following tenders: £15,182 of Messrs. Truett and Steel, Ltd., for the erection of a central school at Hackbridge; £15,258 of Messrs. Thorogood Bros. and Sons, for the erection of a central school at Molesey; £24,400 of Messrs. Thorogood Bros. and Sons, for the erection of junior and central schools at Chessington Moor, Surbiton; £13,287 of Messrs. H. H. and F. Roll, Ltd., for the erection of a central school at the Bushey Site, Merton.

WANTAGE. *Slum Clearance.* The Minister of Health has consented to the R.D.C. raising loans amounting to £17,890 for the purpose of erecting 52 houses in the district under the Slum Clearance Scheme.

### SOUTH-WESTERN COUNTIES

DEVON. *Houses.* Mr. R. Ching is to erect 66 houses in Jacks Lane, Bartow.

EXETER. *Social Hall.* The Corporation is to erect a social hall in Burnthouse Lane at a cost of £2,200.

SWINDON. *Houses.* The Corporation has passed the following plans: 112 houses on the Walcot Estate and four houses at Headlands Grove for Mr. A. J. Colbourne.

### EASTERN COUNTIES

COLCHESTER. *Houses.* The Corporation is to prepare plans for the erection of 20 houses on the Lexden Estate.

ESSEX. *County Hall Extensions.* The County Architect has reported that he would be definitely ready with tenders for the proposed third section of the County Hall before the General Purposes Committee meet in September. The Committee has been authorized to accept the lowest tender.

IPSWICH. *Houses.* The Corporation is to erect 68 houses on council estates by direct labour, at a cost of £29,666.

### MIDLAND COUNTIES

BIRMINGHAM. *Bank Premises.* New premises are to be erected on a site near Holland Road, Sutton Coldfield, for the Birmingham Municipal Bank. The architect is Mr. Harry W. Weedon, A.R.I.B.A., 84, Colmore Road, Birmingham.

DOWNHAM. *Library.* The B.C. are to proceed with the erection of a public library at Durham Hill. A tender of £57,890 by E. D. Winn & Co., to carry out the work, has been accepted.

MANSFIELD. *Houses, etc.* Plans passed by the Corporation: 46 houses in Big Barn Lane for Real Estates (Doncaster), Ltd.; four houses in Chesterfield Road, for Mr. B. Read; laundry extensions in Nottingham Road, for the Imperial Laundry Co.

### NORTHERN COUNTIES

LIVERPOOL. *School.* The Liverpool E.C. is recommended to accept the tender £50,233 of Messrs. Henry Boot and Sons, Ltd., for the erection of the New Holt High School for Boys at Wavertree.

NORTH BERWICK. *School.* The East Lothian C.C. are to carry out extensions to the North Berwick High School, at an estimated cost of £22,000. The County Architect is Mr. F. W. Hardie.

SHEFFIELD. *Hospital.* The Corporation is to erect two ward blocks by direct labour at the Lodge Moor Hospital, at a cost of £19,960. Mr. E. Griffiths has been appointed consulting engineer.

WALLASEY. *Hospital.* The Victoria Central Hospital Committee is to prepare plans for the erection of a nurses' home in Mill Lane, Wallasey.

### SCOTLAND

DUMBARTON. *Houses.* The County Council is to erect 172 houses at Renton.

LANARKSHIRE. *Houses.* The County Council Housing Committee has decided that work on 316 houses in 12 districts will start immediately the new Housing Bill to relieve overcrowding

(*Continued on page xlvi.*)

# RATES OF WAGES

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

| | | | I | II |
|---|---|---|---|---|
| | | | s. d. | s. d. |
| $A_1$ | ABERDARE .. | S. Wales & M. | 1 5 | 1 0½ |
| A | Aberdeen .. | Scotland | 1 6 | 1 1½ |
| $A_1$ | Abergavenny .. | S. Wales & M. | 1 5 | 1 0½ |
| A | Abingdon .. | S. Counties | 1 4 | 1 0 |
| A | Accrington .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Addlestone .. | S. Counties | 1 4 | 1 0 |
| A | Adlington .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Airdrie .. | Scotland | *1 5½ | 1 1½ |
| C | Aldeburgh .. | E. Counties | 1 1½ | 10½ |
| A | Altrincham .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Appleby .. | N.W. Counties | 1 2 | 10½ |
| A | Ashton-under Lyne | N.W. Counties | 1 5½ | 1 1½ |
| $B_1$ | Aylesbury .. | S. Counties | 1 3 | 11½ |
| $B_1$ | BANBURY .. | S. Counties | 1 3 | 11½ |
| $B_1$ | Bangor .. | N.W. Counties | 1 3 | 11½ |
| $A_2$ | Barnard Castle | N.E. Coast | 1 4 | 1 0 |
| A | Barnsley .. | Yorkshire | 1 5½ | 1 1½ |
| B | Barnstaple .. | S.W. Counties | 1 3½ | 11½ |
| A | Barrow .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Barry .. .. | S. Wales & M. | 1 5½ | 1 1½ |
| $B_1$ | Basingstoke .. | S.W. Counties | 1 3 | 11½ |
| $A_2$ | Bath .. .. | S.W. Counties | 1 4½ | 1 0½ |
| A | Batley .. | Yorkshire | 1 5½ | 1 1½ |
| $A_2$ | Bedford .. | E. Counties | 1 4½ | 1 0½ |
| $A_2$ | Berwick-on-Tweed | N.E. Coast | 1 4½ | 1 0½ |
| $A_2$ | Bewdley .. | Mid. Counties | 1 4½ | 1 0½ |
| B | Bicester .. | S. Counties | 1 2 | 10½ |
| | Birkenhead .. | N.W. Counties | *1 7 | 1 2½ |
| A | Birmingham .. | Mid Counties | 1 5½ | 1 1½ |
| $A_1$ | Bishop Auckland | N.E. Coast | 1 5 | 1 0½ |
| A | Blackburn .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Blackpool .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Blyth .. .. | N.E. Coast | 1 5½ | 1 1½ |
| $B_1$ | Bognor .. | S. Counties | 1 3 | 11½ |
| A | Bolton .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Boston .. .. | Mid. Counties | 1 4 | 1 0 |
| $A_2$ | Bournemouth .. | S. Counties | 1 4½ | 1 0½ |
| $B_2$ | Bovey Tracey | S.W. Counties | 1 2½ | 11 |
| A | Bradford .. | Yorkshire | 1 5½ | 1 1½ |
| $A_1$ | Brentwood .. | E. Counties | 1 5 | 1 0½ |
| A | Bridgend .. | S. Wales & M. | 1 5½ | 1 1½ |
| B | Bridgwater .. | S.W. Counties | 1 3½ | 11½ |
| $A_1$ | Bridlington .. | Yorkshire | 1 5 | 1 0½ |
| A | Brighouse .. | Yorkshire | 1 5½ | 1 1½ |
| $A_2$ | Brighton .. | S. Counties | 1 4½ | 1 0½ |
| A | Bristol .. .. | S.W. Counties | 1 5½ | 1 1½ |
| B | Brixham .. | S.W. Counties | 1 2½ | 11 |
| A | Bromsgrove .. | Mid. Counties | 1 4½ | 1 0½ |
| B | Bromyard .. | Mid. Counties | 1 2 | 10½ |
| A | Burnley .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Burslem .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Burton-on-Trent | Mid. Counties | 1 5½ | 1 1½ |
| A | Bury .. .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Buxton .. | N.W. Counties | 1 5 | 1 0½ |
| $A_1$ | CAMBRIDGE .. | E. Counties | 1 5 | 1 0½ |
| $B_1$ | Canterbury .. | S. Counties | 1 3 | 11½ |
| A | Cardiff .. .. | S. Wales & M. | 1 5½ | 1 1½ |
| A | Carlisle .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Carmarthen .. | S. Wales & M. | 1 3½ | 11½ |
| B | Carnarvon .. | N.W. Counties | 1 3½ | 11½ |
| A | Carnforth .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Castleford .. | Yorkshire | 1 5½ | 1 1½ |
| $A_2$ | Chatham .. | S. Counties | 1 4 | 1 0 |
| A | Chelmsford .. | E. Counties | 1 4 | 1 0 |
| A | Cheltenham .. | S.W. Counties | 1 4 | 1 0 |
| A | Chester .. .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Chesterfield .. | Mid. Counties | 1 5½ | 1 1½ |
| $B_1$ | Chichester .. | S. Counties | 1 3 | 11½ |
| A | Chorley .. .. | N.W. Counties | 1 5½ | 1 1½ |
| $B_1$ | Cirencester .. | S. Counties | 1 3 | 11½ |
| A | Clitheroe .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Clydebank .. | Scotland | 1 5½ | 1 1½ |
| A | Coalville .. | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Colchester .. | E. Counties | 1 4½ | 1 0½ |
| A | Colne .. .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_2$ | Colwyn Bay .. | N.W. Counties | 1 4½ | 1 0½ |
| $A_1$ | Consett .. | N.E. Coast | 1 5 | 1 0½ |
| $A_2$ | Conway .. | N.W. Counties | 1 4½ | 1 0½ |
| A | Coventry .. | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Crewe .. .. | N.W. Counties | 1 4½ | 1 0½ |
| A | Cumberland .. | N.W. Counties | 1 4 | 1 0 |
| A | DARLINGTON | N.E. Coast | 1 5½ | 1 1½ |
| A | Darwen .. | N.W. Counties | 1 5½ | 1 1½ |
| $B_1$ | Deal .. .. | S. Counties | 1 3 | 11½ |
| $A_2$ | Denbigh .. | N.W. Counties | 1 4 | 1 0 |
| A | Derby .. .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Dewsbury .. | Yorkshire | 1 5½ | 1 1½ |
| B | Didcot .. .. | S. Counties | 1 3½ | 11½ |
| A | Doncaster .. | Yorkshire | 1 5½ | 1 1½ |
| $B_1$ | Dorchester .. | S.W. Counties | 1 3 | 11½ |
| A | Driffield .. | Yorkshire | 1 4 | 1 0 |
| $A_2$ | Droitwich .. | Mid. Counties | 1 4½ | 1 0½ |
| A | Dudley .. | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Dumfries .. | Scotland | 1 5 | 1 0½ |
| A | Dundee .. | Scotland | 1 5½ | 1 1½ |
| A | Durham | N.E. Coast | 1 5½ | 1 1½ |
| $A_2$ | EASTBOURNE | S. Counties | 1 4½ | 1 0½ |
| $A_1$ | Ebbw Vale .. | S. Wales & M. | 1 5 | 1 0½ |
| A | Edinburgh .. | Scotland | 1 5½ | 1 1½ |
| $A_1$ | E. Glamorganshire, Rhondda Valley District | S. Wales & M. | 1 5 | 1 0½ |
| $A_2$ | Exeter .. .. | S.W. Counties | *1 4½ | 1 0½ |
| B | Exmouth .. | S.W. Counties | 1 3½ | 11½ |
| $A_2$ | FELIXSTOWE | E. Counties | 1 4 | 1 0 |
| A | Filey .. .. | Yorkshire | 1 4 | 1 0 |
| A | Fleetwood .. | N.W. Counties | 1 5½ | 1 1½ |
| $B_1$ | Folkestone .. | S. Counties | 1 3 | 11½ |
| A | Frodsham .. | N.W. Counties | 1 5½ | 1 1½ |
| $B_2$ | Frome .. .. | S.W. Counties | 1 2½ | 11 |
| A | GATESHEAD | N.E. Coast | 1 5½ | 1 1½ |
| B | Gillingham .. | S. Counties | 1 3½ | 11½ |
| A | Glasgow .. | Scotland | 1 6 | 1 1½ |
| $A_2$ | Gloucester .. | S.W.Counties | 1 4½ | 1 0½ |
| $A_2$ | Goole .. .. | Yorkshire | 1 4½ | 1 0½ |
| $A_2$ | Gosport .. | S. Counties | 1 4½ | 1 0½ |
| $A_2$ | Grantham .. | Mid. Counties | 1 4 | 1 0 |
| $A_1$ | Gravesend .. | S. Counties | 1 5 | 1 0½ |
| A | Greenock .. | Scotland | *1 5½ | 1 1½ |
| A | Grimsby .. | Yorkshire | 1 5½ | 1 1½ |
| B | Guildford .. | S. Counties | 1 3½ | 11½ |
| A | HALIFAX .. | Yorkshire | 1 5½ | 1 1½ |
| A | Hanley .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Harrogate .. | Yorkshire | 1 5½ | 1 1½ |
| A | Hartlepools .. | N.E. Coast | 1 5½ | 1 1½ |
| B | Harwich .. | E. Counties | 1 3½ | 11½ |
| $B_1$ | Hastings .. | S. Counties | 1 3 | 11½ |
| $A_2$ | Hatfield .. | S. Counties | 1 4½ | 1 0½ |
| B | Hereford .. | S.W. Counties | 1 3½ | 11½ |
| A | Hertford .. | E. Counties | 1 4½ | 1 0½ |
| A | Heysham .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Howden .. | N.E. Coast | 1 5½ | 1 1½ |
| A | Huddersfield .. | Yorkshire | 1 5½ | 1 1½ |
| A | Hull .. .. | Yorkshire | 1 5½ | 1 1½ |
| A | ILKLEY .. | Yorkshire | 1 5½ | 1 1½ |
| A | Immingham .. | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Ipswich .. | E. Counties | 1 4½ | 1 0½ |
| $B_2$ | Isle of Wight .. | S. Counties | 1 2½ | 11 |
| A | JARROW .. | N.E. Coast | 1 5½ | 1 1½ |
| A | KEIGHLEY .. | Yorkshire | 1 5½ | 1 1½ |
| $A_2$ | Kendal .. | N.W. Counties | 1 4 | 1 0 |
| $A_2$ | Keswick .. | N.W. Counties | 1 4 | 1 0 |
| $A_1$ | Kettering .. | Mid. Counties | 1 5 | 1 0½ |
| $A_2$ | Kidderminster | Mid. Counties | 1 4½ | 1 0½ |
| $B_1$ | King's Lynn .. | E. Counties | 1 3 | 11½ |
| A | LANCASTER .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_1$ | Leamington .. | Mid. Counties | 1 5 | 1 0½ |
| A | Leeds .. .. | Yorkshire | 1 5½ | 1 1½ |
| A | Leek .. .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Leicester .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Leigh .. .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Lewes .. .. | S. Counties | 1 2 | 10½ |
| $A_2$ | Lichfield .. | Mid. Counties | 1 4½ | 1 0½ |
| A | Lincoln .. | Mid. Counties | 1 5½ | 1 1½ |
| | Liverpool .. | N.W. Counties | *1 7 | 1 2½ |
| $A_2$ | Llandudno .. | N.W. Counties | 1 4½ | 1 0½ |
| A | Llanelly .. | S. Wales & M. | 1 5½ | 1 1½ |
| | London (12-miles radius) | | 1 7 | 1 2½ |
| | Do. (12-15 miles radius) | | 1 6½ | 1 2 |
| A | Long Eaton .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Loughborough | Mid. Counties | 1 5½ | 1 1½ |
| $A_1$ | Luton .. .. | E. Counties | 1 5 | 1 0½ |
| A | Lytham .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_1$ | MACCLESFIELD | N.W. Counties | 1 5 | 1 0½ |
| $A_2$ | Maidstone .. | S. Counties | 1 4 | 1 0 |
| $A_2$ | Malvern .. | Mid. Counties | 1 4 | 1 0 |
| A | Manchester .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Mansfield .. | Mid. Counties | 1 5½ | 1 1½ |
| $B_1$ | Margate .. | S. Counties | 1 3 | 11½ |
| A | Matlock .. | Mid. Counties | 1 4 | 1 0 |
| $A_1$ | Merthyr .. | S. Wales & M. | 1 5 | 1 0½ |
| A | Middlesbrough | N. E. Coast | 1 5½ | 1 1½ |
| $A_2$ | Middlewich .. | N. W. Counties | 1 4½ | 1 0½ |
| $B_2$ | Minehead .. | S.W. Counties | 1 2½ | 11 |
| $B_2$ | Monmouth & S. and E. Glamorganshire | S. Wales & M. | 1 2½ | 11 |
| A | Morecambe .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_2$ | NANTWICH .. | N.W. Counties | 1 4½ | 1 0½ |
| A | Neath .. .. | S. Wales & M. | 1 5½ | 1 1½ |
| A | Nelson .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Newcastle .. | N.E. Coast | 1 5½ | 1 1½ |
| A | Newport .. | S. Wales & M. | 1 5½ | 1 1½ |
| A | Normanton .. | Yorkshire | 1 5½ | 1 1½ |
| A | Northampton | Mid. Counties | 1 5½ | 1 1½ |
| A | North Staffs .. | Mid. Counties | 1 5½ | 1 1½ |
| A | North Shields .. | N.E. Coast | 1 5½ | 1 1½ |
| $A_1$ | Norwich .. | E. Counties | 1 5 | 1 0½ |
| A | Nottingham .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Nuneaton .. | Mid. Counties | 1 5½ | 1 1½ |
| A | OAKHAM .. | Mid. Counties | 1 4 | 1 0 |
| A | Oldham .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_2$ | Oswestry .. | N.W. Counties | 1 4 | 1 0 |
| $A_1$ | Oxford .. | S. Counties | 1 5 | 1 0½ |
| A | PAISLEY .. | Scotland | *1 5½ | 1 1½ |
| $B_2$ | Pembroke .. | S. Wales & M. | 1 2 | 10½ |
| A | Perth .. .. | Scotland | *1 5½ | 1 1½ |
| $A_1$ | Peterborough .. | E. Counties | 1 5 | 1 0½ |
| A | Plymouth .. | S.W. Counties | *1 5½ | 1 1½ |
| A | Pontefract .. | Yorkshire | 1 5½ | 1 1½ |
| $A_1$ | Pontypridd .. | S. Wales & M. | 1 5 | 1 0½ |
| $A_2$ | Portsmouth .. | S. Counties | 1 4½ | 1 0½ |
| A | Preston .. | N.W. Counties | 1 5½ | 1 1½ |
| A | QUEENSFERRY | N.W. Counties | 1 5½ | 1 1½ |
| $A_2$ | READING .. | S. Counties | 1 4½ | 1 0½ |
| B | Reigate .. | S. Counties | 1 3½ | 11½ |
| A | Retford .. | Mid. Counties | 1 4 | 1 0 |
| $A_1$ | Rhondda Valley | S. Wales & M. | 1 5 | 1 0½ |
| A | Ripon .. .. | Yorkshire | 1 4 | 1 0 |
| A | Rochdale .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Rochester .. | S. Counties | 1 3½ | 11½ |
| $A_1$ | Ruabon .. | N.W. Counties | 1 5 | 1 0½ |
| A | Rugby .. .. | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Rugeley .. | Mid. Counties | 1 4½ | 1 0½ |
| A | Runcorn .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_1$ | ST. ALBANS .. | E. Counties | 1 5 | 1 0½ |
| A | St. Helens .. | N.W. Counties | 1 5½ | 1 1½ |
| $B_2$ | Salisbury .. | S.W. Counties | 1 2½ | 11 |
| $A_1$ | Scarborough .. | Yorkshire | 1 5 | 1 0½ |
| A | Scunthorpe .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Sheffield .. | Yorkshire | 1 5½ | 1 1½ |
| A | Shipley .. | Yorkshire | 1 5½ | 1 1½ |
| $A_2$ | Shrewsbury .. | Mid. Counties | 1 4½ | 1 0½ |
| $A_2$ | Skipton .. | Yorkshire | 1 4½ | 1 0½ |
| $A_2$ | Slough .. | S. Counties | 1 4½ | 1 0½ |
| $A_1$ | Solihull .. | Mid. Counties | 1 5 | 1 0½ |
| $A_2$ | Southampton | S. Counties | 1 4½ | 1 0½ |
| $A_1$ | Southend-on-Sea | E. Counties | 1 5 | 1 0½ |
| A | Southport .. | N.W. Counties | 1 5½ | 1 1½ |
| A | S. Shields .. | N.E. Coast | 1 5½ | 1 1½ |
| $A_1$ | Stafford .. | Mid. Counties | 1 5 | 1 0½ |
| A | Stirling .. | Scotland | 1 6 | 1 1½ |
| A | Stockport .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Stockton-on-Tees | N.E. Coast | 1 5½ | 1 1½ |
| A | Stoke-on-Trent | Mid. Counties | 1 5½ | 1 1½ |
| B | Stroud .. .. | S.W. Counties | 1 3½ | 11½ |
| A | Sunderland .. | N.E. Coast | 1 5½ | 1 1½ |
| A | Swansea .. | S. Wales & M. | 1 5½ | 1 1½ |
| A | Swindon .. | S.W. Counties | 1 4 | 1 0 |
| $A_1$ | TAMWORTH .. | N.W. Counties | 1 5 | 1 0½ |
| B | Taunton .. | S.W. Counties | 1 3½ | 11½ |
| A | Teesside Dist. .. | N.E. Counties | 1 5½ | 1 1½ |
| $A_2$ | Teignmouth .. | S.W. Coast | 1 4½ | 1 0½ |
| A | Todmorden .. | Yorkshire | 1 5½ | 1 1½ |
| $A_1$ | Torquay .. | S.W. Counties | 1 5 | 1 0½ |
| $B_2$ | Truro .. .. | S.W. Counties | 1 2½ | 11 |
| $A_2$ | Tunbridge Wells | S. Counties | 1 4 | 1 0 |
| A | Tunstall .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Tyne District .. | N.E. Coast | 1 5½ | 1 1½ |
| A | WAKEFIELD | Yorkshire | 1 5½ | 1 1½ |
| A | Walsall .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Warrington .. | N.W. Counties | 1 5½ | 1 1½ |
| $A_1$ | Warwick .. | Mid. Counties | 1 5 | 1 0½ |
| $A_1$ | Wellingborough | Mid. Counties | 1 5 | 1 0½ |
| A | West Bromwich | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Weston-s.-Mare | W. Counties | 1 4½ | 1 0½ |
| $A_2$ | Whitby .. | Yorkshire | 1 4½ | 1 0½ |
| A | Widnes .. | N.W. Counties | 1 5½ | 1 1½ |
| A | Wigan .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Winchester .. | S. Counties | 1 3½ | 11½ |
| $A_2$ | Windsor .. | S. Counties | 1 4½ | 1 0½ |
| A | Wolverhampton | Mid. Counties | 1 5½ | 1 1½ |
| $A_2$ | Worcester .. | Mid. Counties | 1 4½ | 1 0½ |
| $A_2$ | Worksop .. | Yorkshire | 1 4 | 1 0 |
| $A_1$ | Wrexham .. | N.W. Counties | 1 5 | 1 0½ |
| A | Wycombe .. | S. Counties | 1 4 | 1 0 |
| B | YARMOUTH .. | E. Counties | 1 3½ | 11½ |
| B | Yeovil .. | S.W. Counties | 1 3½ | 11½ |
| A | York .. .. | Yorkshire | 1 5½ | 1 1½ |

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

The rates for every trade in any given area will be sent on request.

# CURRENT PRICES

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

## WAGES

| | | s. | d. |
|---|---|---|---|
| Bricklayer | per hour | 1 | 7½ |
| Carpenter | ,, | 1 | 7½ |
| Joiner | ,, | 1 | 7½ |
| Machinist | ,, | 1 | 8½ |
| Mason (Banker) | ,, | 1 | 7½ |
| ,, (Fixer) | ,, | 1 | 8½ |
| Plumber | ,, | 1 | 7½ |
| Painter | ,, | 1 | 6½ |
| Paperhanger | ,, | 1 | 6½ |
| Glazier | ,, | 1 | 7½ |
| Slater | ,, | 1 | 7½ |
| Scaffolder | ,, | 1 | 3½ |
| Timberman | ,, | 1 | 3½ |
| Navvy | ,, | 1 | 2½ |
| General Labourer | ,, | 1 | 2½ |
| Lorryman | ,, | 1 | 5½ |
| Crane Driver | ,, | 1 | 6½ |
| Watchman | per week | 2 | 10 | 0 |

## MATERIALS

### EXCAVATOR AND CONCRETOR

| | | £ | s. | d. |
|---|---|---|---|---|
| Grey Stone Lime | per ton | 2 | 2 | ● |
| Blue Lias Lime | ,, | 1 | 16 | 6 |
| Hydrated Lime | ,, | 3 | 0 | 9 |
| Portland Cement, in 4 ton lots (d/d site, including Paper Bags) | ,, | 2 | 0 | ● |
| Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags) | ,, | 2 | 6 | 0 |
| White Portland Cement, in 1-ton lots | ,, | 8 | 15 | 0 |
| Thames Ballast | per Y.C. | | 6 | 3 |
| ¾" Crushed Ballast | ,, | | 6 | 9 |
| Building Sand | ,, | | 7 | 3 |
| Washed Sand | ,, | | 8 | 3 |
| 8" Broken Brick | ,, | | 8 | 0 |
| ¾" ,, ,, | ,, | | 10 | 3 |
| Pan Breeze | ,, | | 6 | 6 |
| Coke Breeze | ,, | | 8 | 9 |

### DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

| | | 4" s. | 4" d. | 6" s. | 6" d. |
|---|---|---|---|---|---|
| Straight Pipes | per F.R. | 0 | 9 | 1 | 1 |
| Bends | each | 1 | 9 | 2 | 6 |
| Taper Bends | ,, | 3 | 6 | 5 | 3 |
| Rest Bends | ,, | 4 | 3 | 6 | 3 |
| Single Junctions | ,, | 3 | 6 | 5 | 3 |
| Double ,, | ,, | 4 | 9 | 6 | 6 |
| Straight channels | per F.R. | 1 | 6 | 2 | 6 |
| ¾" Channel bends | each | 2 | 9 | 4 | ● |
| Channel junctions | ,, | 4 | 6 | 6 | 6 |
| Channel tapers | ,, | 2 | 9 | 4 | ● |
| Yard gullies | ,, | 6 | 9 | 8 | 9 |
| Interceptors | ,, | 16 | 0 | 19 | 6 |
| IRON DRAINS: | | | | | |
| Iron drain pipe | per F.R. | 1 | 6 | 2 | 6 |
| Bends | each | 5 | 0 | 10 | 6 |
| Inspection bends | ,, | 9 | 0 | 15 | 0 |
| Single junctions | ,, | 8 | 9 | 18 | 0 |
| Double junctions | ,, | 13 | 6 | 30 | 0 |
| Lead Wool | lb. | | 6 | | — |
| Gaskin | ,, | | 5 | | — |

### BRICKLAYER

| | | £ | s. | d. |
|---|---|---|---|---|
| Flettons | per M. | 2 | 15 | 0 |
| Grooved do. | ,, | 2 | 17 | 0 |
| Phorpres bricks | ,, | 2 | 15 | 0 |
| ,, Cellular bricks | ,, | 2 | 15 | 0 |
| Stocks, 1st quality | ,, | 4 | 11 | 0 |
| ,, 2nd ,, | ,, | 4 | 2 | 6 |
| Blue Bricks, Pressed | ,, | 8 | 17 | 6 |
| ,, Wirecuts | ,, | 7 | 17 | 6 |
| ,, Brindles | ,, | 7 | 0 | 0 |
| ,, Bullnose | ,, | 9 | 0 | 0 |
| Red Sand-faced Facings | ,, | 6 | 18 | 6 |
| Red Rubbers for Arches | ,, | 12 | 0 | ● |
| Multicoloured Facings | ,, | 7 | 10 | 0 |
| Luton Facings | ,, | 7 | 10 | 0 |
| Phorpres White Facings | ,, | 3 | 17 | 3 |
| ,, Rustic Facings | ,, | 3 | 12 | 3 |
| Midhurst White Facings | ,, | 5 | 0 | 0 |
| Glazed Bricks, Ivory, White or Salt glazed, 1st quality: | | | | |
| Stretchers | ,, | 21 | 0 | 0 |
| Headers | ,, | 20 | 10 | 0 |
| Bullnose | ,, | 27 | 10 | 0 |
| Double Stretchers | ,, | 29 | 10 | 0 |
| Double Headers | ,, | 26 | 10 | 0 |
| Glazed Second Quality, *Less* | ,, | 1 | 0 | 0 |
| ,, Buffs and Creams, *Add* | ,, | 2 | 0 | 0 |
| ,, Other Colours | ,, | 5 | 10 | 0 |
| 2" Breeze Partition Blocks | per Y.S. | | 1 | 7 |
| 2½" ,, ,, ,, | ,, | | 1 | 10 |
| 3" ,, ,, ,, | ,, | | 2 | 1 |
| 4" ,, ,, ,, | ,, | | 2 | 6 |

### MASON

The following d/d F.O.R. at Nine Elms:

| | | s. | d. |
|---|---|---|---|
| Portland stone, Whitbed | F.C. | 4 | 4½ |
| ,, ,, Basebed | ,, | 4 | 7½ |
| Bath stone | ,, | 2 | 10 |
| York stone | ,, | 6 | 6 |
| ,, ,, Sawn templates | ,, | 7 | 6 |
| ,, ,, Paving, 2" | F.S. | 1 | 8 |
| ,, 3" | ,, | 2 | 6 |

### SLATER AND TILER

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

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

### CARPENTER AND JOINER

| | | s. | d. |
|---|---|---|---|
| Good carcassing timber | F.C. | 2 | 2 |
| Birch | as 1" F.S. | | 9 |
| Deal, Joiner's | ,, ,, | | 5 |
| ,, ,, 2nds | ,, ,, | | 4 |
| Mahogany, Honduras | ,, ,, | 1 | 3 |
| ,, African | ,, ,, | 1 | 1 |
| ,, Cuban | ,, ,, | 2 | 6 |
| Oak, plain American | ,, ,, | 1 | 0 |
| ,, Figured ,, | ,, ,, | 1 | 3 |
| ,, plain Japanese | ,, ,, | 1 | 2 |
| ,, Figured ,, | ,, ,, | 1 | 5 |
| ,, Austrian wainscot | ,, ,, | 1 | 6 |
| ,, English | ,, ,, | 1 | 11 |
| Pine, Yellow | ,, ,, | 1 | 0 |
| ,, Oregon | ,, ,, | | 4 |
| ,, British Columbian | ,, ,, | | 4 |
| Teak, Moulmein | ,, ,, | 1 | 3 |
| ,, Burma | ,, ,, | 1 | 2 |
| Walnut, American | ,, ,, | 2 | 3 |
| ,, French | ,, ,, | 2 | 3 |
| Whitewood, American | ,, ,, | 1 | 1 |
| Deal floorings, ¾" | Sq. | 18 | 6 |
| ,, 1" | ,, | 1 | 1 | 6 |
| ,, 1¼" | ,, | 1 | 2 | 0 |
| ,, 1½" | ,, | 1 | 5 | 0 |
| ,, 1¾" | ,, | 1 | 10 | 0 |
| Deal matchings ¾" | ,, | | 14 | 0 |
| ,, 1" | ,, | | 15 | 6 |
| Rough boarding ¾" | ,, | 1 | 4 | 0 |
| ,, 1" | ,, | | 16 | 0 |
| ,, 1¼" | ,, | | 18 | 0 |
| ,, 1½" | ,, | 1 | 6 | 0 |

Plywood, per ft. sup.

| Thickness | ¼" d. | ⅜" d. | ½" d. | ¾" d. |
|---|---|---|---|---|
| Qualities | AA. A. B. | AA. A. B. | AA. A. B. | AA. A. B. |
| Birch | 4 3 2 | 5 4 3 | 7½ 6 4½ | 8½ 7 6 |
| Alder | 3½ 3 2 | 5 4 3 | 6½ 5½ 4½ | 8 7 6 |
| Gaboon Mahogany | 4 3 3 | 6½ 5½ 4½ | 9½ 7½ – | 1/0½ 10 – |
| Figured Oak 1 side | 8½ 7 – | 10 8 – | 11½ – – | 1/6 – – |
| Plain Oak 1 side | 6½ 6 – | 7½ 7 – | 9½ – – | 1/– – – |
| Oregon Pine | 5 4 – | 5½ 5 – | 6 – – | – – – |

| | | d. |
|---|---|---|
| Scotch glue | lb. | 8 |

### SMITH AND FOUNDER

Tubes and Fittings:

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

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

Discounts:

TUBES.

| | Per cent. | | Per cent. |
|---|---|---|---|
| Gas | 65 | Galvanized gas | 52½ |
| Water | 61½ | ,, water | 47½ |
| Steam | 57½ | ,, steam | 42½ |

FITTINGS.

| | | | |
|---|---|---|---|
| Gas | 57½ | Galvanized gas | 47½ |
| Water | 52½ | ,, water | 42½ |
| Steam | 47½ | ,, steam | 37½ |

### SMITH AND FOUNDER—*continued.*

| | | s. | d. |
|---|---|---|---|
| Rolled steel joists cut to length | cwt. | 12 | 9 |
| Mild steel reinforcing rods, ⅜" | ,, | 9 | 6 |
| ,, ,, ½" | ,, | 9 | 3 |
| ,, ,, ⅝" | ,, | 9 | 0 |
| ,, ,, ¾" | ,, | 8 | 6 |
| ,, ,, ⅞" | ,, | 8 | 6 |
| ,, ,, 1" | ,, | 8 | 6 |
| ,, ,, 1¼" | ,, | 8 | 6 |
| ,, ,, 1½" | ,, | 8 | 6 |

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

### PLUMBER

| | | s. | d. |
|---|---|---|---|
| Lead, milled sheets | cwt. | 21 | 0 |
| ,, drawn pipes | ,, | 20 | 6 |
| ,, soil pipe | ,, | 21 | 0 |
| ,, scrap | ,, | 13 | 0 |
| Solder, plumbers' | lb. | | 9½ |
| ,, fine do. | ,, | 1 | 0 |
| Copper, sheet | ,, | | 8½ |
| ,, tubes | ,, | | 11 |

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

### PLASTERER

| | | £ | s. | d. |
|---|---|---|---|---|
| Lime, chalk | per ton | 2 | 5 | 0 |
| Plaster, coarse | ,, | 2 | 10 | 0 |
| ,, fine | ,, | 4 | 15 | 0 |
| Hydrated lime | ,, | 3 | 0 | 9 |
| Sirapite | ,, | 3 | 6 | ● |
| Keene's cement | ,, | 5 | 0 | ● |
| Gothite Plaster | ,, | 3 | 6 | ● |
| Pioneer Plaster | ,, | 3 | 3 | ● |
| Thistle plaster | ,, | 3 | 6 | 0 |
| Sand, washed | Y.C. | | 11 | 6 |
| Hair | lb. | | | 6 |
| Laths, sawn | bundle | | 2 | 4 |
| ,, rent | ,, | | 3 | 9 |
| Lath nails | lb. | | | 3 |

### GLAZIER

| | s. | d. |
|---|---|---|
| Sheet glass, 21 oz., squares n/e 2 ft. | s. F.S. | 2½ |
| ,, ,, 26 oz. ,, ,, | ,, | 3 |
| Flemish, Arctic, Figures (white)* | ,, | 7 |
| Blazoned glasses | ,, | 2 6 |
| Reeded; Cross Reeded | ,, | 11 |
| Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite | ,, | 6 |
| Crown sheet glass (n/e 12 in. x 10 in.) | ,, | 2 0 |
| Flashed opals (white and coloured) | ,, 1 ● and 2 | ● |
| ¼" rough cast; rolled plate | ,, | 5½ |
| ¼" wired cast; wired rolled | ,, | 9½ |
| ¼" Georgian wired cast | ,, | 11 |

| ¼" Polished plate, n/e 1 ft. | | †10 to ‡1 | 1 |
|---|---|---|---|
| ,, ,, 2 | ,, | †1 2 ,, ‡1 | 4 |
| ,, ,, 4 | ,, | †2 3 ,, ‡2 | 6 |
| ,, ,, 8 | ,, | †2 9 ,, ‡3 | 2 |
| ,, ,, 20 | ,, | †3 7 ,, ‡4 | 2 |
| ,, ,, 45 | ,, | †3 11 ,, ‡4 | 7 |
| ,, ,, 100 | ,, | †5 0 ,, ‡5 | 7 |
| Vita glass, sheet, n/e 1 ft. | ,, | | 1 0 |
| ,, ,, ,, 2 ft. | ,, | | 1 3 |
| ,, ,, ,, over 2 ft. | ,, | | 1 9 |
| ,, ,, plate, n/e 1 ft. | ,, | | 1 6 |
| ,, ,, ,, 2 ft. | ,, | | 3 ● |
| ,, ,, ,, 5 ft. | ,, | | 4 ● |
| ,, ,, ,, 7 ft. | ,, | | 5 ● |
| ,, ,, ,, 15 ft. | ,, | | 6 0 |
| ,, ,, ,, over 15 ft. | ,, | | 7 6 |
| "Calorex" sheet 21 oz., and 32 oz. | ,, 2 6 and | 3 | 6 |
| ,, rough cast ¼" and ½" | ,, | 8½ ,, 1 | ● |
| Putty, linseed oil | lb. | | 3 |

* *Colours, 1d. F.S. extra.*

† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

### PAINTER

| | | £ | s. | d. |
|---|---|---|---|---|
| White lead in 1 cwt. casks | cwt. | 2 | 8 | 6 |
| Linseed oil | gall. | | 2 | 3 |
| Boiled oil | ,, | | 2 | 9 |
| Turpentine | ,, | | 4 | 1½ |
| Patent knotting | ,, | | 14 | ● |
| Distemper, washable | cwt. | 2 | 6 | 0 |
| ,, ordinary | ,, | 2 | 0 | ● |
| Whitening | ,, | | 4 | ● |
| Size, double | firkin | | 3 | ● |
| Copal varnish | gall. | | 13 | ● |
| Flat varnish | ,, | | 14 | ● |
| Outside varnish | ,, | | 16 | 0 |
| White enamel | ,, | 1 | 15 | ● |
| Ready mixed paint | ,, | | 13 | 6 |
| Brunswick black | ,, | | 7 | 6 |

# CURRENT PRICES FOR MEASURED WORK

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

### EXCAVATOR AND CONCRETOR

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

### DRAINLAYER

| | | 4" s. d. | 6" s. d. |
|---|---|---|---|
| Stoneware drains, laid complete (digging and concrete to be priced separately) | F.R. | 1 6 | 2 3 |
| Extra, only for bends | Each | 2 8 | 3 9 |
| " junctions | " | 3 9 | 4 6 |
| Gullies and gratings | " | 16 6 | 18 0 |
| Cast iron drains, and laying and jointing | F.R. | 4 9 | 6 9 |
| Extra, only for bends | Each | 10 6 | 15 6 |

### BRICKLAYER

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

### ASPHALTER

| | | s. d. |
|---|---|---|
| ½" Horizontal dampcourse | Y.S. | 4 6 |
| ½" Vertical dampcourse | " | 6 9 |
| ½" paving or flat | " | 4 0 |
| 1" paving or flat | " | 5 6 |
| 1" × 6" skirting | F.R. | 1 0 |
| Angle fillet | " | 2 |
| Rounded angle | " | 2 |
| Cesspools | Each | 5 0 |

### MASON

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

### SLATER AND TILER

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

### CARPENTER AND JOINER

| | | £ s. d. |
|---|---|---|
| Flat boarded centering to concrete floors, including all strutting | Sqr. | 2 2 6 |
| Shuttering to sides and soffits of beams | F.S. | 7 |
| " to stanchions | " | 7 |
| " to staircases | " | 1 6 |
| Fir and fixing in wall plates, lintols, etc. | F.C. | 3 9 |
| Fir framed in floors | " | 4 6 |
| " " roofs | " | 6 6 |
| " " trusses | " | 7 6 |
| " " partitions | " | 8 6 |
| ¾" deal sawn boarding and fixing to joists | Sqr. | 1 14 6 |
| 1" " " " " | " | 1 17 6 |
| 1½" " " " " | " | 2 3 0 |
| 1" × 2" fir battening for Countess slating | " | 9 0 |
| Do. for 4" gauge tiling | " | 12 0 |
| Stout feather-edged tilting fillet | F.R. | 4½ |
| Patent inodorous felt, 1 ply | Y.S. | 2 3 |
| " " " 2 " | " | 2 9 |
| " " " 3 " | " | 3 3 |
| Stout herringbone strutting to 9" joists | F.R. | 10½ |
| 1" deal gutter boards and bearers | F.S. | 1 2 |
| 1½" " " " " | " | 1 6 |
| 2" deal wrought rounded roll | F.R. | 8 |
| 1" deal grooved and tongued flooring, laid complete, including cleaning off | Sqr. | 2 1 0 |
| 1¼" do. | " | 2 10 0 |
| 1½" do. | " | 2 17 6 |
| 1" deal moulded skirting, fixed on, and including grounds plugged to wall | F.S. | 1 6 |
| 1¼" do. | " | 1 9 |

### CARPENTER AND JOINER—*continued*

| | | s. d. |
|---|---|---|
| 1¾" deal moulded sashes of average size | F.S. | 1 9½ |
| 2" " " " " | " | 1 11½ |
| 1¼" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass faced axle pulleys, etc., fixed complete | | 3 7 |
| 2" " " " | " | 3 10 |
| Extra only for moulded horns | Each | 6 |
| 1¼" deal four-panel square, both sides, door | F.S. | 2 0 |
| 2" " " " | " | 2 8 |
| 1¼" " but moulded both sides | " | 2 4 |
| 2" " " " | " | 3 0 |
| 4" × 3" deal, rebated and moulded frames | F.R. | 1 9 |
| 4¼" × 3¼" " " " | " | 1 4 |
| 1¼" deal tongued and moulded window board, on and including deal bearers | F.S. | 1 9 |
| 1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages | " | 2 6 |
| 1¼" deal moulded wall strings | " | 2 1 |
| 1¼" " outer strings | " | 2 4 |
| Ends of treads and risers housed to string | Each | 1 9 |
| 3" × 2" deal moulded handrail | F.R. | 1 3 |
| 1" × 1" deal balusters and housing each end | Each | 2 0 |
| 1¼" × 1¼" " " " | " | 2 9 |
| 3" × 3" deal wrought framed newels | F.R. | 1 3 |
| Extra only for newel caps | Each | 6 0 |
| Do., pendants | " | 5 0 |

### SMITH AND FOUNDER

| | | £ s. d. |
|---|---|---|
| Rolled steel joists, cut to length, and hoisting and fixing in position | Per cwt. | 16 6 |
| Riveted plate or compound girders, and hoisting and fixing in position | " | 1 0 6 |
| Do., stanchions with riveted caps and bases and do. | " | 19 0 |
| Mild steel bar reinforcement, ½" and up, bent and fixed complete | " | 17 6 |
| Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. | F.S. | 11 |
| Wrot-iron caulked and cambered chimney bars | Per cwt. | 1 10 0 |

### PLUMBER

| | | £ s. d. |
|---|---|---|
| Milled lead and labour in flats | cwt. | 1 14 6 |
| Do. in flashings | " | 1 18 0 |
| Do. in covering to turrets | " | 2 5 6 |
| Do. in soakers | " | 1 10 0 |
| Labour to welted edge | F.R. | 3½ |
| Open copper nailing | " | 3 |
| Close " " | " | 4 |

| | | ½" s. d. | ¾" s. d. | 1" s. d. | 1½" s. d. | 2" s. d. | 4" s. d. |
|---|---|---|---|---|---|---|---|
| Lead service pipe and fixing with pipe hooks | F.R. | 10 | 1 0 | 1 3 | 2 0 | 2 10 | — |
| Do. soil pipe and fixing with cast lead tacks | | — | — | — | — | — | 5 6 |
| Extra, only to bends | Each | — | — | — | — | 2 0 | 6 9 |
| Do. to stop ends | " | 6½ | 8 | 9 | 11 | 1 0 | — |
| Boiler screws and unions | " | 3 3 | 3 9 | 5 0 | 8 0 | — | — |
| Lead traps | " | — | — | — | 6 3 | 8 9 | — |
| Screw down bib valves | " | 6 9 | 9 6 | 11 0 | — | — | — |
| Do. stop cocks | " | 7 0 | 9 6 | 12 6 | — | — | — |

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

### PLASTERER AND TILING

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

### GLAZIER

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

### PAINTER

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

*Building News—(Continued from page 105)*

is approved by Parliament. Plans for the erection of an additional 1,000 houses under the Bill are also being considered.

MOTHERWELL. *Factory.* Messrs. A. G. Barr & Co., Ltd., propose to erect a factory on a site in Stewarton Street.

OBAN. *Houses.* Plans for the erection of 18 blocks, comprising 70 houses of three apartments were passed at Dean of Guild Court.

STRANRAER. *Houses.* Stranraer is to build 154 municipal houses, to cost £37,000.

### WALES

SWANSEA. The Corporation has purchased 20 acres at Gelli Grafog for a rehousing sheme.

SWANSEA. *Hospital.* The Corporation has sold a site on the Singleton estate to the Welsh National Association for the erection of a tuberculosis hospital.

## BUILDING CONTRACTS OPEN

*Unless the contrary is expressly stated, all deposits required for bills of quantities, etc., are returned on receipt of bona-fide tenders. The words "Fair Wages Clause," inserted in certain paragraphs, signify that persons tendering must conform to a fair wages clause in the contract, which requires them to pay the rates of wages current in the district. Application for plans and particulars should be made to the address given at the end of each entry.*—ED., *A.J.*

ESSEX: SCHOOLS

*July* 18.—Erection of (1) Woodford proposed Council senior school and (2) enlargement of Romford-Havirney Road Council School. Forms of tender for (1) from E. C. Edgar, Education Office, Loughton; (2) from P. B. Tinker, 90 Eastern Road, Romford. Tenders to J. Stuart, county architect, County Hall, Chelmsford. Deposit of £2 2s. in each case to H. W. Collis, county accountant, County Hall, Chelmsford.

LONDON (WILLESDEN): ALTERATIONS

*July* 18.—Alterations and additions to the Salusbury Road Council School, for the T.C. F. Wilkinson, Town Hall, Dyne Road, Kilburn, N.W.6. Deposit £10 10s.

NEATH: HOSPITAL

*July* 18.—Erection of Isolation Hospital at Tonna-Uchat, Neath. Forms of tender from H. A. Clarke, Gwyn Hall, Neath. Tenders, with priced-out bill of quantities, to A. E. I. Curtis and T. D. Windsor Williams, joint clerks, 28 Queen Street, Neath. Deposit £5 5s.

BIRKENHEAD: LIBRARY

*July* 20.—Erection of a new branch library, Upton. Forms of tender from B. Robinson, borough engineer and surveyor, Town Hall, Birkenhead. Tenders to E. W. Tame, town clerk, Town Hall, Birkenhead. Deposit £2 2s.

DEVIZES: HOUSES

*July* 20.—Erection of 20 houses on the 40 acre site. A. W. Jakeway, Borough Surveyor, Town Hall, Devizes. Deposit £2 2s.

DORCHESTER: LIBRARY

*July* 22.—Erection of library and clinics at Colliton Park. B. C. Roè, Deputy Clerk, County Offices, Dorchester. Deposit £2 2s.

EALING: HOUSES

*July* 22.—Erection of 24 houses in connection with the Greenford Road housing scheme. Forms of tender from F. J. Forty, Borough Engineer, Town Hall, Ealing, W.5. Tenders to R. H. Wanklyn, Town Clerk, Town Hall, Ealing, W.5. Deposit £1.

BRISTOL: GUILDHALL

*July* 23.—Reconstruction of the Civil Court and adjoining rooms at the Guildhall, Small Street, Bristol. Forms of tender from Messrs. Bernard and Son, 26 Orchard Street, Bristol, 1. Tenders to Josiah Green, Town Clerk, The Council House, Bristol. Deposit, £5 5s.

BOROUGH OF BEDFORD

*July* 24.—Repairs and maintenance. Works of repair and maintenance to houses on the Corporation Housing Estates, in accordance with instructions issued from time to time by the Housing Manager, and for a period of 12 months. Specification, schedule of prices and general conditions of contract may be obtained on deposit of £1 (returnable on receipt of a *bona fide* tender which has not been withdrawn before a decision has been arrived at). Application to Housing Manager, Town Hall, Bedford. Tenders to The Chairman, Housing Management Committee, endorsed "Housing Estate Repairs."

LEEDS: BATHING POOL

*July* 24.—Alterations and improvements to Roundhay Park Bathing Pool. Forms of tender, Fred Broadbent, F.R.I.B.A., Civic Hall, Leeds 1. Deposit £1 1s., cheques payable to Leeds Corporation. Tenders to the Town Clerk (Room No. 57), Civic Hall, Leeds 1.

SUDBURY: SCHOOL

*July* 24.—Erection of a High school for 200 girls at Sudbury, Suffolk, for the West Suffolk County E.C. Forms of tender from County Architect, Westgate Street, Bury St. Edmunds, not later than July 9. Deposits should be made payable to the West Suffolk County Education Committee. Tenders to F. R. Hughes, county education secretary, Shire Hall, Bury St. Edmunds.

MANCHESTER: SCHOOL

*July* 25.—Erection of Sharston Municipal Senior Schools, Wythenshawe, Manchester. Form of tender from Surveyor's Department, Education Offices, Deansgate, Manchester. Cheques to be made payable to the Accountant, Education Offices, Deansgate, Manchester. Tenders to the Education Offices. Deposit £2 2s.

LEEDS: EMPLOYMENT EXCHANGE

*July* 26.—Erection of an Employment Exchange. Drawings, specification, conditions and form of contract may be seen on application at H.M. Office of Works, Britannia House, Wellington Street, Leeds. Deposit £1 (cheques payable The Commissioners, H.M. Office of Works). Bills of quantities and forms of tender from Room 65D, Third Floor, H.M. Office of Works, London, S.W.1.

RYDE: WORKING-CLASS HOUSES

*July* 26.—Erection of 26 houses at Alfred Street, Ryde. Drawings, specifications and form of tender from the Borough Engineer and Surveyor, 5, Lind Street, Ryde, I.W. Tenders in plain envelopes to Thomas J. Fawdry, Town Clerk, Town Hall, Ryde, I.W., endorsed "Housing."

ECCLES: SCHOOL

*July* 27.—Erection and completion of a proposed Senior Elementary School for 720 children at Winton, Eccles, for the Eccles Education Committee. Forms of tender from architects, Messrs. Biram and Fletcher, 17 George Street, St. Helens, Lancs. Tenders to Arthur V. Ridgway, Town Hall, Eccles. Deposit £2.

BOROUGH OF BURY: HOUSES

*July* 29.—Erection and completion of 150 houses at Bridge Farm Estate, Brandlesholme Road. Particulars John Chadwick, A.M.I.C.E., Borough Engineer and Surveyor, Bank Street, Bury, on deposit of £5. Tenders, endorsed "Brandlesholme (No. 1) Housing Scheme," to Richard Moore, Town Clerk, Municipal Offices, Bank Street, Bury.

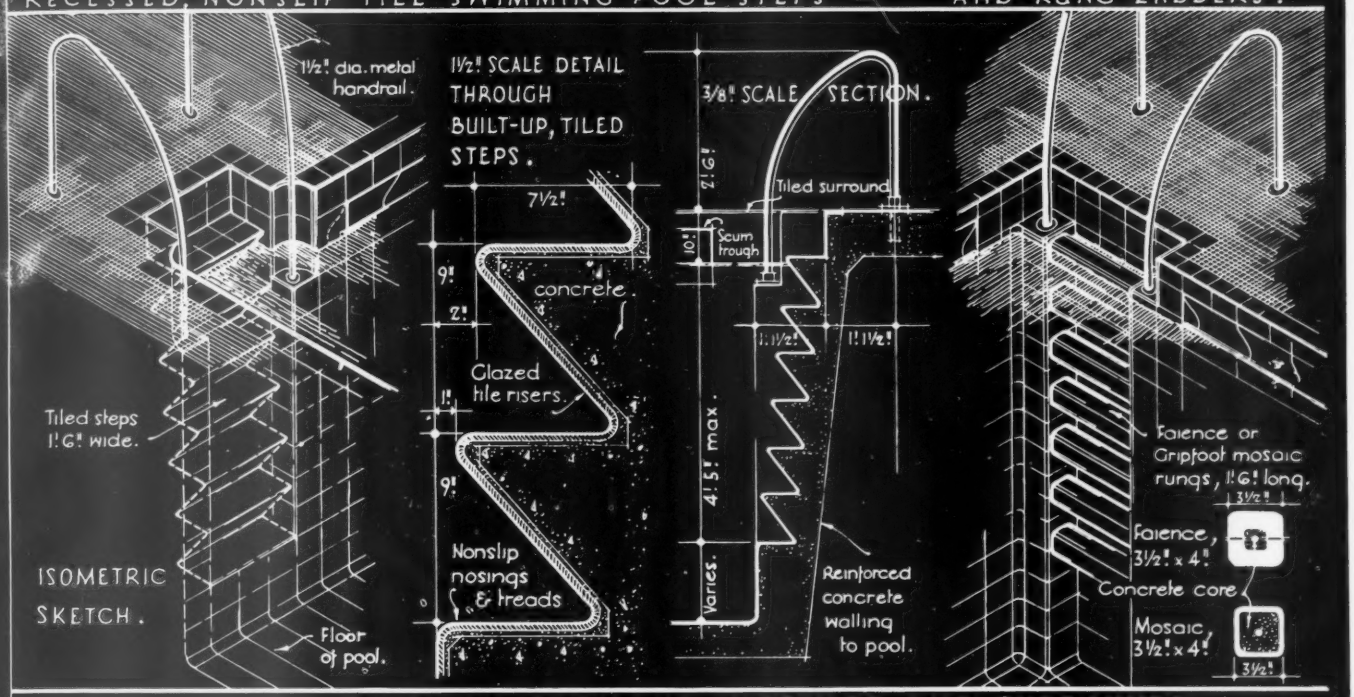
GLASGOW: HOUSING

*August* 1.—96 houses at Denmark Street. Tenders for various sub-contractors. Schedules and forms of tender from Room 36, Town Clerk's Office, City Chambers, Glasgow.

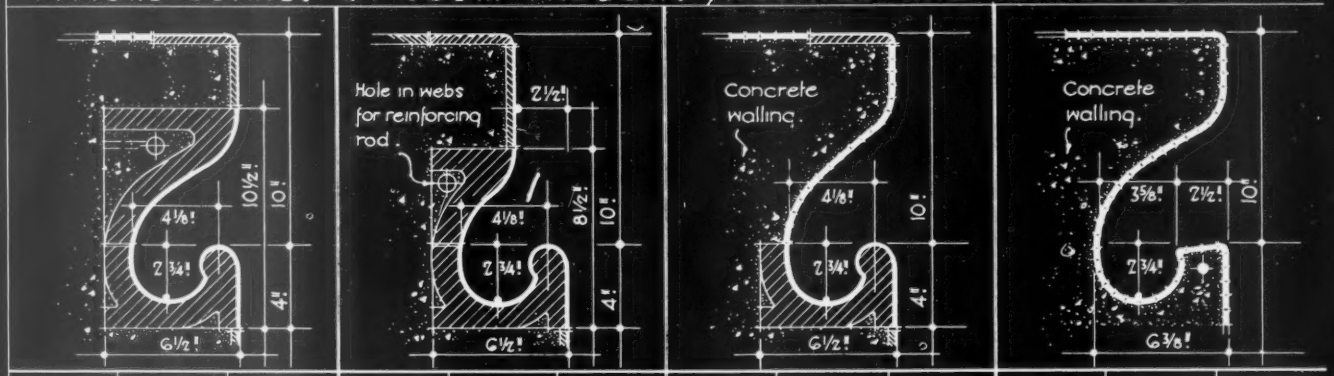
66.

# THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## RECESSED, NONSLIP TILE SWIMMING POOL STEPS & RUNG LADDERS.

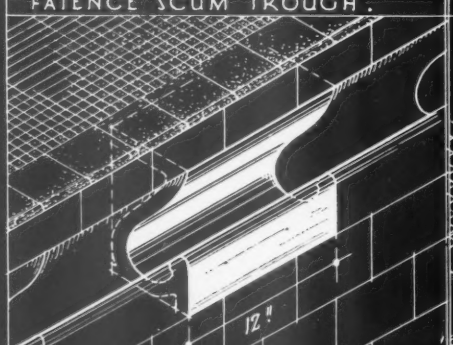



## TYPICAL DETAILS OF SCUM-TROUGHS, NOSINGS AND SURROUNDS:



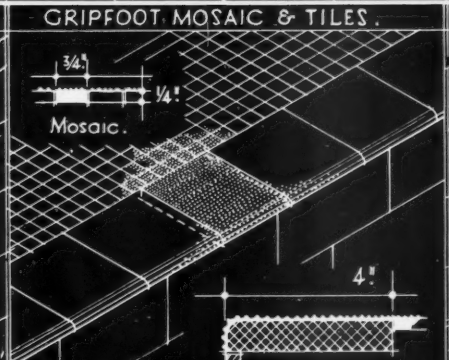

| TROUGH | NOSING | SURROUND | TROUGH | NOSING | SURROUND | TROUGH | NOSING | SURROUND | TROUGH | NOSING | SURROUND |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Faience. | Gripfoot tile. | Gripfoot mosaic. | Faience. | Ribbed step nosing. | Ribbed tiles. | Faience & mosaic. | Gripfoot tile. | Gripfoot mosaic. | Mosaic. | Gripfoot mosaic. | Gripfoot mosaic. |

### FAIENCE SCUM TROUGH.



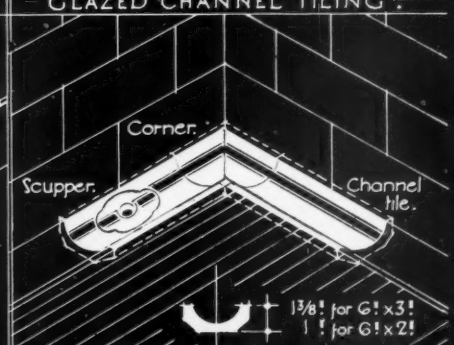

The necessary corners and scuppers are also manufactured.

### GRIPFOOT MOSAIC & TILES.




The surface of Gripfoot mosaic & tiles is covered with raised points about the size of pinheads, on which, wet or dry, it is practically impossible to slip.

### GLAZED CHANNEL TILING.




| TILE PIECE. | SIZE & CATALOGUE No |
|---|---|
| Scupper | 6"x3", 3355 D. 6"x2", 3958 D. |
| Corner | 3"x3", 3355 E. 2"x2", 3958 E. |
| Channel | 6"x3", 3355. 6"x2", 3958. |

*Information from Richards Tiles Ltd.*

INFORMATION SHEET: TILED SWIMMING POOLS No. 2.

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

Supplement to THE ARCHITECTS' JOURNAL for July 18, 1935

THE ARCHITECTS'. JOURNAL
LIBRARY OF PLANNED INFORMATION

# INFORMATION SHEET

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# SWIMMING POOL TILE AND FAIENCE FITTINGS

Types of Product : Steps, Ladders, Scum Troughs, and Channels

Pool Ladders.

Pool ladders may be divided into two classes, those which project into the pool and those which are recessed into the pool wall. The latter, as causing no obstruction to swimmers, are clearly to be preferred. The built-up tiled ladder illustrated has non-slip treads of Gripfoot tiles or mosaic, is comfortable to the foot and easy of ascent, and is so constructed that there is no possibility of a foot being trapped or an ankle sprained. An improved design of the rung type of ladder, the rungs of faience or of pre-cast mosaic, is also shown.

Scum Troughs.

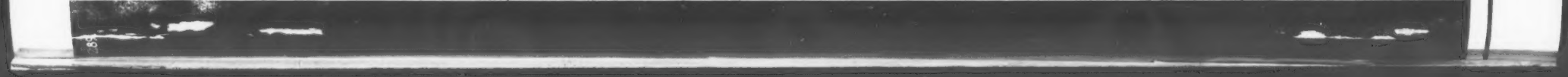
The scum trough should preferably be of faience, though troughs may also be built up of mosaic or of glazed tiles. The cross section should be such that the trough has ample water capacity, and that the lip affords a good grip for swimmers and tends to prevent scum water from splashing back into the pool. The faience trough shown in the illustrations (British Registered Design No. 789729) is specially constructed to fulfil these conditions. The position recommended for the surround nosing is that vertically over the trough face at water level, as in the 1st (and 3rd and 4th) illustrations, as a set-back or an overhanging nosing would alter the length of a race started from it—a vital matter in attempts on records.

Channel Tiling.

The pool surround should have a slope of 1 in. in 10 ft. away from the pool, so that water falling on it may drain, not into the pool, but into a channel close to the surround's outer edge. Suitable channels with the necessary corners and scuppers are illustrated.

For Tiling of Swimming Pools, see Information Sheet No. 231.

Name of Manufacturers : Messrs. Richards Tiles, Ltd.
Address : Tunstall, Stoke-on-Trent
Telephone : Hanley 7215-8
London Office : 25 Victoria Street
Telephone : Victoria 9128
Glasgow Office : 53 Bothwell Street, Glasgow, C.2
Telephone : Central 1768



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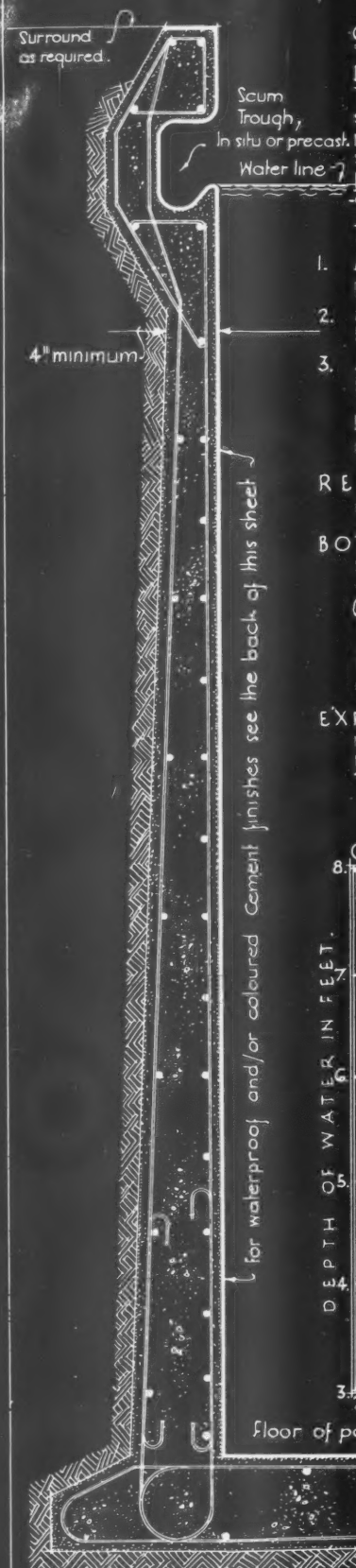



## CONSTRUCTIONAL DATA :

### DESIGN :

The "L" type wall is usually the most adaptable & economical construction & should be designed to resist earth pressure when the Pool is empty & water pressure when the Pool is full. Provision of a small heel increases stability, due to the weight of earth above, and at the same time provides a foundation for back shuttering. The toe of the wall is formed by thickening the bottom slab and providing the necessary extra reinforcement.

The wall may be designed for water pressure by one of the following methods:

1. As a cantilever wall for full water pressure, ignoring the resistance of earth pressure. (The graph below is based on this assumption.)
2. As a cantilever wall allowing a reduction of the water pressure equivalent to one half the calculated earth pressure.
3. As a cantilever wall allowing a reduction of the water pressure equivalent to the calculated earth pressure.

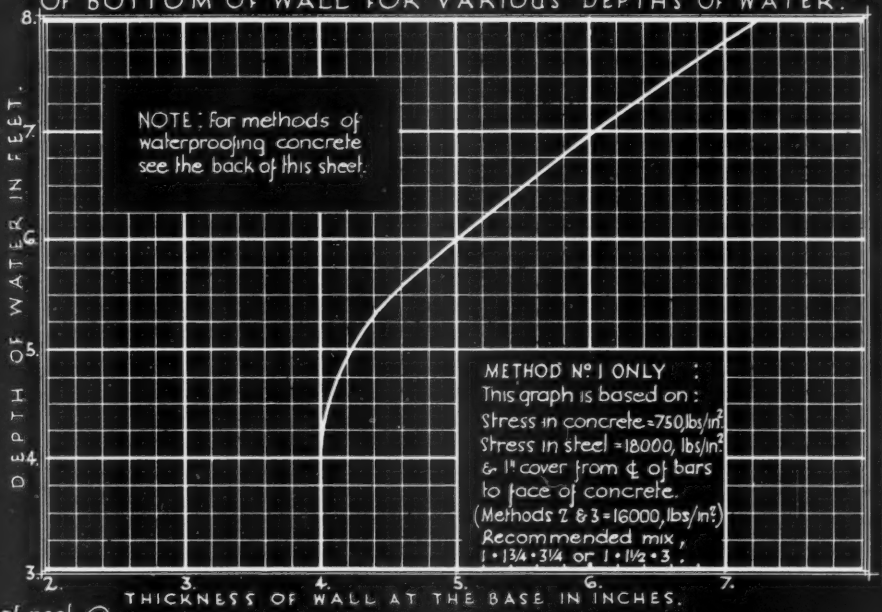
NOTE : Methods 1. & 2. are most commonly used. Method 3. giving unreliable results due to the difficulty in estimating exactly the earth pressure.

REINFORCEMENT : Horizontal steel should not be less than 30% of main reinforcement, an increased percentage reduces shrinkage cracks.

BOTTOM : Design of tank bottom is usually governed by the condition of the ground. Providing ground is not waterlogged or of very low bearing capacity, a 5" or 6" slab is usual. Reinforcement should be in the order of one of the following : 1. Light mesh - (say ¼" at 8" centres both ways) one layer placed near the top & one at the bottom of the slab. 2. A somewhat heavier mesh (say 3/8" at 9" to 12" centres both ways) in a single layer placed in the centre or at the bottom of the slab. When expansion joints are provided the longitudinal reinforcement should be increased.

EXPANSION JOINTS : Special provision should be made for shrinkage when the length of the pool exceeds say 100'0" by one or both of the following methods : a. The provision of an expansion joint. b. An increase in the longitudinal reinforcement.

GRAPH SHOWING THICKNESS OF BOTTOM OF WALL FOR VARIOUS DEPTHS OF WATER.




Constructional data by O.N. Arup. Consulting Engineer. Issued by The R.I.W. Protective Products Co. Ltd.

INFORMATION SHEET : CONSTRUCTION, WATERPROOFING & FINISHING OF SWIMMING POOLS.

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

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# INFORMATION SHEET

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# SWIMMING POOLS

Product : Waterproofing Materials

Integral Waterproofing :

Ordinary concrete contains countless large and small pores in its structure, through which water percolation will take place unless provision is made to prevent it. R.I.W. Toxement Cement Waterproofing Compound is especially adapted for waterproofing concrete.

If waterproofed through the mass, it will require per yard super :

| | | | | |
|---|---|---|---|---|
| 4½ | in. thick | 1.61 | lb. of | R.I.W. Toxement. |
| 6 | in. ,, | 2.25 | ,, | ,, ,, |
| 9 | in. ,, | 3.22 | ,, | ,, ,, |
| 12 | in. ,, | 4.5 | ,, | ,, ,, |

R.I.W. Toxement is dealt with in detail in Information Sheet No. 222.

Coloured Waterproof Renderings :

Where waterproofing is to be obtained by means of waterproof renderings, three-coat work should be used, each coat containing a proportion of R.I.W. Toxement, and the finishing coat containing in addition a suitable proportion of R.I.W. cement colour.

The first and second rendering coats should consist of :

1 part Portland cement to 2½ parts sand, with 2 per cent. by weight of R.I.W. Toxement to the cement.

These coats should be not more than ⅜ in. thick and should be well trowelled and finished with a wooden float and lightly scratched to receive the finishing coat. The third or finishing coat should also be of 1 part Portland cement to 2½ parts sand, with 2 per cent. by weight of R.I.W. Toxement, and a proportion of R.I.W. cement colour according to the colour and depth of colour required.

If light shades are required, these should be of white cement and should again be of 1-2½ mix, with a white silica sand as aggregate.

To waterproof 100 ft. super ¾ in. thick, will require 4½ lb. of Toxement. For surrounds, a non-slip surface can be obtained by the addition of one of the recognised materials.

R.I.W. Cement Colours :

Some of the colours are inorganic (natural) and others are organic pigments. The latter are more expensive, but give very much brighter shades which cannot be obtained with the natural pigments, and, for that reason, are indispensable. All R.I.W. cement colours are absolutely pure and represent the very highest possible tinctorial power in each particular shade of both categories. All are fast to alkali (lime), light, etc., and they can be intermixed as required.

From 3 to 5 per cent. of R.I.W. cement colours is sufficient for deep shades, and for light shades 1½ to 2½ per cent. can be used. The amount of colour required for 100 ft. super ⅜ in. thick 1-2½ mix is as follows :—

| | |
|---|---|
| 3 per cent. .. | 3 lb. 6 oz. |
| 5 per cent. .. | 5 lb. 10 oz. |

The best results are obtained by well trowelling with a wooden float, and, when thoroughly dry, rubbing down with a carborundum or buffing wheel.

R.I.W. cement colours are made in the following shades :—1. Orange Yellow. 2. Canary Yellow. 3. Fire Red. 4. Carmine Red. 5. Dark Tile. 6. Light Tile. 7. Marigold. 8. Marine Blue. 9. Vivid Green. 10. Grass Green. 11. Beaver Brown. 12. Intense Black.

Previous Sheets on R.I.W. Product were Nos. 159, 163, and 222.

Name of Manufacturers : The R.I.W. Protective Products Co., Ltd.

Address : 16 Devonshire Square, E.C.2

Telephone : Avenue 4735

276.

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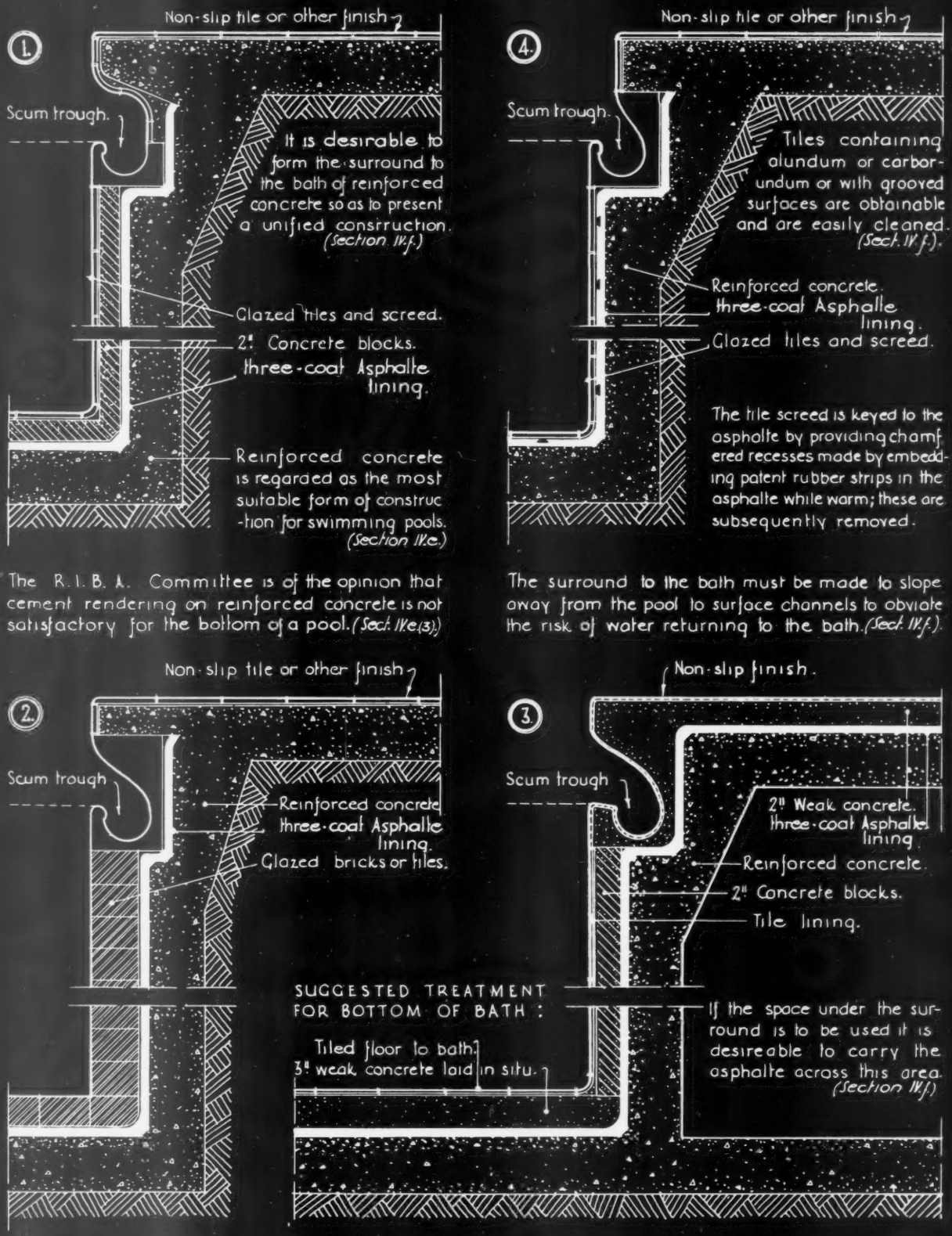
Nos 1, 2, & 3, ARE A DIGEST OF CERTAIN R.I.B.A. RECOMMENDATIONS.
No 4 shows a method when tiling is applied direct to asphalte. (approved by the N.A.M.M.C.)




The R.I.B.A. Committee is of the opinion that cement rendering on reinforced concrete is not satisfactory for the bottom of a pool. (Sect. IV.e.(3).)

The surround to the bath must be made to slope away from the pool to surface channels to obviate the risk of water returning to the bath. (Sect. IV.f.).

*Issued by the Natural Asphalte Mine-Owners & Manufacturers Council.*

INFORMATION SHEET : WATERPROOFING OF SWIMMING POOLS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEFORD SQUARE LONDON W. C. 1. Oscar A. Bayne

Supplement to THE ARCHITECTS' JOURNAL for July 18, 1935

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# INFORMATION SHEET

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# SWIMMING POOLS

Type of Product : Asphalte Waterproofing

This Sheet sets out three methods of waterproofing Swimming Pools as recommended in "The Cost of Public Baths and Wash-Houses," a report issued by the special committee of the Royal Institute of British Architects, October, 1934.

The fourth type of wall and waterproofing shown (detail No. 4) is one which has been used satisfactorily where tiles are to be applied direct to the asphalte face, and is approved by The Natural Asphalte Mine-Owners and Manufacturers Council. The Council has standardised a natural asphalte rock mastic suitable for all the conditions shown.

Application :

While it is recommended that asphalte should be applied in three coats in all first-class work of this character, it is essential to do so in the case of method of construction No. 4.

In all cases double angle fillets should be used in all angles.

For waterproofing of basement walls and floors, see Information Sheet 162.

Information from : The Natural Asphalte Mine-Owners and Manufacturers Council

Address : 52 Grosvenor Gardens, S.W.1

Telephone : Sloane 7902

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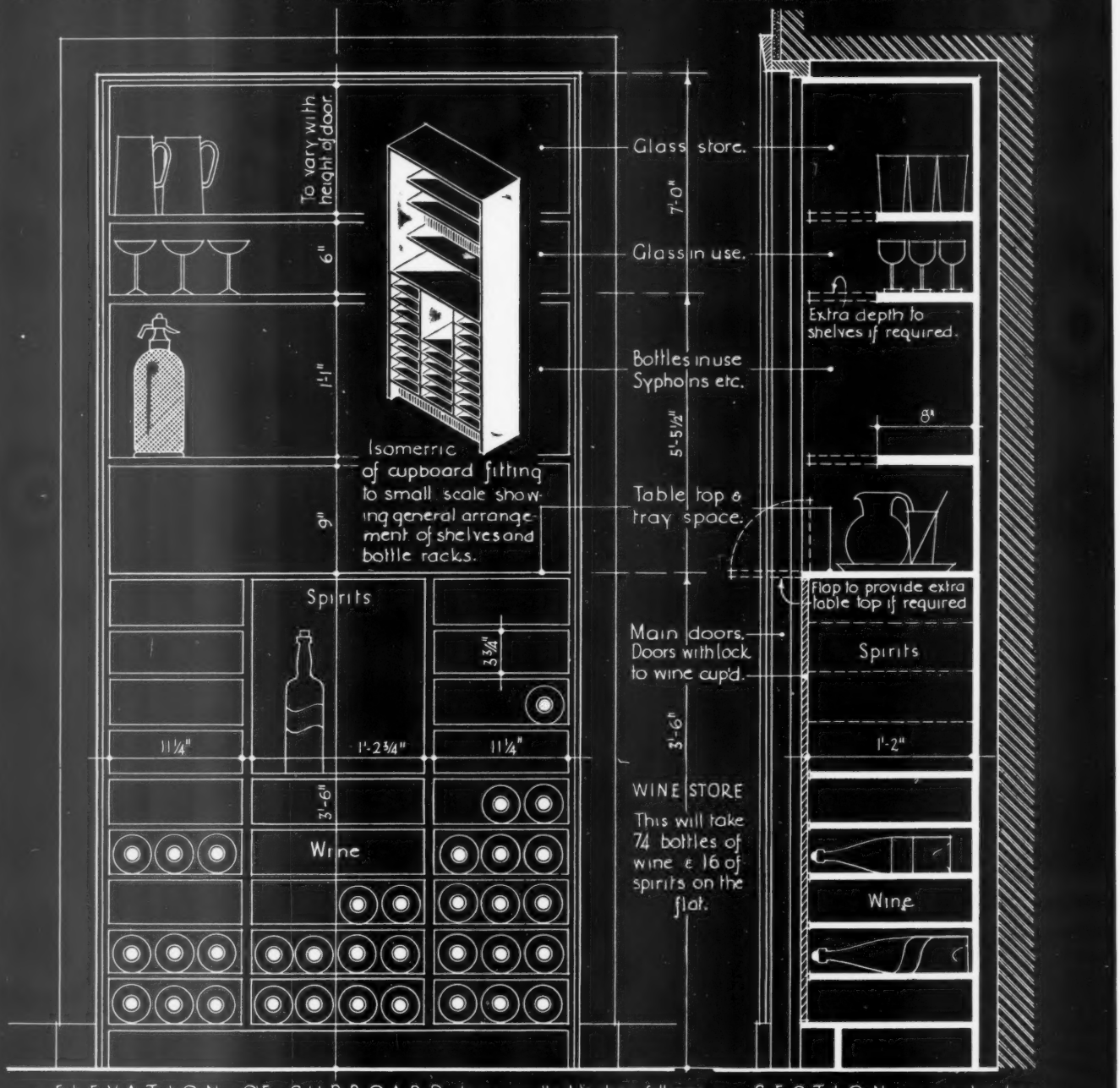
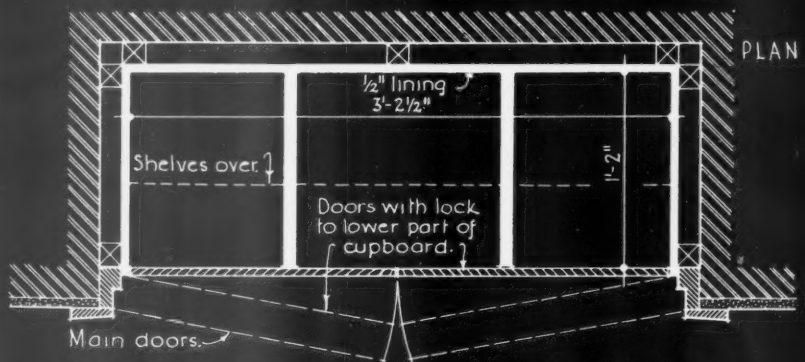



ELEVATION OF CUPBOARD, doors omitted to show fittings. SECTION, on centre line.




PLAN


*Information from The Wine and Spirit Association.*

Battens to separate bottles stored horizontaly.

8.6.35

## INFORMATION SHEET: BUILT-IN WINE STORE CUPBOARD

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1. Oscar A. Bayne.

## INFORMATION SHEET • 240 • WINE CUPBOARDS

THE ARCHITECTS' JOURNAL
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# INFORMATION SHEET

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# WINE CUPBOARDS

General :

The built-in fitting shown on this Sheet has been worked out to show a method of storing wine in small houses and flats in which large storage accommodation is not required and wine cellars are not available.

Accommodation :

In a compact fitting of this type, there should be accommodation for :

(a) Stored wine (bottles lying horizontally).
(b) Spirits, liqueurs, open wine bottles (bottles standing vertically).
(c) Syphons, beer, lager, etc.
(d) Glass.
(e) Tray, etc.

It will be appreciated that it is not possible to lay down any general rules for the amount of accommodation required in any one of these sections—individual requirements being the determining factor, and in many cases, where the upper shelves are not required for glasses, etc., this space may be taken up by bottle racks also. It should be noted that, for these reasons, the unit shown on this Sheet is not put forward as a standard but as a suggestion for a small wine store suitable for many situations.

In the unit the storage space for wine, spirits, and liqueurs is arranged in the lower part, and as these are likely to be valuable, small doors are provided so that this part of the fitting may be kept locked, while the upper shelves containing the glasses, syphons, beer, lager, and opened bottles remains open for use.

Storage Shelves :

It is important that every bottle should be readily accessible without moving other bottles, as the wine once " binned " should be kept undisturbed as far as possible until it is drunk. Plain shelves are shown in this drawing, but these may be changed, if preferred, to various types of battened shelf, arranged or shaped to take each bottle, and in addition various patent forms of bin are on the market, usually obtainable in two-dozen units.

Wood :

No one wood is particularly favoured for such cupboards, but it is important to note that where strong-smelling wood is used, the smell will be taken up by the glasses, which in turn flavour and so spoil the wine when served. For this reason, only very well seasoned wood should be used. Pine may be used if thoroughly seasoned, but in general it will be found safer to use a hardwood for the shelves on which the glassware will stand.

Temperature :

Wine should always be stored in a dry place at a temperature of 53° to 58° F. Cupboards should therefore not be planned near an outside wall, or near a radiator or fire, but should be in some interior position where they will not be liable to any great fluctuations in temperature ; otherwise no special precautions need be taken.

Lighting :

Wine should not be kept in a strong light, therefore the doors of the lower cupboard should always be kept shut, even when not locked.

Humidity :

Wine should always be stored in a dry place ; in cupboards such as the one shown, placed in the interior of the house, the normal atmosphere should be suitable, and no special precautions need be taken.

Information from : The Wine & Spirit Association

Address : 17, Harp Lane, E.C.3

Telephone : Holborn 8626