THE BURY COMPETITION

SITE FOR PROPOSED TOWN HALL

THE County Borough of Bury, Lancashire, has invited competitive designs for a new Town Hall, and has appointed Professor J. Hubert Worthington to act as the assessor in the competition.

The photograph above shows the site of the proposed scheme, outlined in white, together with surrounding streets and buildings.

The conditions of the competition are reviewed on pages 295-297 of this issue.

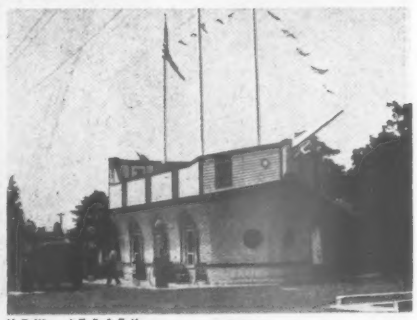
CALIFORNIA

CALIFORNIA

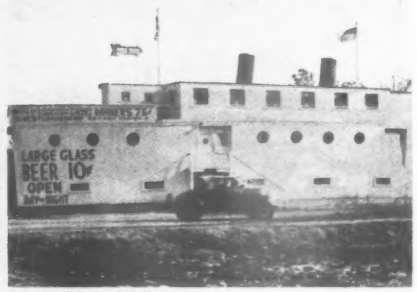

CALIFORNIA


CALIFORNIA

CALIFORNIA


NEW JERSEY

CALIFORNIA



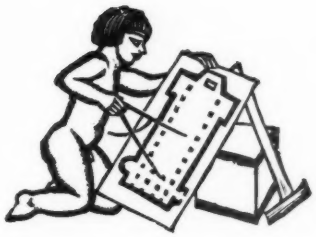
CONNECTICUT

H O T D O G S

"History fails to record the name of the intrepid genius who first conceived the idea of inflating a frankfurter to the Gargantuan proportions of a building. But only his identity remains obscure, as this display bears not too silent witness. Here motoring America meets at a thousand cross roads to gorge—amid architectural garniture that cannot quite conceal the excellence of the food, the modesty of the prices. You will notice that California has the greatest number of representatives, but you should expect that, for anything haywire is always most haywire in California."*

From the "Architectural Forum."

[** Haywire: crazy, misguided, wide of the mark, etc., Ed.*]



A TIME FOR THOUGHT ACT

ON August 2 of this year the Restriction of Ribbon Development Act received the Royal Assent and became a part of the law of the land. In this happening an observer unaccustomed to the ever-recurring paradoxes of democratic government might find a certain irony. For, only a very short time before August, members of the present Government were extolling the rightness of their trust in private initiative for the solving of the bulk of the housing problem, and were pointing, as proof positive of that rightness and of the beneficence of their own rule, to the almost incredible fact that 1,000 houses per day were then springing up, anywhere and everywhere, upon the limited surface of Great Britain.

And now an Act is in being which, besides showing that even in the eyes of a Conservative majority the energy of private enterprise can become too much of a good thing, will also, if widely used, leave the production of 1,000 houses a day as a record which will never again be approached. And since such a rate of production does not really help those who most need new houses, the majority of the public will be content that it should be so.

But what does this Act do—this Act which the public hoped was gently to curb and guide the worst, and encourage the best, that lies in private enterprise? "Thank goodness, the Government is doing something at last about those horrid strings of little houses along the roads. . . ." There can be little doubt that it was in this sense that public opinion first welcomed the Bill; that it was because of this general construction of its scope and meaning that the Bill received support, the Government praise, and the Act a speedy entry into statute law.

In actuality the Act is something different. It is really an Act for encouraging the future increase of broader and rather safer roads; and as such has given to the public, if not what they imagined, at least a measure of potential usefulness. From an embryo Bill which by the restriction of ribbon development would also seem to promise relief to the traffic problem, the measure has become an Act administered by the highway authorities, who are recommended to co-operate with local town planners. This addition to the already weary list of liaisons possessed by town planning authorities would seem more likely to lead to the added complication of interdepartmental correspondence than to an effective remedy for an admitted evil.

Reduced to its simplest terms the Act provides that no building shall be erected within 220 ft. of the centre of any classified road, nor any access formed to that road, without the permission of the relevant highway authority. In regard to unclassified roads, the highway authority is empowered to fix for each a standard width, after which similar restrictions to those set on classified roads apply, save that the 220 ft. minimum is appropriately reduced. If the Act is vigorously applied there can be little doubt that, in time, the country will have wide and unobstructed roads and the suburban pedestrian casualty list be reduced. So much for what the Government mean by the restriction of ribbon development.

What the public mean by the restriction of ribbon development—some measure to prevent the silly wasteful stringing of small houses along each and every road—does not seem much represented in the Act. The distance between the travelling public and the houses may increase by fifty yards, but that is all.

This disappointment would not be lasting if the Act which the public has got was as sound as it appears. But in explaining its provisions Government circulars gloss over a point of some importance. They do not make clear that the whole of the compensation which will become payable under the Act must be met from local resources. All things being equal the provincial citizen may feel that he would quite like the houses bordering local roads to be pushed back a bit; it is possible, however, that he may be willing to forgo this luxury when he realizes that he himself is going to pay for the operation. Poorer local authorities, faced with the certainty that each mile of enlightenment is going to mean a penny on the rates, may come to the conclusion that the good old ways of live and let live are good enough for them. This possibility can but be proved by experience.

Ribbon development is only one symptom of a large disease—of the unthinking ill-use of the surface of Great Britain. As a temporary expedient to prevent that ill-use hopelessly impeding road transport, the Act is useful. As a stopgap which may allow time for deep and thoughtful consideration of how best to use the country's surface in the future, the Act is very useful. As these it deserves both welcome and fair trial; more than these it can never be.

The Architects' Journal
Westminster, S.W.1
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NOTES & TOPICS

LOOKING AHEAD . . .

IN the past an architectural expression of civic sense cannot be said to have been common in our cities and county towns. And this lack has been principally caused by the hand-to-mouth outlook of our city fathers in the matter of public buildings. The thought of buildings which may eventually be needed has but rarely occurred to them, and where to place any building which has been a clamant necessity for several years, is usually decided by dumping it on whatever piece of ground happens to be available at the moment when procrastination can no longer be continued without civic strife.

*

Guildford's decision to look well ahead in these matters should not, therefore, pass without note—and congratulation. The decision that the town needs a public hall and library has caused the Council to consider all such additional public buildings that may one day be required by the borough, and the acquirement of a central site sufficiently large to accommodate them in a properly grouped whole.

*

The plan that has been prepared for this civic centre shows the advantage of such foresight, for a central site has been suggested which is ample for the purpose and is now obtainable. Whereas in twenty years such a chance might have gone for ever. Guildford's example should be borne in mind by all municipal authorities.

—STILL FURTHER

In a recent article in the *Evening News* Professor S. D. Adshead discusses probable future trends in housing and town planning. During the last ten years this question has received plenty of publicity. And the multitude of progressively bigger and brighter solutions—by Le Corbusier, Hugh Ferriss and others—have, perhaps, induced amongst architects an attitude towards these pictorial prophecies not wholly free from irony.

*

It is therefore the more interesting to learn that Professor Adshead, whose experience and authority in the problems of town planning are not likely to make him favour new methods for the sake of novelty alone, is also one of those who believe that the future will compel the adoption of solutions both dramatic and revolutionary. In the sketch with which he illustrates his article a slum re-housing scheme is shown in the form of a zoned and cruciform skyscraper block standing on perhaps one-tenth of its allotted site.

*

That the older and wiser should support their views will be greatly encouraging to the young and ardent, but has anyone yet outlined a practicable method by which such changes can even be begun to be brought about?

*

Today there is a huge prejudice against the skyscraper, and indeed against the flat dwelling of any kind for families with children. And the spectacle of the L.C.C. waiting patiently for a building to fall down before widening a street by twenty feet rather dulls the faith of the most passionate believer in town-planning.

MEANWHILE

For the present the provision of houses follows very different ways. And a correspondent of the *Manchester Guardian* destroys the common hope that many of the thousand houses a day which are springing up all around us will solve their own problem within thirty years. The correspondent mentions having congratulated an architect on the self-destructive powers of a really badly built house. The architect replied that it was not so, that such a house was the cause of constant irritation and of repairs grossly disproportionate to its first cost, but that so long as it was continuously lived in it would not fall down.

*

So it seems that in fifty years' time both town planners and architects will have their hands full. But nobody seems to care very much.

CULTURE AND ANALYSIS

I am told that both the R.I.B.A. and the A.A. are contemplating the formation of Camera and Sketching Clubs.

*

The very words "Camera and Sketching" recall a few months of my own youth, when, as a member of a student group, I cycled about the countryside, clicking my mouse-trap shutter to left and right and occasionally halting to sketch some weathered finial or the grouping of some well-matured farm buildings.

*

I remember soon tiring of this doubtful pastime, for I had no guidance except that sentimentally offered by the well-meaning pedagogue who accompanied us in a pony-trap.

*

A few years later I remember, too, regretting the opportunity we had missed—regretting that we had flirted lightly with trimmings when we ought to have made analytical studies of form and plan, regretting that we looked only on ancient buildings and completely ignored contemporary problems, regretting that our excuse of

STATUE AND ROCK AS CHURCH EXTERIOR

Gethsemane is the motive of a striking design for a church by Mr. Rode N. Wall, of Vancouver. It appears to be a huge statue of Christ in prayer, but a doorway, approached by steps, is revealed on closer inspection. The door appears to open into a gigantic rock against which Christ is leaning.

From a recent issue of the "Daily Mail."

developing drawing facility was always better served in a studio, drawing from life.

*

Let us have intelligent photograph and sketch studies by all means, but let us remember that when every architect in England spent every week-end blindly filling sketch books, architecture, as a creative art, was at its lowest possible ebb.

HOLIDAY

A holiday at last! Not, I may say, as I had forecast three weeks ago . . . with one of the marauder-architect parties touring Europe in search of interesting ideas (and, albeit, the inevitable crib) . . . but this year a lone tour of England, with perhaps Scotland for a middle week or so.

*

My first day took me into Essex and Suffolk, past the one-time Exhibition Houses at Gidea Park, some of which I noted look maturer and better, while others had already over-weathered and look drab.

*

Then on to the sea, first for an hour at Clacton, which appears to have built so much on stilts in the sea that I did not recognize the modest pier I last saw some dozen years ago; then to Frinton, whose nineteenth-century architectural efforts after Nash are being followed by some twentieth-century efforts.

*

And then inland again to the real half-timber country; to Lavenham, where the old "Swan" inn has been at least honestly conserved with some knowledge of its wood-framed structure, and then to Long Melton, a grand sweep of English village street, culminating for some at the top of the hill, but for me about half-way up—at the "Black Dog" to be precise.

*

But not the "Black Dog" I used to know; instead, a rejuvenated hound devoid of the $4\frac{1}{2}$ in. brick wall and Georgian (real Georgian) sashes which for over a century have masked its face and flank . . . a hound now exhibiting each oaken rib, each square of original daub, each lustrous oriel eye—until some later generation, tired of further decay, covers it once again with a $4\frac{1}{2}$ in. outer skin of . . . glass? concrete? a plastic made from beer? . . . I wonder?

FATHER BASIL JELLICOE

St. Pancras, Poplar, and indeed the whole housing movement through public utility societies, have suffered a grievous loss in the untimely death of Father Basil Jellicoe.

*

Almost a decade ago Father Jellicoe tackled the problem of rehousing in Somers Town, and because he combined a talented head with energy and above all a deep understanding of and love for human nature he made a real success of it.

*

Not the least of his achievements was the rebuilding of two public houses, one of which he managed for some time himself. He was a sound business man as well as a great humanist . . . perhaps his most surprising achievement was to make rehousing pay, and continue to pay, a small dividend over a number of years.

IDENTIFICATION OF PIPES

The British Standards Institution has just issued a specification for the "Identification of Pipes, Conduits, Ducts and Cables in Buildings."

*

The pipes, etc., are to be identified by means of standard colours and small identification plates—a really useful idea. Not a new one by any means, but a very necessary recruit to our increasing range of British Standards.

*

There are eight main services in buildings—air, drainage, electricity, gas, oil, refrigeration, steam, and water—and each has about twenty subsections needing identification.

*

Many buildings already have a system of their own and not a few painters have had their fun in the boiler house; now we have a British Standard which only needs the wholehearted support of architects and builders to make maintenance and repairs a routine matter rather than an adventure.

GARAGE DOORS

Shortly after pointing out last week some of the detail weaknesses which modern designers have found, through time test, in building technique, I run again into the bogey of doors . . . garage doors.

*

Have you ever seen a pair of garage doors which, after a month, open easily, swing true, remain open in wind, close and lock simply, fit close, keep out the dust, and, above all, fail to rattle, groan, squeak, squeal, creak, clank, grate, and generally make the most caterwauling noises?

*

I admit that I have not. Nor has Mr. W. F. Leysmith, of East Sheen, who writes an august letter to *The Times* appealing to the builders of the Sydney Bridge, the *Queen Mary* and the Mersey Tunnel, to set their larger projects aside for once and tackle this urgent problem.

*

And at the same time may I appeal for a simple and straightforward hinge which can be easily fixed, instead of having at least eight bits of iron (or brass) to work loose and gradually drop out?

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

" *And now an Act is in being which will if widely used, leave the production of 1,000 houses a day as a record which will never again be approached.*" 291

The R.I.B.A. and the Architectural Association are contemplating the formation of Camera and Sketching Clubs. 292

" *While technical college buildings should not be devoid of architectural interest, it is possible to obtain a dignified effect in a simple manner by relying upon skilful composition and the judicious employment of modern materials, rather than upon the more elaborate decorative forms associated with past architectural periods.*" 315

COUNTY OFFICES, WESTMORLAND

At a recent meeting of the Westmorland County Council it was recommended by the County Buildings Committee that no estimate exceeding £40,000 for the proposed county offices be considered. Also that unless this could be complied with the Council should not proceed with the erection of the building. It was pointed out that the estimated cost (£67,000) of the proposed scheme, which was placed first in a recent competition, was in excess of what the Council had in mind.

The Clerk said that, since the County Buildings Committee meeting, the architect (Mr. Verner O. Rees) had seen the Chairman of the Council and was prepared to submit a revised plan based on his winning scheme but cut down to meet the wishes of the Council. He had intimated he could provide a building for £40,000 that would satisfy the Council. The plan would come before the Committee in due course.

INTERNATIONAL REUNION OF ARCHITECTS

Following is the programme of the International Study Tour (September 4-22) arranged by the General Committee of the International Reunion of Architects.

September 4 : Leave London (Victoria) in the morning for Brussels. 5th : Brussels, visit to the International Exhibition. Leave Brussels for Prague. 6th : Prague. 7th ; Visit round the town ; reception by the Mayor of Prague ; gala evening at the National Theatre. 8th : Visit to the Czechoslovakian Architects' Exhibition. After lunch, excursion to Barrandov. 9th : Sightseeing tour of the city. After lunch, Government reception at the Palais Czernin. 10th : Hradec-Kralove. 11th : Zlin. Sightseeing and visit to the Bata shoe factory. Afternoon, sightseeing in Brno. 12th : Morning in Bratislava and leave at noon by boat. Arrive Budapest for dinner. 13th : Budapest. 14th : Budapest. In the morning reception at the Technical High School ; visit to the Architectural Exhibition specially organized for the Congress ; lunch given by the Municipality of Budapest ; sightseeing in the afternoon and dinner, followed by a dance at the Artists' Club. 15th : Sightseeing in the afternoon ; tea will be given by the Government in the Royal Palace ; dinner at St. Margaret's Island, given by the Office of Public Works. 16th : Vienna. Leave Budapest after lunch. Arrive Vienna in the evening. 17th : Vienna. Official reception and closing ceremony of the Reunion. Farewell dinner in Schonbrunn. 18th : Vienna. End of official programme. Leave Vienna in the evening.

On September 19 two programmes are available to the members of the Study Tour : 1, to travel direct to Rome for the International Congress of Architects, which is to be held from September 22-28 ; 2, to leave for London by the following route : 19th : Stuttgart. Arrive in the morning. Sightseeing in the afternoon and visit to the modern city conducted by German architects. 20th : Paris. Leave Stuttgart after lunch ; arrive Paris in the evening. 21st : In Paris, free. 22nd : Arrive London.

THE ARCHITECTS' DIARY

Thursday, August 29

LONDON MUSEUM, *St James's, S.W.1. Exhibition of photographs, " New London from the Air." Open until further notice. 10 a.m. to 6 p.m.*

R.I.B.A., INTERNATIONAL EXHIBITION OF ARCHITECTURE. *At the Royal West of England Academy, Bristol. Until September 28.*

Wednesday, September 4

INTERNATIONAL REUNION OF ARCHITECTS. *Study Tour. Until September 22. For programme see below.*

BRIGHTON'S NEW PUBLIC BUILDINGS

A Ministry of Health inquiry was held at Brighton last week into the Corporation's application for leave to borrow £48,000 for the new market building. The market is being moved from its present site, abutting on the town hall, in accordance with the scheme to build a new town hall.

LEEDS £17,000,000 PLAN

The Leeds Corporation proposes to spend £17,000,000 in the next few years on a vast programme of reconstruction. Nearly £15,000,000 will be spent on slum clearance schemes involving the demolition of 30,000 houses. Plans have been prepared for the extension of the central markets and the provision of an omnibus station at a cost of £250,000, and a like amount is to be spent on improved accommodation in the centre of the city for commercial art and technological education.

PRESERVING RURAL WALES

Pembrokeshire has decided to set up an Executive Joint Planning Committee under the Town and Country Planning Act. The chairman is Lord Merthyr, the consultant Mr. T. Alwyn Lloyd and the planning officer Mr. H. R. Judd, who was engaged on the West Sussex plan.

SUSSEX AMENITIES

The view that effective action may be impossible is taken by Sir Philip Buckland in his report to the C.P.R.E. on the proposal to reclaim land at West Wittering, Sussex, for development. It is planned to fill up part of the bay and construct a golf course and an hotel. Residents object that the scheme will completely alter the character of the locality.

FILM STUDIOS, WRAYSBURY

The Eton R.D.C. has passed plans for talking film studios on the Ankerwyke estate, Wraysbury. The estate is opposite Runnymede and adjoins Magna Carta Island. Included in it are Ankerwyke House, a Benedictine nunnery founded in the time of Henry II, and a portion of a hunting lodge which belonged to King John. The studios are to be called " The Magna Carta Studios."

APPOINTMENT

Mr. R. F. Fairhurst, DIP. ARCH. (L'POOL), A.R.I.B.A., previously with the Willesden Borough Council, has been appointed to the staff of Mr. Percival T. Harrison, M.INST.C.E., Borough Engineer and Surveyor, 9 The Hawthorns, Regent's Park Road, Finchley, N.3.

OBITUARY

We regret to record the death, at the age of 77, of Mr. Harry Quick of Coventry.

Mr. Quick was responsible for the design of many buildings in Coventry, where he had been in practice for the past forty-five years.

The death took place last week of Mr. Hugh Thomson, architect and surveyor, of Saltcoats, Ayrshire. He was 73 years of age. For a long period he practised in Saltcoats, and was responsible for the design of numerous buildings in the town and surrounding district.

SOCIETIES AND SCHOOLS

WELSH SCHOOL OF ARCHITECTURE

The new term at the Welsh School of Architecture begins on Monday, October 7. The school, which for the last eight years

has been granted the status of Final Recognition by the R.I.B.A., is accommodated in the new wing of the Technical College, Cathays Park, Cardiff.

At the college 10 scholarships covering tuition fees and maintenance grants of £40 per annum for three years are offered for competition annually. Candidates for entry to the Welsh School of Architecture are eligible to compete for these scholarships. The examination is a competitive one, and is of about the same standard as matriculation.

The Welsh School of Architecture has now been at work for rather more than 15 years, under the charge of Mr. W. S. Purchon, M.A., F.R.I.B.A., the lecturer in architecture being Mr. Lewis John, M.A., B.ARCH., A.R.I.B.A., the assistant lecturer Mr. A. C. Light, B.A., A.R.I.B.A., and the junior instructor Mr. A. R. Whitton, B.A. Prominent local architects assist in the work of the advanced course as honorary lecturers.

The three years' full-time day course leads to the award of the certificate, to the holders of which the R.I.B.A. grants exemption from its Intermediate Examination, while those students who successfully pass through the Diploma Course are exempted from the R.I.B.A. Final Examination, a special course of lectures on professional practice and a special examination in this subject being held in the school. Success in the Diploma Examination also forms a complete qualification for registration under the Architects' Registration Act. This Diploma Course follows the Certificate Course and consists of two sessions, the former of these being of six months' duration only, the intervening six months being spent in architects' offices.

There is also an evening atelier for architects' assistants who cannot attend the day courses.

The department is in close touch with the South Wales Institute of Architects, representatives of this body being on the Advisory Committee of the school, and students of the school are eligible for the prizes awarded by the Institute. In addition to these awards there are a number of school prizes presented in the main by local architects.

Full particulars are obtainable from Mr. W. Purchon, M.A., F.R.I.B.A., The Technical College, Cardiff.

CITY OF LONDON COLLEGE

The City of London College has just issued a leaflet giving full particulars of a three years' course on timber. Leaflets are obtainable from the Secretary of the College, Ropemaker Street, E.C.2.

HACKNEY TECHNICAL INSTITUTE

The new term of the L.C.C. Hackney Technical Institute begins on September 23. The Architectural and Building Trades Department of the Institute provides theoretical and practical training in the large range of subjects set forth in the syllabus, including classes both trade and professional in character.

Mr. C. W. Box, A.R.I.B.A., A.I.STRUCT.E., is head of the department, and prospectuses and full particulars may be obtained on application to the Principal, Mr. W. Rankine, M.B.E., M.I.MECH.E., Dalston Lane, E.8. Enrolment for the forthcoming session commences on September 16.

THE BURY COMPETITION

The Conditions Reviewed

December 31.—Sending-in day. Proposed town hall, Bury, for the Corporation of Bury. Assessor: J. Hubert Worthington, O.B.E., M.A., F.R.I.B.A. Premiums: £500, £300 and £150. Conditions, etc., are obtainable from Richard Moore, Town Clerk, Municipal Offices, Bank Street, Bury. Deposit £2.

DURING my first reading through of the conditions and instructions for the competition for the proposed town hall for Bury, I could not help enjoying mental pictures of competition aces happy in the knowledge that there was work to be done—of Ivor Jones and Percy Thomas sharpening their dividers and of Berry Webber crouching the better to spring.

For here is one of those rareties—a competition which provides a good wide site for a free plan, enough accommodation to make things interesting and, above all, an assessor who can understand why all people do not do everything alike.

The proposed site is a piece of level ground some 200 ft. wide by 350 ft. deep, bounded on three sides by streets and open on the south side, where it is flanked by a railway cutting beyond which are a memorial garden and clock tower. The ground falls to the south, so that the building will have a dominating position as approached from the Manchester side.

ACCOMMODATION

The schedule of accommodation requires a council chamber to hold 80 people, three committee rooms, Mayor and Mayoress's parlour, reception room and an assembly hall with accommodation for dining 250 people, with a main approach from the north side and suitable foyer, cloakrooms and retiring rooms; in addition to the usual administrative departments required in a town hall for a town of this size.

Careful consideration of the way the site plan is drawn and the manner in which the conditions are set down reveal, in my opinion, a desire on the promoters' part for the main entrance to be on the north and narrow side, and if this assumption is correct the nice arrangement of the three parts, i.e., the ceremonial rooms, the assembly hall and the offices, on this north side will be almost the beginning and the end of the competition. It would be necessary to treat each part separately, for the assembly hall must be one storey, the ceremonial suite two storeys and the offices three storeys, so while there must be easy access between each part there cannot be free circulation. The necessity to provide kitchen accommodation is an indication that the Mayor's reception room is expected to be placed near the assembly hall.

This rough analysis would seem to indicate that the winners' scheme will somewhat follow the lines of Ivor Jones's and Percy Thomas's winning lay-out for the Swansea civic centre. The ceremonial rooms fit quite logically on the major axis of the site (running from north to south), the council chamber and committee rooms being placed at the back of the plan on the first floor, and the Mayor and Mayoress's parlour, etc., over the main entrance on the front.

This arrangement gives excellent opportunity to design a dignified main entrance hall, grand staircase landings and crush hall, and allows the usually hopeless dark hatch under the council chamber to be used as kitchen, store rooms, cycle store, etc.

SYMMETRY

In architectural competitions the winning designs have a great leaning towards symmetry; in fact, this convention has become a sort of superstition which no one really likes to break. Most people walk under ladders in this enlightened day (I do so myself, but I always feel for a minute or two afterwards that by doing so I have taken away at least some small chance of enjoying a happy and peaceful day). So it is with symmetry. Designers of competitions for town halls know only too well how smart their beautifully articulated centre lines look and they will seek the aid of symmetry in almost every case. There seems to be no reason to quarrel with this convention,

provided that the true architectural plan is not sacrificed—and it must be admitted that the recent competition winners have shown that symmetry can produce polished, clever and wholly practical plans. The seamy side of symmetry is, of course, rarely seen outside exhibitions of competition drawings, and the lengths to which a real addict will go in order to make his centre lines intersect are really beyond the understanding of anyone who has not been trained at a really good architectural school.

All this explanation is because, in continuing to describe this solution, I wish to balance the assembly hall with the block of municipal offices on each side of the ceremonial rooms. I do not wish to use them as if they were in any way comparable, since this would lead to artificiality in planning and would mean that the offices would have to be fitted into the shape of the assembly hall. I do think, however, that their elevations to the entrance front should be, in the main, balanced. This arrangement would mean that the assembly hall would be entered from Tenterden Street as the conditions require, and a number of exits could be placed on to the side street. The kitchen could then serve the assembly hall and reception room and the council chamber and ceremonial rooms would be within easy reach. The municipal offices need not necessarily be at all like the assembly hall in shape, since only on the main entrance front would the two blocks be seen together. The placing of the long elevation of the municipal offices on to a side road has the great advantage of having ample opportunity for subsidiary entrances.

The elevation of the main entrance with such a grouping would be fairly easy to handle, since it would show a composition with pavilions at each end connected by fairly low links to a main central tower, which would express the ceremonial rooms.

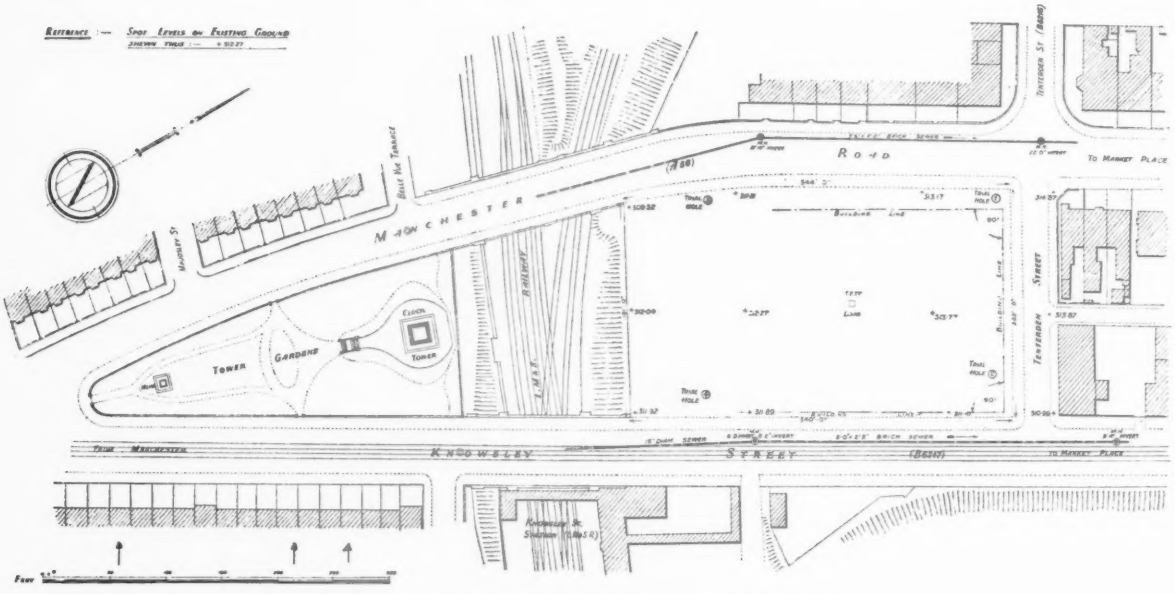
Of course, that is one scheme, and it seems to march smoothly enough ; unfortunately competitions delude people in this way. Who has not thought out the " winning scheme " in a bus and rushed to the board and found it workable for about four days, after which it joins that pathetically fat roll marked " roughings " ?

Professor Worthington has written a most inviting set of conditions, making me feel that Bury must be very prosperous and proud to require such a new town hall ; the clauses seem to be redolent of pomp and civic dinners. Even the capacity of the assembly hall is measured, not in cubic feet or even in seating capacity, but in the fact that it must be able to dine 250 persons ; and later we are reminded that for larger banquets outside caterers will be engaged. Now I have always thought that quite a lot of the incentive to competitors to enter into the spirit of what the promoters want depends on how the programme is written, and recently too little attention has been given to this fact. These conditions are descriptive and inviting. At the same time they are concise, and, whilst I do not believe Professor Worthington will not receive any questions at all, I think there is enough information in the conditions for any experienced competitor to complete his drawings with a full understanding of what the promoters require.

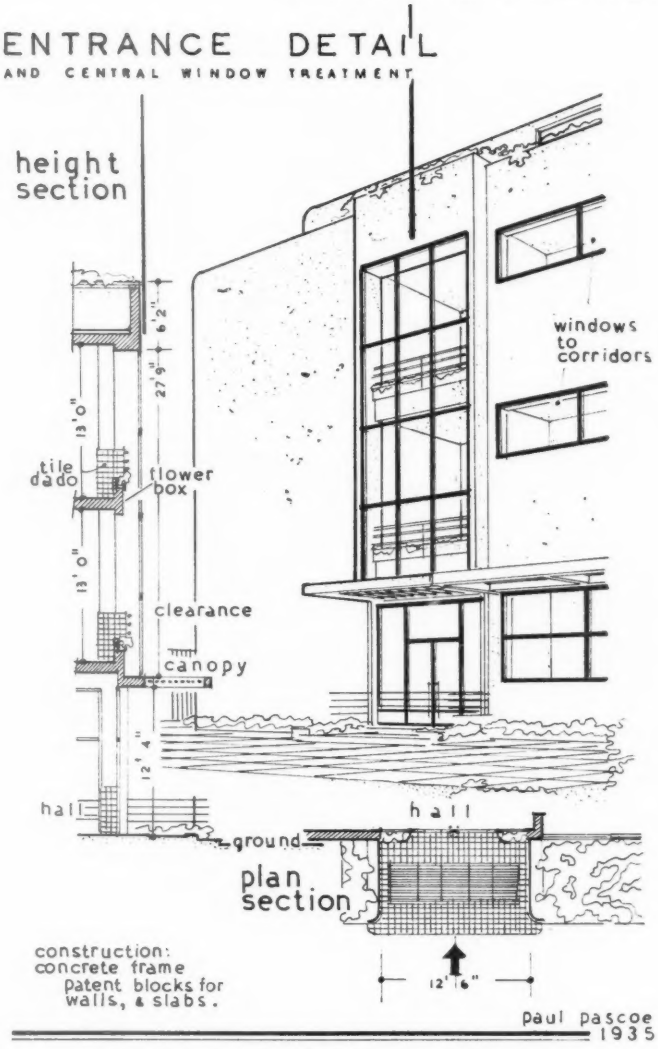
THE STYLES AGAIN?

The statement that " no restrictions are placed on competitors as to style, but they are reminded that Bury is a northern industrial town *with plenty of mills already*, and this will be taken into account in making the award," does seem both odd and unfortunate. (You can do what you like but you *musn't* be modern !) A later paragraph states that the four frontages shall be executed in Northern grit stone.

I do not think that the promoters need worry lest they may be confronted with " advanced modern " elevations. Most architects who win competitions do so because they have gained their " competition " minds through the painful experience of seeing many designs turned down until they have understood just the kind of things that assessors and promoters want. The competition system must always force the designs of elevations to be purely commercial propositions, i.e., designs created by the architects especially for sale to someone else, and the design must be sober and be capable of being appreciated by everyone who has a say on the council. Whether this is right or wrong is a matter I do not even try to examine in this small space. Again, there is the fact that the people who go in for competitions are essentially gamblers, and very shrewd gamblers at that. Few people feel inclined to hazard two months' very hard work and their chance of winning by attempting to decorate the traditional massing which the present day successful competition plan must nearly always possess, with the accepted trappings of modernism. In fact, it is impossible to



THE BURY COMPETITION : SITE PLAN



From School at Villejuif. Designer: André Lurçat.

use such treatment without artificiality and insincerity. A. C. C.

DRAWINGS REQUIRED

Block plan to a scale of 1/500.
Plans of each floor.
Elevations to each frontage.
Sufficient sections to explain the design.
} All to a scale of $\frac{1}{8}$ inch to a foot.

A half-inch detail of a small portion of the building.

No perspectives will be admitted, but the successful competitor may be required to submit one in due course.

Drawings may be in pencil or ink and tinted as simply as possible to explain the design.

They need not be unnecessarily elaborated.

Proposed Offices, Dublin

The Commissioners of Public Works of the Irish Free State have decided to erect new offices for the Department of Industry and Commerce on the site of the Maple Hotel, Kildare Street, Dublin. Architects of Irish nationality resident in the Free State and architects of other nationalities resident there for at least the past 10 years are invited to submit competitive designs for the proposed building. The author of the winning design will be appointed architect for the building, and to the authors of the designs placed second and third sums of £150 and £75 respectively will be paid.

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.

September 2.—Sending-in Day. A competition (promoted by the Liverpool Building Trades Exhibition, in conjunction with the Liverpool Architectural Society) to improve the amenities of suburban building estates: eight prizes of £10 for drawings of the lay-out or planning of 20 pairs of semi-detached villas at a "T" junction of two roads. Assessors: Lt.-Col. Ernest Gee, F.R.I.B.A., Professor L. P. Abercrombie, F.R.I.B.A., Leonard Barnish, F.R.I.B.A. The latest date for the submission of designs is September 2.

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 5.—Sending-in Day. New Fire Station, Brighton, for the County Borough of Brighton. (Open to architects of British nationality resident in the British Isles.) Assessor: Stanley O. Livock, F.R.I.B.A. Premiums of £200, £125 and £75. Conditions of the competition may be obtained from J. G. Drew. Clerk, Town Hall. Brighton. (Deposit £1 1s.)

October 16.—Sending-in Day. Lay-out competition for Lump Fort site, for Portsmouth T.C. Assessor: E. Prentice Mawson, F.R.I.B.A. Premiums: £350 and further £200 divisible. Conditions are obtainable from the Town Clerk, Guildhall, Portsmouth. (Deposit £1 1s.)

October 28.—Sending-in Day. Competition for timber houses organized by the Timber Development Association. Assessors: Robert Atkinson, F.R.I.B.A., G. Grey Wornum, F.R.I.B.A. and E. Maxwell Fry, A.R.I.B.A. The competition is divided into two sections and competitors may enter for one or both. In each section there will be the following awards: first premium, £100; second premium, £30; third premium, £25.

SECTION 1:—Designs to be submitted for a timber house suitable for a small family, the total cost to be £800. SECTION 2:—Designs to be submitted for a week-end timber cottage, the total cost to be £350. Conditions, etc., are obtainable from the Manager, Timber Development Association, 69-73 Cannon Street, London, E.C.4. The latest date for submission of designs is Monday, October 28.

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.

January 31, 1936.—Sending-in Day. Proposed Parliament House, Salisbury, Southern Rhodesia, for the Government of Southern Rhodesia. (Open to architects of British citizenship.) Assessor: James R. Adamson, F.R.I.B.A. Premiums: £500, £300, £200 and £100. Conditions, etc., obtainable from the High Commissioner for Southern Rhodesia, Crown House, Aldwych, W.C.2. (Deposit £2 2s.) Last day for questions was August 26. The designs must be sent to the Assessor at 19 Silverwell Street, Bolton, not later than January 31.

HOUSING SCHEME, EASTFIELD,

TURNER

LAY-OUT PLAN

GENERAL SCHEME.—*As a result of the limitation of the output of subsidized housing during 1933, and of the decision to allot municipal houses only to couples possessing two or more children, the Hundred Houses Society was formed at Cambridge to provide such families with houses at a moderate rental. The scheme was intended especially for those in regular work in the new industries around Cambridge who were earning from 45s. to £4 per week. As the result of a limited competition for the lay-out and design of 100 houses of three differing types, Mr. C. W. Craske was appointed as the architect for the scheme, and work was begun early in 1934. Above is a general view of the scheme from the south-east.*

CAMBRIDGE: BY C. W. CRASKE

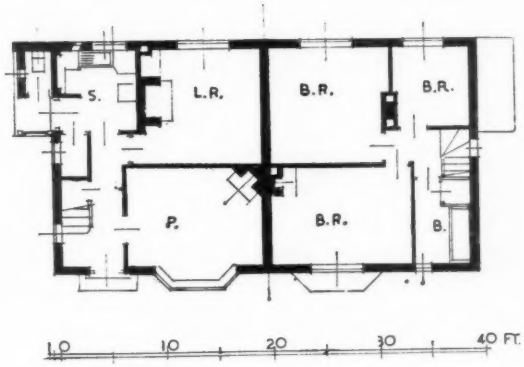
THE SITE.—*The selected ten-acre site is situated on the outskirts of Cambridge, and an agreement was come to with the Corporation by which the Society should have the use of this land, prepared with roads and sewers, at an annual ground rent of £50 for fifty years, at the end of which term both land and houses will revert to the Corporation.*

LAY-OUT, ETC.—*The site of a mediæval moated farm has been preserved as a children's playground, and forms a central feature of the scheme, while the rather awkward shape of the site and problems of levels for sewerage have been countered by the use of four culs-de-sac springing fanwise from the children's playground. No sheds, other than the standard ones designed by the architect, are allowed. These are feather-edge boarded, stained green, with wooden casement windows painted white and felt roofs. The tenants are charged a rent of 3d. a week for the use of each.*

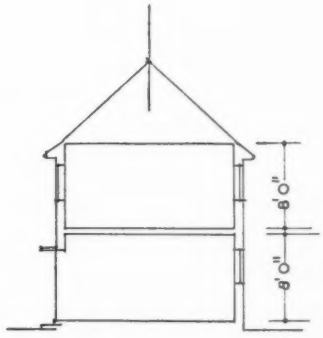
PLAN TYPES.—*The three plan types have accommodation as follows:— "A" type: Two living rooms and scullery bathroom, ground floor, and three bedrooms. "B" type: Living room, sitting room and scullery, ground floor, three bedrooms and bathroom, first floor. "C" type: Similar to the "B" type, but with slightly different plan. The types are built in blocks of two, three, four and six. The "A" and "B" types are built in single blocks of three, four and one block of six, the latter opposite the entrance to the children's playground. The "C" types are in pairs, adapting themselves to culs-de-sac and contributing to the variety of the scheme.*

CONSTRUCTION.—*The houses are faced with sand lime facing bricks. The roofs of the "A" and "B" types are covered with grey concrete plain tiles, and the "C" types with grey concrete interlocking tiles, apple-green interlocking tiles being used for houses in culs-de-sac. Wide-flange metal windows are used throughout, built direct in brickwork openings. The paintwork externally to all houses is apple-green, the downpipes, soffits and fascias battleship grey. The curved, lean-to roofs covering back porches and w.c.'s to the "C" types are of grey corrugated asbestos. All fencing is chain-link, finished with bitumastic paint.*

Above is one of the pairs of "C" type houses.



BLOCK OF TWO: HALF GROUND AND FIRST FLOOR PLAN

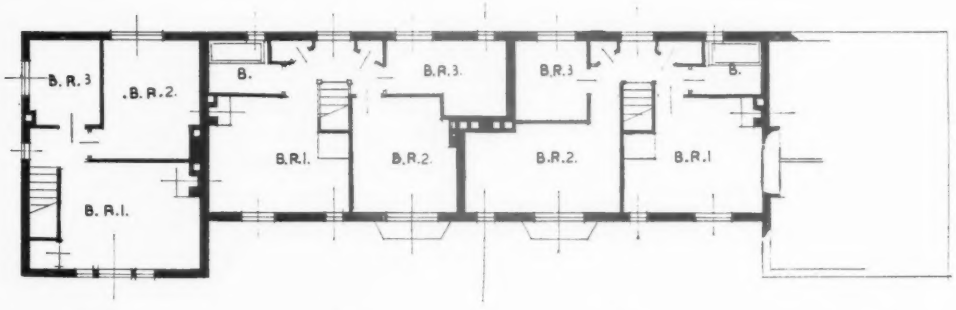


SECTION

HOUSING SCHEME, EASTFIELD,

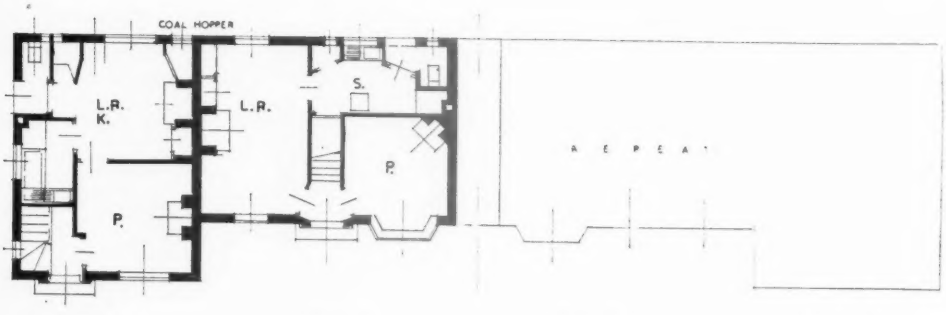
TURNER

Left, one of the four-dwelling "A" and "B" type blocks.



BLOCK OF FOUR: FIRST FLOOR PLAN

Type A Type B Type B Type A



GROUND FLOOR PLAN

Type A Type B Type B Type A

TYPICAL PLANS

CAMBRIDGE: BY C. W. CRASKE

CONTRACT.—*The contract figure for the scheme complete with paths and chain-link fencing was £28,450, an average of £284 10s. per house.*

Sheds for the scheme were extra to this amount, as these were not decided upon until the scheme was under way.

INTERNAL FINISHES AND SERVICES.—*All woodwork internally is finished with silver-grey stain with a finishing coat of copal varnish, and the metal-work internally with lime-green paint. All internal doors are five-panelled standard doors. All hot and cold water services throughout are in copper with bronze welded joints and all houses except the "A" types, which have a direct supply from the copper in the scullery bathrooms, are fitted with copper combination hot and cold circulating tanks in linen cupboards. Hand rails to all houses are of oak.*

Above is a general view of the scheme from point A *on site plan.*

BLOCK OF SIX: GROUND AND FIRST FLOOR

ARCHITECT'S SUMMER HOUSE,

DESIGNED BY ANTONIN RAYMOND

This house, situated on the high plateau of Karuizawa, in the midst of the mountain group around Asama, was built as the summer headquarters of the architect. A separate building contains a drawing office and living quarters for assistants.

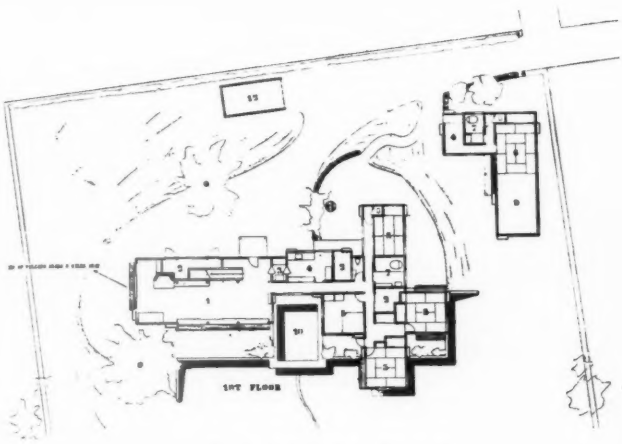
The house is raised on a base of lava concrete. The framing is of roughly dressed chestnut, and the weather-boarding of cedar. The roof is thatched with grass bound with straw rope and reeds.

The internal wall finish is of thin cedar planking, the floors of pine, and the fireplace and stack of lava concrete. The cypress furniture was made on the job. Sun blinds are of reed.

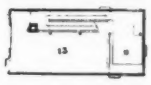
Above is a view of the principal front, and, left, a detail of the swimming-pool.

The photographs on the facing page are of the living-room, showing the studio above the dining recess, and, below, a detail of the ramp up to the studio.

ASAMA MOUNTAIN, JAPAN



MAIN FLOOR PLAN



SECOND FLOOR PLAN

KEY TO THE PLANS

1. Living room
2. Storage
3. Pantry
4. Kitchen
5. Bedroom
6. Draughtsmen's Dormitory
7. Bathroom
8. Servants' room
9. Studio
10. Swimming pool
11. Well
12. Garage
13. Upper part of living room

LETTERS FROM READERS

WALTER H. GODFREY, F.S.A., F.R.I.B.A

RAYMOND WALKER
Coal Utilization Council

D. M. MATHESON
(Secretary, The National Trust)

What the Public Wants

SIR,—I am constrained to thank you for your eminently sane Leader in the JOURNAL for August 15 on "What the Public Wants." Future historians of architecture will write in no uncertain terms of the tragedy which we are witnessing—the virtual control of a great building epoch by middle-class prejudice, which stultifies opportunity at every turn.

It is, however, when you attempt to allocate the responsibility that a doubt crosses my mind. It is possible that wherever we seek to place the blame, our censure will be ill directed. But no harm can come of trying among ourselves to consider how best the confusion in the public mind can be avoided. Is not this confusion due to the thoroughly unreal conflict between the so-called modern and traditional schools of design? Can we not win back the solidarity which every architect knows at heart is possible, if we base it on a wide enough conception of good architecture?

I have been as devoted a student of the architecture of the past as any, and yet I have felt nothing but admiration for the best productions of the modern school, and I could never understand why the younger architects should find it necessary to decry the great achievements on which the fame of architecture rests, in order to secure appreciation of modern developments. England is full of architecture, the charm of which has entered deep into the national consciousness, and, far from being out of date, it reveals more and more beauty as the years pass. To condemn it out of hand is not only bad policy, but the unreason of the condemnation simply mystifies the general public. Whereas an enunciation of the truth that the principles of architectural beauty remain constant and that these principles lie as much in modern as in ancient work would excite interest and a desire to probe below the surface to the things that really matter.

Those of us who are catholic enough to feel that we are at liberty to use the experience of the past as well as to take full advantage of the discoveries of today, find that our greatest obstacle lies in the "cult of the antique" which is so prominent a feature of middle-class psychology. As long as the body of architectural practice is divided into two warring factions, there is little hope of this disease being stamped out, and I cannot help thinking that controversy is putting off the day of our deliverance.

The disfigurement of the countryside, especially in the spread of our towns, is due to the search for a futile variety of style based less on any clear stylistic preference than on an uninformed taste for the picturesque. To this we must add the strong attachment of the suburbanite to a "detached" dwelling. But the sprinkling of the countryside with villas and bungalows is merely untidiness and sins against the first principle of architecture, which requires the assimilation of units in an ordered whole, on a scale sufficient to balance the features of nature. Compare eighteenth-century Bath with its barbarous recent outcrops and the lesson is evident. Large blocks of flats, the sweeping lines of crescents, and the serenity of quadrangles leave nature unspoiled, and add a new beauty to that of the landscape. Once the social tendency of the day leans towards sanity, taste will follow, and architects will again have their opportunity. But let us understand the direction in which we are going, and let us all pull together.

We shall achieve our end more surely by recognizing the unity of the architectural objective through the ages, for our case can then be made intelligible not only to the man in the street, but also to the men and women of the urbanized countryside.

WALTER H. GODFREY
Lewes

The New Housing Bill

SIR,—Mr. Pamphilon's letter is very timely and he raises questions that are too often overlooked in the design of houses for the poorer sections of the community.

His point about ventilation is particularly important and is one that has occupied the attention of this Council for some time past. For today, when so many of our people get their living by work carried out indoors, it is even more essential that both homes and office and factory buildings should be properly ventilated than was perhaps the case in a mainly agricultural community when men and women spent much of their time working out of doors.

Mr. Pamphilon makes special reference to buildings in which electricity is used for heating and appears to think that in such cases sufficient attention is not always given to the provision of automatic ventilation. He recognizes that the coal fire provides this by means of its flues and suggests that where coal flues are not incorporated in the building cross-ventilation should be obtained by arrangements of fenestration or by keeping doors as well as windows continually open. His ultimate object is entirely praiseworthy; but I cannot help feeling that the occupier will scarcely appreciate the prospect of living in a perpetual draught, and that Mr. Pamphilon has overlooked the simpler solution of providing adequate flues for all habitable rooms.

This would not in any way preclude the use of electric fires in bedrooms where that method of heating is preferred, but healthy conditions of ventilation would thus be maintained more efficiently and more economically than by any alternative method.

In fact, provided flues are incorporated in a building, all forms of heat can be used according to individual choice. There is, incidentally, the further point that in cases of sickness coal fires can be used to cheer the invalid.

It may be argued that the addition of a chimney stack adds to the cost and reduces the room-space. But surely this slight additional cost is not uneconomic when one considers the disastrous effects of badly ventilated rooms.

RAYMOND WALKER

The National Trust

SIR,—May I thank you for your excellent leading article in your issue for July 25. We are indeed in very real need of vigorous assistance for preserving both places of natural beauty, and also those places of historic interest which are not covered by the work of the Office of Works, which can only deal with buildings which are already unfit for habitation. Both Lord Lothian last year and Mr. Ormsby-Gore this year, spoke of the fact that the National Trust is the only body which can deal with the preservation of country houses and keep them for the purpose for which they were intended, that is for use.

It is unfortunate that the name of the National Trust conveys so much the impression to the public of a body with substantial financial backing, and that its work is so often associated with the process of "sterilization" instead of with the proper use of our countryside.

I think the policy of the Trust in regard to those few areas of agricultural land which it holds justifies our saying that we have shown that we want it to be used, and properly used.

D. M. MATHESON
London

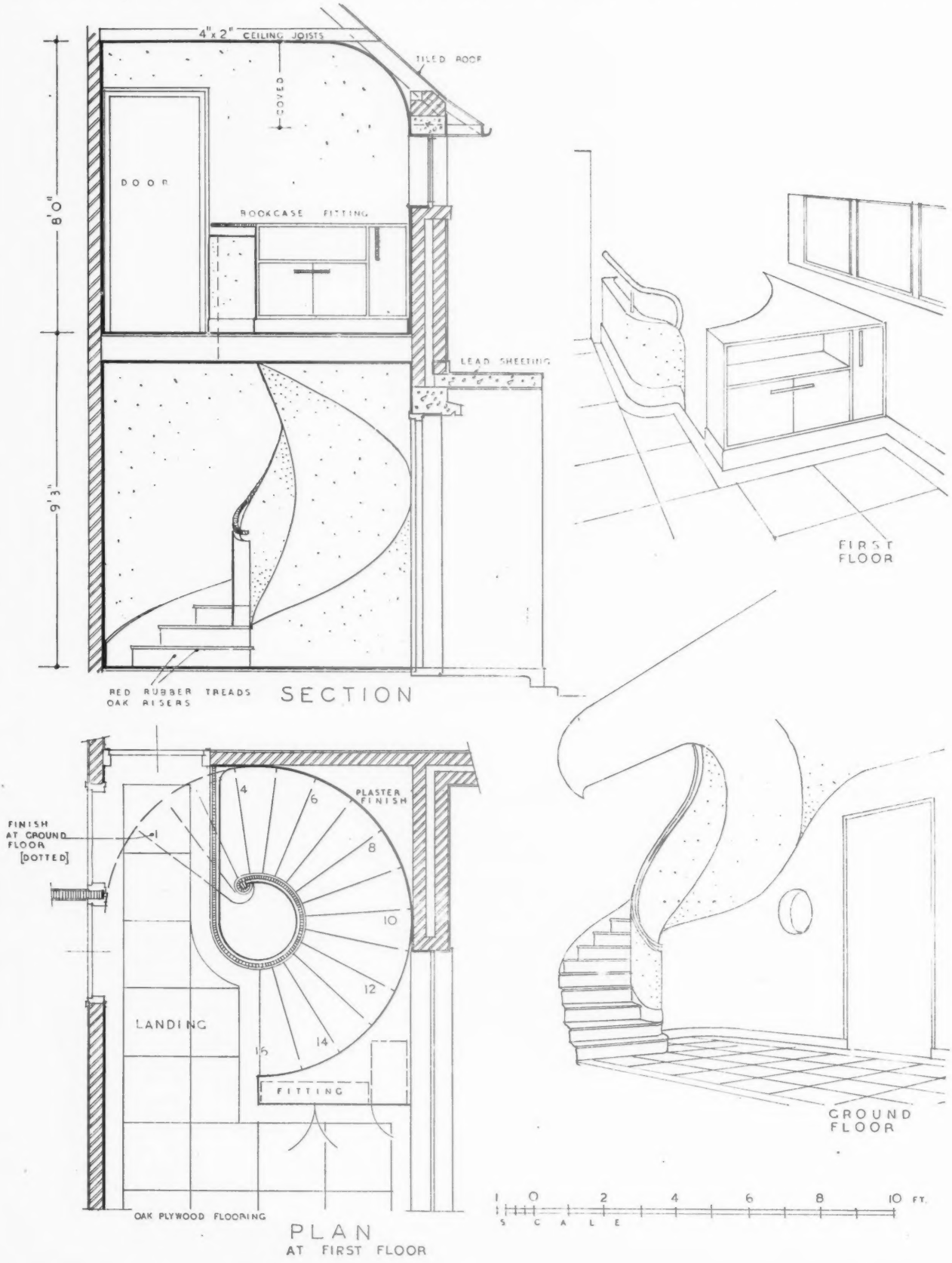
WORKING DETAILS : 315

STAIRCASE • HOUSE AT BOGNOR REGIS • CAMERON KIRBY

The circular staircase illustrated above was made in two sections in the joiner's shop and, when erected on the site, fitted to $\frac{1}{16}$ in. Risers are in oak, treads and nosings in deal covered with red rubber; the walls are distempered cream. Plan, section and sketches are shown overleaf.

WORKING DETAILS : 316

STAIRCASE • HOUSE AT BOGNOR REGIS • CAMERON KIRBY

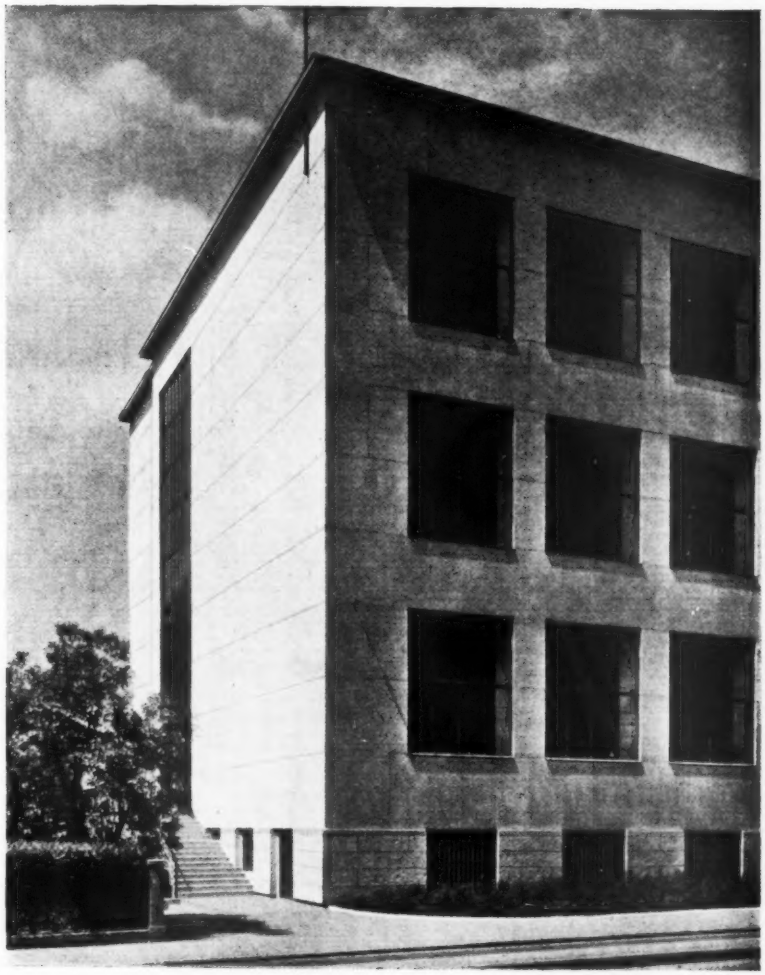


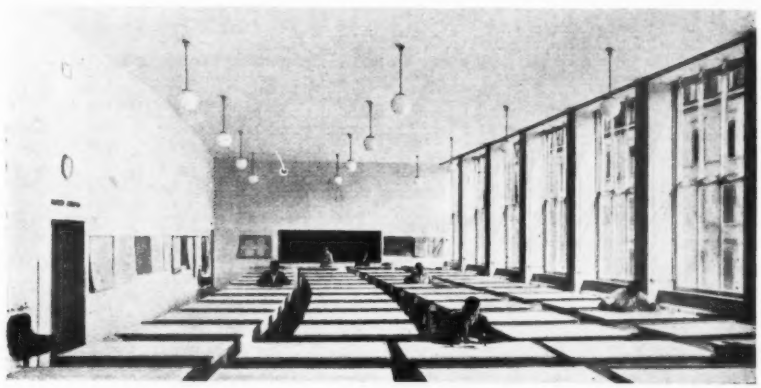
Plan, section and sketches of the staircase illustrated overleaf.

FILING REFERENCE:

WORKING DETAILS : 317

WALL FACING • TECHNICAL SCHOOL, ZURICH • MAX MEIER

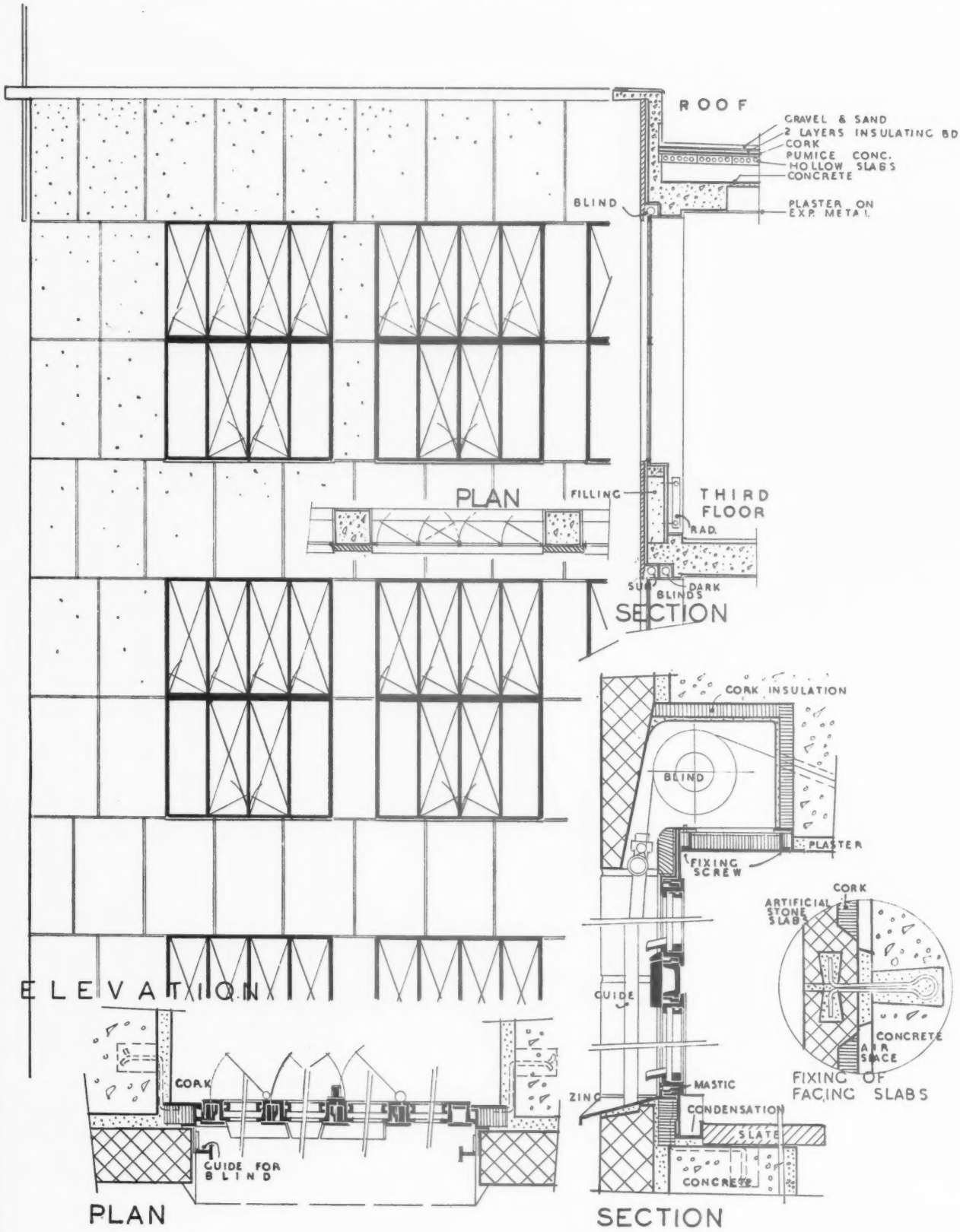




This building is faced with reconstructed stone slabs, cast in one piece with 1 in. thick cork linings. The slabbing is fixed to the R.C. wall-filling behind by cramps, being blocked out from it to leave a $\frac{3}{4}$ in. air space between. All windows have external sunblinds and some rooms are also provided with dark blinds on the inside of the windows : condensation channels are also provided (see section and details overleaf).

WORKING DETAILS : 318

WALL FACING • TECHNICAL SCHOOL, ZURICH • MAX MEIER



Elevation and sections of the wall illustrated overleaf.

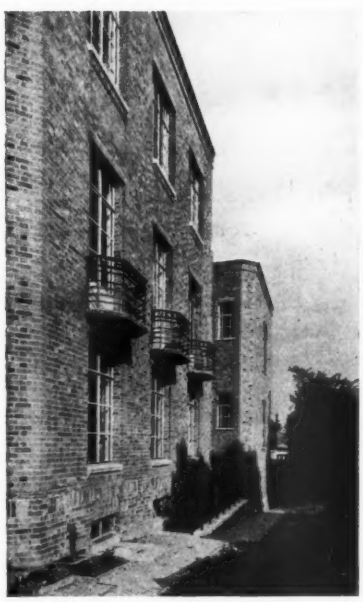
NEW WING, WESTFIELD COLLEGE, N.W.

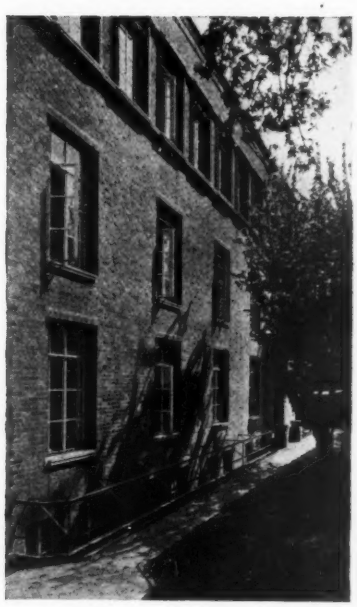
GENERAL SCHEME. — *The Orchard Wing is a new addition to Westfield College, a London University women's college in Hampstead. The building is primarily intended as a hostel, to which has been added a floor of laboratories for general use by all students of the College.*

SITE.—*The building stands at some little distance from the central college building, in the angle formed by the junction of two adjoining roads.*

ELEVATIONAL TREATMENT.—*The walls generally are in multi-coloured stocks, with a plinth and doorway surrounds in 2½ in. brown stocks. Flat arches to windows are of tiles, and windows steel throughout. Copings and string courses are in Portland stone, and balustrades in wrought-iron.*

The photographs show: Above, a general view from point **A** *on plan overleaf. Right, details from points* **B** *and* **C**.



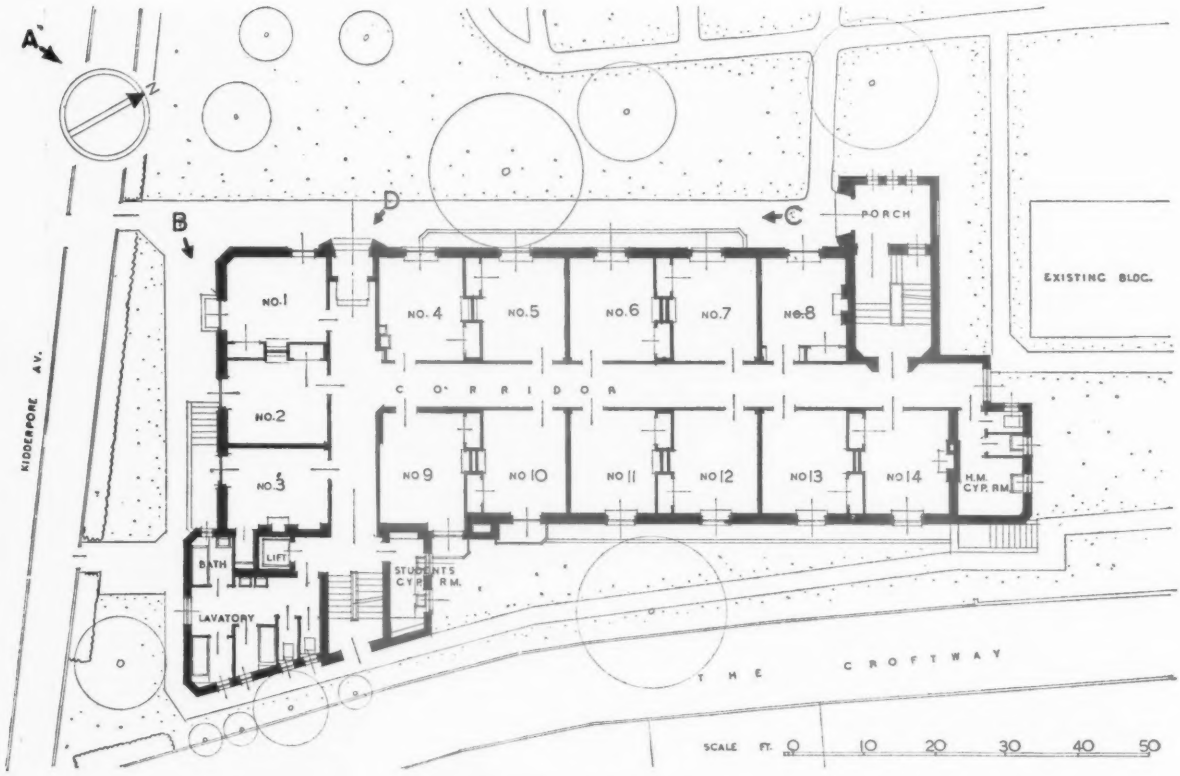


DESIGNED BY

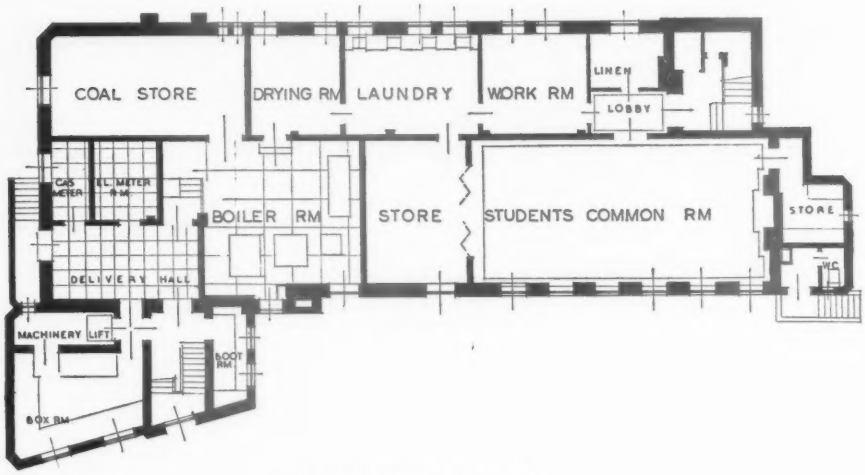
VERNER O. REES

C

NEW WING, WESTFIELD COLLEGE,



GROUND FLOOR PLAN



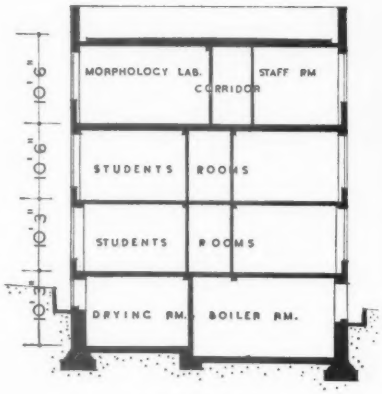
BASEMENT PLAN

CONSTRUCTION.—*The walls are of weight-carrying brick, the floors of hollow-tile, and the roof finish of heat-resisting asbestos composition slabs. Small-section steel stanchions are used for internal support. Partitions are of double hollow-tile.*

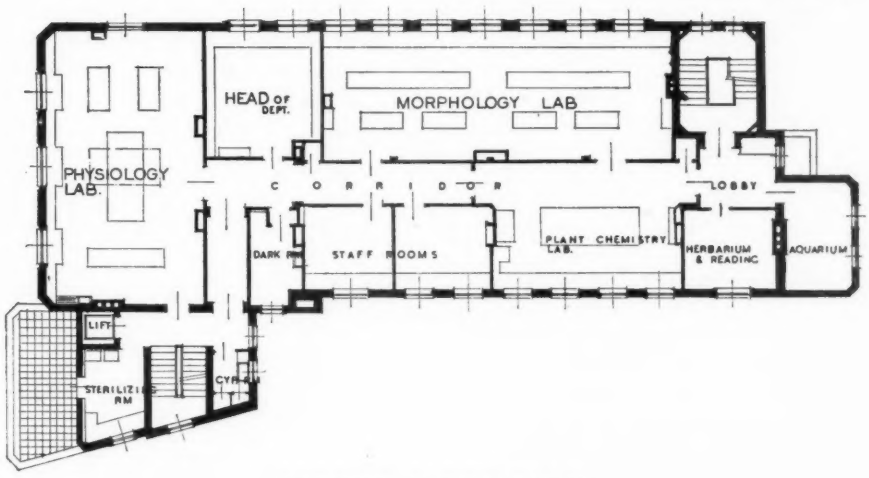
PLAN.—*The building is four-floored, with a large common room and service rooms in the basement; 26 study-bedrooms on the ground and first floors; a laboratory group on the second floor, and a roof garden over, containing botanical glass-houses. The hostel does not contain any facilities for meals, which are provided for in the central buildings.*

The boiler installation has been made adequate for both the present building and a proposed future extension. The boilers are coke-fired, and heating is on the low-pressure accelerated system. Hot-water supply is from calorifiers.

HAMPSTEAD: BY VERNER O. REES



SECTION

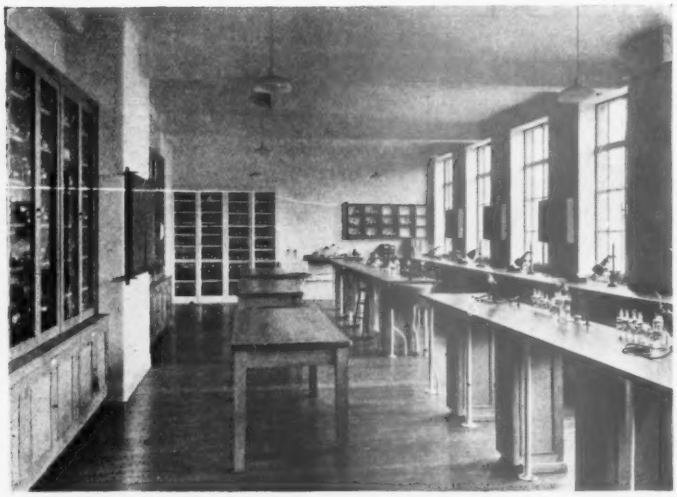


SECOND FLOOR PLAN

A detail of the main entrance from point D; and second floor plan and section. The first floor is similar in design to the floor below.

NEW WING, WESTFIELD COLLEGE, N.W.

DESIGNED BY VERNER O. REES



INTERNAL FINISH.—*Corridors and stairways are finished in plaster, clear blue enamelled. The staircases are surfaced in English oak, and the handrails are in bronze.*

The students' rooms average 15 × 12 ft., and are equipped with a built-in cupboard, concealed lavatory basins, recessed bookshelves, and a window seat covering a radiator fitted with a towel drying tray.

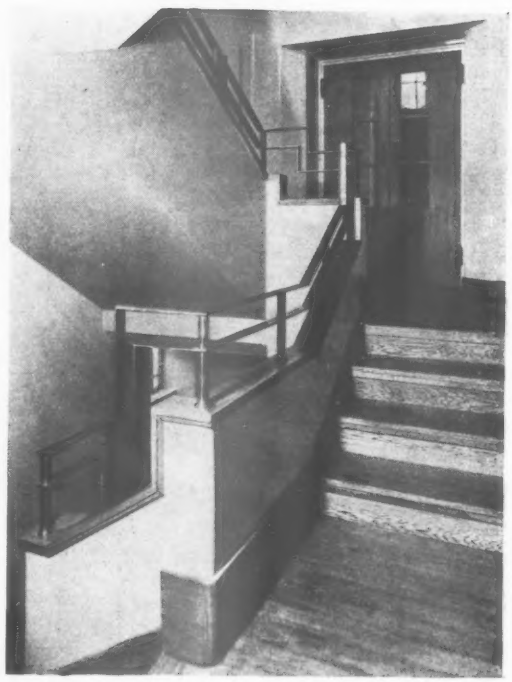
The furniture (consisting of writing-desk, chairs, tea-table and divan bed) has also been designed by the architect. Coal-fires are fitted in six rooms and gas-fires in the remainder. Floors are of gurjun, a Burmese hardwood, and the doors are of oak. The rooms are decorated in five colour schemes.

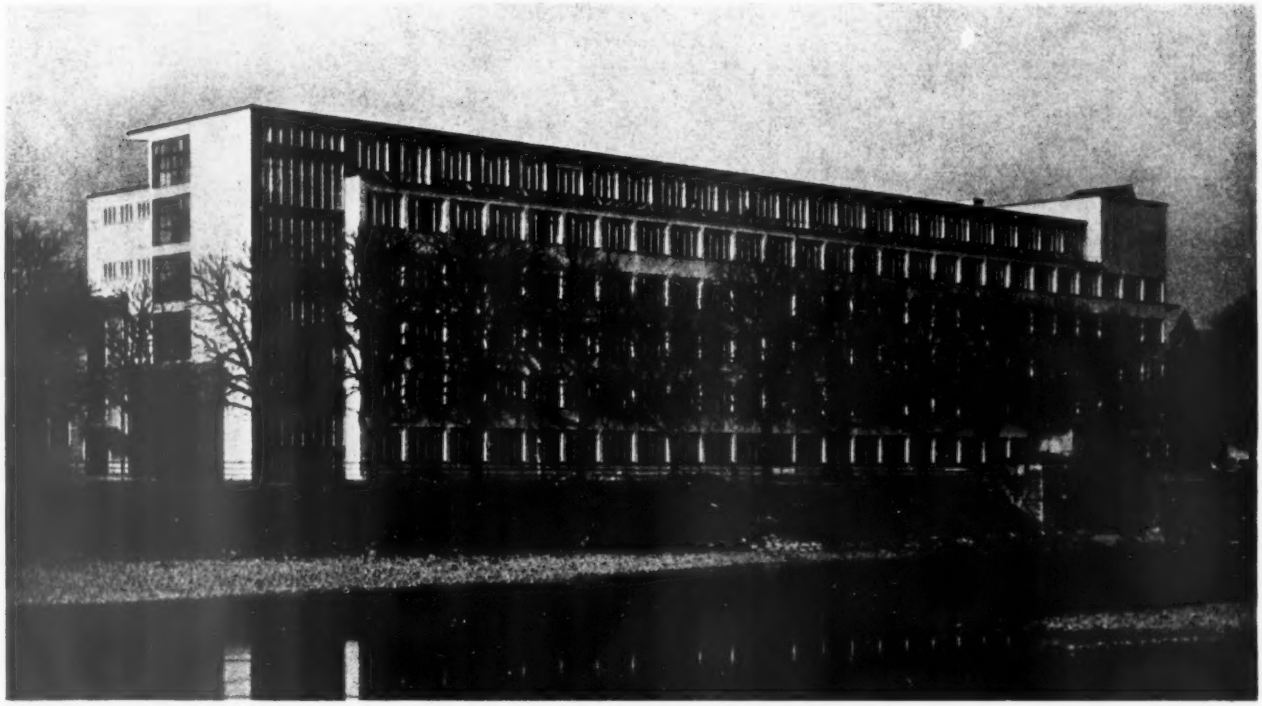
The laboratory walls are finished in cream, and the photographic and dark rooms are in a light-absorbent orange. Floors are in hardwood strip, fittings in Oregon pine, and benches in teak.

The common room is finished in dove-grey, with the ceiling touched in light green. The floor is of gurjun blocks.

The photographs show: top, a laboratory; below, a general view of the common room; right, the north staircase.

For list of general and sub-contractors, see page 321.





Trade School, Zürich, from "Technical College Buildings."

LITERATURE

EXPERT ADVICE

THE PLANNING OF TECHNICAL COLLEGES

[*BY H. MYLES WRIGHT*]

Technical College Buildings: their Planning and Equipment. A Report by a Joint Committee of the Association of Technical Institutions and the Association of Principals of Technical Institutions with representatives of the Royal Institute of British Architects, the Institute of Builders, and a member of the staff of the Board of Education. Obtainable from the Hon. Sec., Joint Committee on Technical College Buildings, Chelsea Polytechnic, Manresa Road, London, S.W.3. 3s. post free.

THE object of a review is, presumably, to help the reader to come to a decision upon the important question of whether or not a book is worth buying. Or, at the least, one may suppose that this was the original idea behind reviews. It is true that the modern world of literature has become accustomed to its more dexterous members finding in these notices other and wider opportunities; to their use of the space at their disposal for exciting rides on private hobby horses, for paying little outstanding accounts of gratitude or otherwise, or just for a nice straightforward chat about their own early struggles. But these improvements came later.

A reviewer in this JOURNAL must not overlook developments in reviews outside the architectural world; he must remember that the last thing the public is accustomed to expect in a review is any opinion on the book reviewed. Opinions can often be very dull.

If, therefore, any architectural publication, however stimulating its title, must be dealt with circumspectly, how can a "report" achieve due measure of attention? The citizen of Great Britain, be he never so intelligently anxious to learn, is apt to feel that he has been caught that way before, and to read no further. But *Technical College Buildings* must be made a glorious exception to a habit not always misguided.

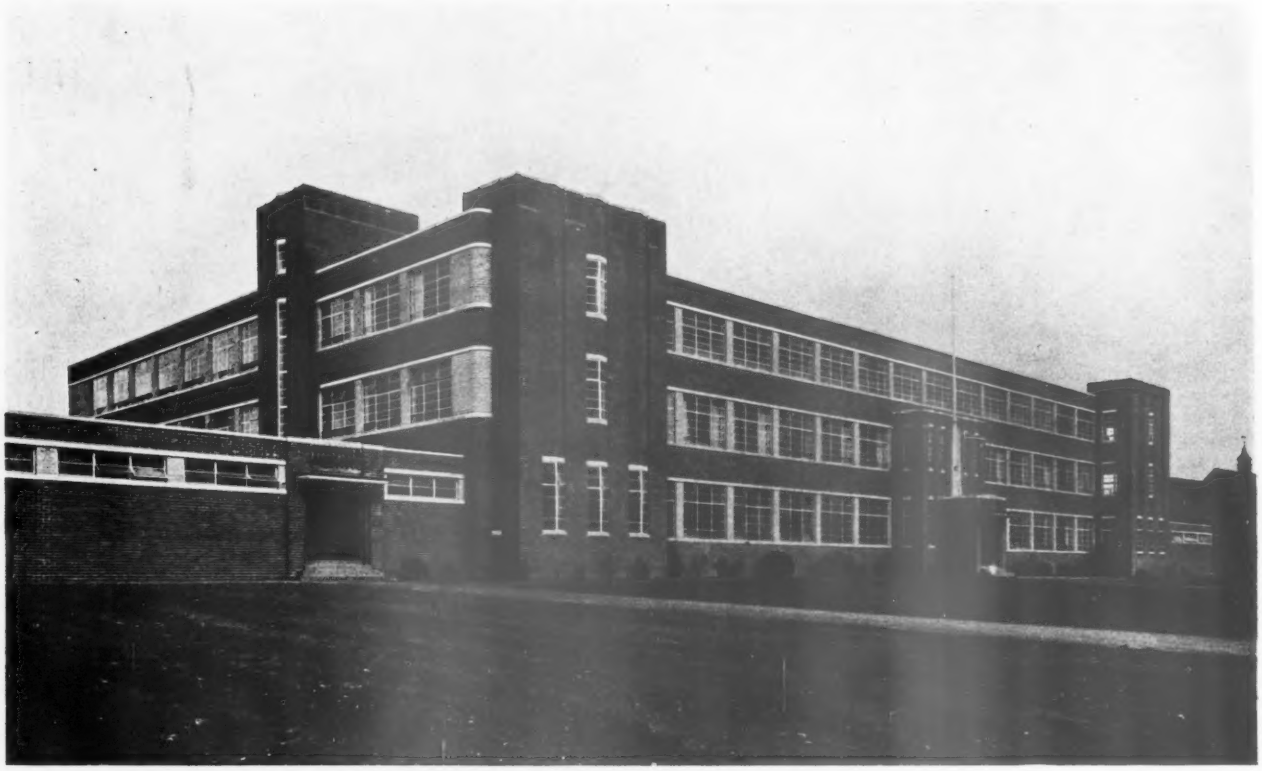
The origin, the substance, and the presentation of this Report are all admirable.

In 1932 the two bodies most concerned with technical education in this country came to the conclusion that both knowledge and the literature of the subject of technical college buildings were small and meagre; and that architects and education authorities were at one in their need for enlightenment.

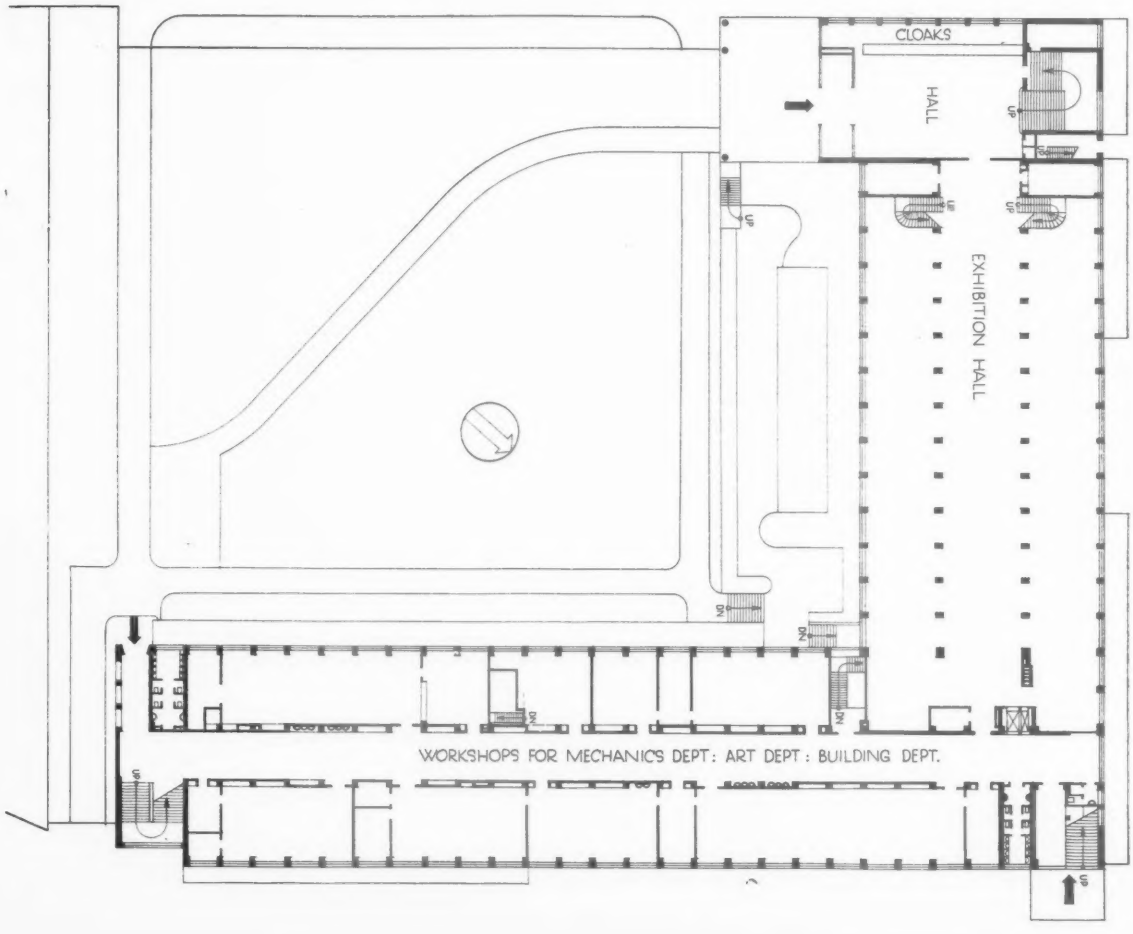
Such things have been felt, and said, before by those specialists whose lot it has been to work in buildings devoted to their specialities. But the representatives of technical institutions did not stop there, as so many have stopped before. They set up a joint committee to prepare a comprehensive report on the best features of planning and building practice in regard to technical colleges. That report, which is the subject of this review, deserves thoughtful study by every architect.

Technical College Buildings is divided into five sections.

In the first and general chapter the committee approach their subject in a manner most inspiringly free from rigid preconceived ideas as to best solutions. There is here no wangling of awkward facts to fit the tightness of a still more awkward frame. Design, planning, services and equipment, structure and materials, are all dealt with, but the various proved alternatives are left to plead their several causes for themselves. The authors' determination to help and not to hinder is excellently expressed by all that is



Willesden Technical College. From "Technical College Buildings." Below, the ground floor plan, Trade School at Zürich.



said on the subject of design—that rock which has wrecked at the outset the vessels of innumerable committees concerning public buildings :

> While technical college buildings should not be devoid of architectural interest, it is possible to obtain a dignified effect in a simple manner by relying upon skilful composition and the judicious employment of modern materials, rather than upon the more elaborate decorative forms associated with past architectural periods. It will be obvious that a considerable saving will be effected by adopting this suggestion.

The gentle hint which has been embodied in this refusal to dictate to the architect in a province especially his own will not prove the less inspiring to the profession if it should also cause a gentle sense of shame.

The second and third chapters of the Report deal with general accommodation, and with the specialized accommodation and equipment necessary for each of the multitude of different departments. In these the authors are, as they should be, authoritative, but they are never dogmatic. What is required is clearly stated, as also are methods of arrangement and equipment which have been found successful in practice, but always as considerations which must be noted and comparatively valued—never as emphatic stipulations.

The best plan for any building must always be the most skilful compromise arrived at after this comparative valuation of many desiderata. And the authors have never allowed their views upon the arrangement and equipment of specialized departments to obscure their realization of this basic function of an architect.

In their own words " the joint committee felt that it would be a mistake to attempt to standardize the design of Technical Colleges . . . (for) in no branch of education is flexibility more needed . . . to provide for development in teaching technique."

This desire to avoid rigidity of plan form is maintained throughout.

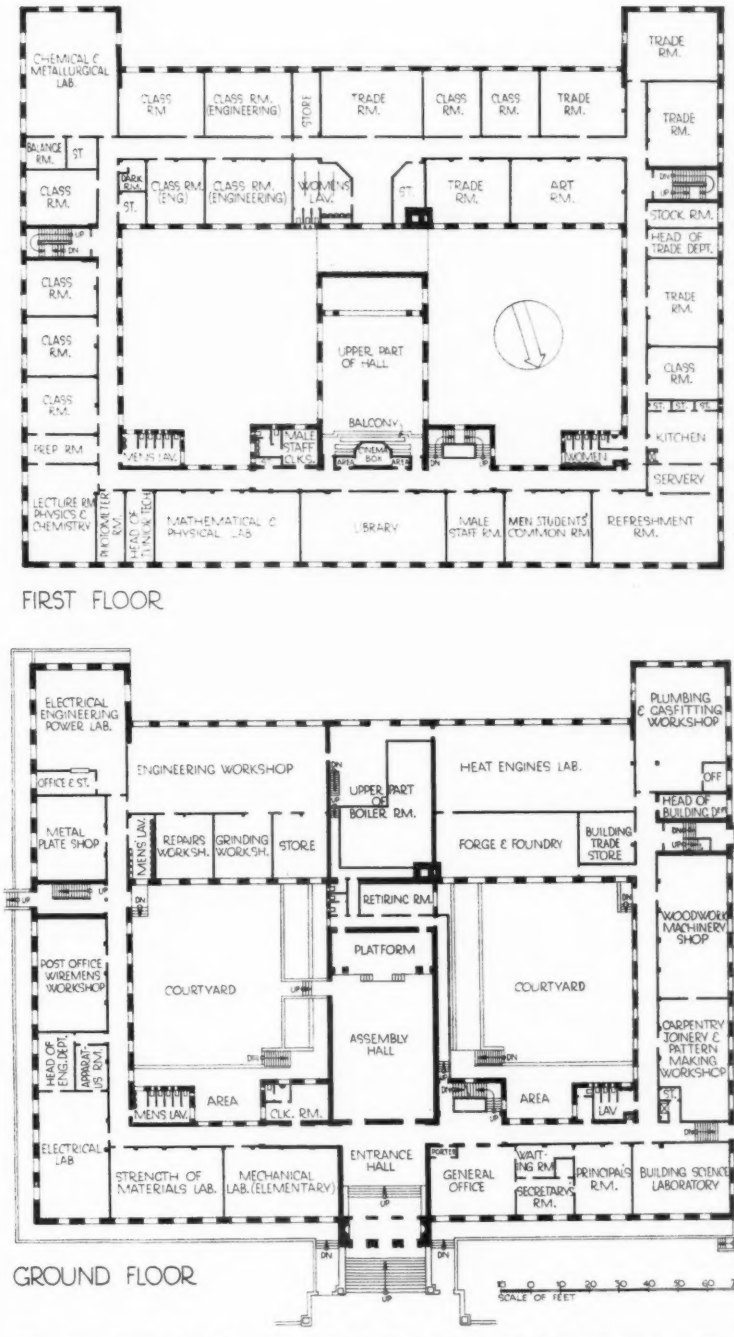
The last two sections of the Report are devoted to illustrations and plans of recent technical colleges both in this country and abroad, clearly presented and accompanied by notes concerning cost, construction, materials and finishes. It is significant that almost all of the plans illustrated are of what is called the " free " type, in which the obtainment of the most efficient plan rarely shows signs of modification to conform to a balanced elevational expression. The freshness of outlook on the part of the committee in such a matter holds much encouragement for the future.

The Report is completed by a bibliography and by a list of references to additional illustrations of technical colleges in the architectural periodicals.

To this list there should now be added the recently published *The New Architecture and the Bauhaus*, in which Walter Gropius outlines a system of technical education expressly designed to secure the best training for a youth about to enter a world of mass production.

Technical College Buildings should be bought by all architects, and not only by those now engaged upon the Bolton competition—to whom it must come as assistance most extremely opportune. In conclusion, it may be said that amongst their many grants the Carnegie Trustees can have made few so constructively helpful as that which has enabled the joint committee to publish this Report in a manner worthy of its excellence.

And if other specialists would follow that committee's example in so instructive a listing of that which they look to find in the buildings designed for their service, the architect's lot would be a happier one.



The ground and first floor plans, South-East London Technical Institute. From " Technical College Buildings."

TECHNICAL SECTION: 28

HEATING, AIR CONDITIONING AND MECHANICAL EQUIPMENT

BY OSCAR FABER

O.B.E., D.C.L., D.Sc., M.Inst.C.E., Hon.A.R.I.B.A., A.M.I.E.E., F.C.G.I., M.I.H.V.E., M.Am.S.H.V.E.

AND J. R. KELL, M.I.H.V.E.

PIPE SIZING FOR HOT WATER SUPPLY SYSTEMS
(Continued)

(*d*) PIPE SIZING FOR SECONDARY RETURNS

HAVING established the sizes of the secondary flow pipes it is a simple matter to calculate the heat emission from the circulating portions of these from Table XXXIV which is given again below (Figure 163) for the particular temperature applying to hot water supply systems, both for iron and copper pipes.

To this must be added the losses from linen cupboard coils and towel airers, average transmissions for some examples being also given in the table.

The secondary returns must also carry sufficient water for their own heat emission so that the temperature drop back to the cylinder does not exceed a predetermined maximum such as 20 deg. for a small system or 30 deg. for a larger. Losses for these returns must therefore be added to each section, and since their size is not yet known they must be assumed at, say, one or two pipe sizes less than the flow in each case.

With the above totals marked on the plans for each branch or section of main it is possible to arrive at totals working back to the cylinder exactly as for a heating system.

The circulating pressure may be obtained as described on page 30, by determining the average height from the centre of cylinder to average point of heat emission. The appropriate circulating head per foot of height may be taken from Table XXXVIII, allowing

flow 150 deg. } for large installation.
return 120 ,, }

flow 140 deg. } for small installation.
return 120 ,, }

The values will be found to be 0·104 and 0·068 in. per ft. of height respectively. Alternatively if a pump is necessary owing to the long runs or mains below the cylinder level, the head may be taken at 5 ft. for most systems, and 10 ft. or 15 ft. for large buildings or institutions with considerable distances between the blocks. The pump-head necessary may be taken by allowing a maximum of 1 in. w.g. per foot of travel allowing the total run of return pipe, plus one third of the run of flow pipe (on account of its larger size) plus 25 per cent. allowance for bends and resistances.

Having determined the head, whether for gravity or pump circulation, the resistance of the flow mains (the sizes of which have already been determined) to the furthest point should be calculated as for the accurate sizing of a heating circuit. This figure, deducted from the total circulating head, will give the available pressure for the return mains. The latter divided by the feet run of return main including allowance for bends and single resistances, will give the available pressure per foot run.

From Table XXXIX a schedule may then be compiled for the pounds of water passed for the various sizes of pipe. The pounds multiplied by the temperature drop will give the B.T.U.'s transmitted for each size.

The sizes of the secondary returns for the transmissions already noted for each section may then be marked on the plans direct from this table, by taking the B.T.U.'s for each pipe as the maximum in each case.

It may so happen in certain cases that the return pipe may be found to be larger than the flow. This means that the circulation has determined the size rather than the outflow requirements. In such case the flow should be increased so as to be equal to the return. In general it will be found that the latter are smaller than the flows.

This method will not be entirely accurate, since by going over the sizes again now that their approximate diameters have been fixed it might be possible in some cases to reduce them. The nearer branches similarly might be recalculated. It is very doubtful if this is ever worth while in the case of a hot water supply system, since the saving in initial cost would be very slight and quite incommensurate with the time taken to do it. Furthermore, diameters on the large side are desirable when it is remembered that furring may reduce the internal area after a period of years. Indeed, if the water is known to be particularly hard it is worth considering the increase of the whole of the sizes, both flow and return, by one size throughout above that theoretically required.

An example of the sizing of the secondary returns is not given, as the method follows exactly the same principles as were given in full previously for the sizing of heating mains.

FIGURE 163

TRANSMISSION OF H.W.S. PIPES AND FITTINGS IN B.T.U.'S PER HOUR

Nominal Diameter	*B.T.U.'s per hour per lineal foot—Bare pipes	
	Galvanized Iron	Copper
in.		
½	48	30
¾	61	44
1	70	55
1¼	85	65
1½	96	75
2	113	96
2½	135	116
3	165	147
3½	182	170
4	203	190
5	247	236
6	291	280

*For lagged pipes divide these figures by 4

Mean water at 150 deg. F.
Air at 60 deg. F.
Linen Cupboard Coils :
2 in. dia., containing 18 ft. of pipe, say, 2,000 B.T.U./hr.
Towel Airers :
3 ft. × 3 ft. plated, 3—1¼ in. rails, say, 800 B.T.U./hr.

(*e*) HOT WATER SUPPLY PIPES IN GENERAL

The choice of materials for hot water pipes will depend on the water, which is really a separate subject. Galvanized iron is the cheapest that may be considered, as bare black iron pipes would cause discoloration of the water in all except special cases. It must be remembered, however, that the galvanizing is damaged whenever a pipe is cut or bent, and frequently it is only the deposit of fur or lime which eventually protects these portions. Galvanizing after bending is often specified for the best work.

Copper piping is undoubtedly worth while wherever its cost can be met, owing to its permanence and cleanness of bore, which reduces furring. With the increasing facility of coupling brought about by new methods, its use will no doubt become more widespread in the future.

With certain waters of the acid type, tinned copper is advocated, though a chemist's report is most desirable on any specific case, as sometimes tinning may do more harm than good.

(*f*) INSULATION

With a hot water supply system it is most desirable that every foot of circulating pipe should be insulated, as the losses may mount to considerable figures over a year for even a small system, remembering that the losses are probably going on twenty-four hours a day summer and winter.

The heat emitted from such pipes if not insulated is also objectionable from the point of view of the temperature in the building in hot weather. For this reason alone they should be properly lagged.

Such insulation may take the form of any of the non-conducting coverings already given in detail for heating systems. It is needles to say, of course, that the boiler and cylinder should also be adequately lagged, unless the latter is used for the warming of a linen cupboard in a small domestic system.

(*g*) PUMPS

As for the heating systems, pumps of centrifugal type are most suited for the purpose, and again an automatic by-pass valve is desirable for gravity circulation when the pump is stopped. The pump body should be of a type readily opened for inspection and for removal of scale, and where the water is corrosive should be of gunmetal.

(*h*) VALVES

Valves on hot water supply systems often give trouble due to fur or scale collecting on the faces, which in time renders them useless for shutting off the water. For this reason plug cocks are much to be preferred, especially if of the lubricated type, as Fig. 163. These can be relied upon to shut off tight even with the most severe internal encrustation.

HEATING BY GAS

THE CASE FOR GAS

Town gas, as a fuel, is both ashless and smokeless, and is available "on tap" in almost unlimited quantities. Its use is not restricted by considerations of maximum demand as is the case with electricity, since it can be stored in gasholders for use by the consumer at any time.

In operation gas calls for less labour than that required with any other fuel except electricity, with which it is on a par. In fact, when thermostatic control is applied it is probably true to say that no attention whatever is necessary.

Gas being a "refined fuel" is necessarily high in cost. That this must be so will be appreciated from a comparison of Figs. 164 and 165. Fig. 164 shows diagrammatically the processes involved in supplying gas to a consumer, and it will be seen that only about one-fifth of the heat value in the raw coal is delivered into the pipes. The coke and by-products all bring in revenue, however, and help to reduce the cost of gas, but maintenance and sinking fund charges on miles of buried mains in the streets enter into the charges to be made.

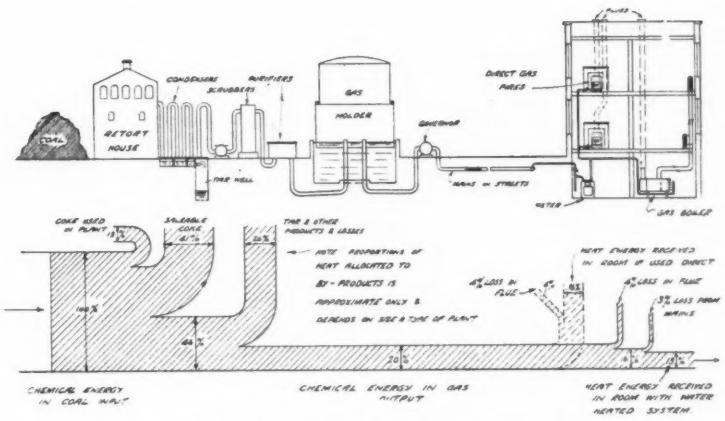


Figure 164. *Diagram of transmission of heat by gas.*

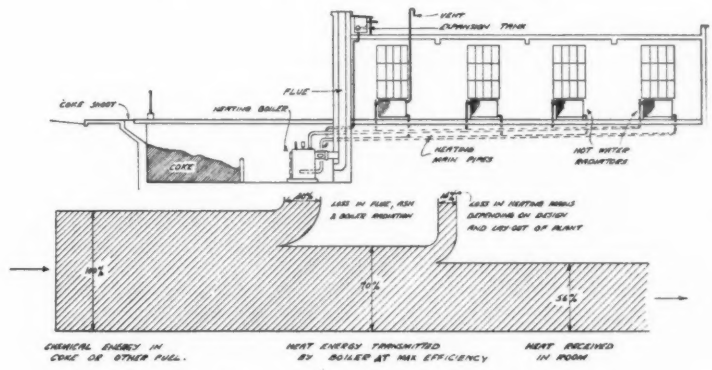


Figure 165. *Diagram of transmission of heat by solid fuel.*

Fig. 165 shows the corresponding process and losses involved in firing a boiler direct with solid fuel.

The relative costs at 100 per cent. efficiency of various fuels were given in Table VI, thus :—

	Pence per therm
Gas at 9d. per therm.. ..	9d.
,, ,, 6d. ,, ,, ...	6d.
Oil at 80s. per ton	2·4d.
Coal or coke at 40s. per ton ..	1·8d.
,, ,, ,, 20s. ,, ,, ..	·9d.

In considering the above relative figures the following points must be borne in mind :—

(1) Rates for gas used *in large quantities for heating* are now being quoted at less than 6d. a therm. In some instances a figure down to 4½d. may be obtained in London, and if a two-part tariff is adopted, it is understood that in some cases a rate of 4d. a therm plus a standing charge is given. In the provinces, particularly in the North of England, prices of 3d., 2d., and in one case 1½d., a therm are available for large users. Each case must therefore be treated on its merits in relation to the policy of the particular gas company concerned.

(2) Gas heated boilers and appliances maintain their initial high efficiency of 80 to 90 per cent. indefinitely with only periodical maintenance, but solid and liquid fuel boilers tend to drop when the heating surfaces become coated with carbon and ash and when the air for combustion is badly adjusted. Air supplied to a gas burner remains fixed once it has been set, whereas with oil firing it is liable to be increased so as to keep the flame bright and clean, with a corresponding drop of efficiency. With solid fuel hand fired boilers, as has already been pointed out, the fuel-air ratio may vary over wide limits and overall efficiencies of no more than 50 per cent. may be general in practice. Magazine fired boilers with automatic controls do not suffer from this defect, though they must be kept clean for maintained high efficiency.

(3) Thermostatic control may be applied to gas boilers in a very effective manner, such that it may properly be said that the heat supplied is in direct proportion to that required. This is also very largely true of oil firing, though there is often a residue of heat in the boiler which is lost on shutting down. Solid fuel boilers suffer the loss due to night firing or banking up, which has already been dealt with. The proportion which this loss bears to the total consumption depends on the type of building in question. For instance, with a school which opens at 9 a.m. and closes at 4 p.m., obviously

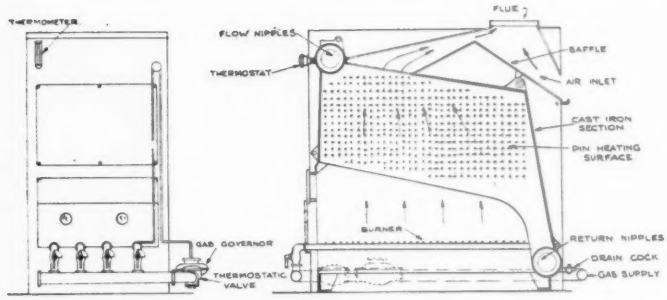
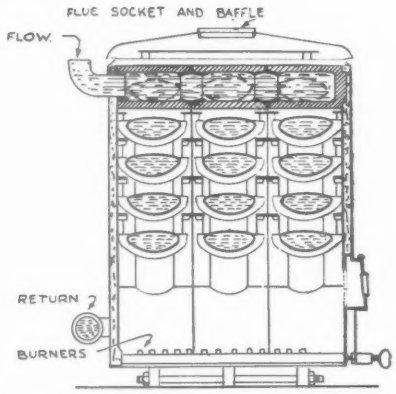


Figure 166. *Cast iron sectional gas boiler ("Ideal").*



Right: **Figure 167.** *Cast iron sectional gas boiler ("Rex").*

a gas fired system will be called on to supply less heat for the same internal temperature during occupation than would a solid fuel boiler which must be kept alight all night.

With the above considerations in mind it will be apparent that less heat needs to be supplied in practice with gas firing as compared with solid or liquid fuel to achieve the same result.

The ratio of heat input necessary with gas firing at 85 per cent. maintained efficiency and indifferently run solid or liquid firing at 50 per cent. efficiency over a season is 1 : 1·7. Allowing for the other factors the ratio may in some cases be brought up to 1 : 2.

This appears to be borne out in practice from a number of comparative figures of running consumption which have been examined. In certain instances the ratio is as high as gas 1, oil or coal 2·5.

Taking some relation such as 1 : 2 it will be seen that the equivalent cost of oil will be 4·8d. and coal (40s. a ton) 3·6d. a therm. If gas can be had at 6d. a therm the total running costs might in some cases be nearly equal when labour costs are taken into account, whilst at 4½d. a therm or under an actual saving might be made.

This can be no more than a general statement and specific cases must be considered on their merits. From the point of view of convenience, of course, gas is superior in every respect.

This briefly is the case for gas. It deserves fullest consideration now that low rates and highly efficient apparatus are becoming available.

Gas Appliances.—Gas may be used in local heaters for heating or hot water supply, or in central heating or hot water supply, or in steam boilers connected to a system of pipes for distributing the heat in the conventional manner.

Local heating and hot water supply with gas has its limitations, and the case for gas as discussed above is primarily on the basis of its being used for the firing of boilers. The latter will therefore be discussed first, but before so doing it will be well to clarify the method of charging for gas.

GAS CHARGES

Under the Gas Regulation Act, 1920, town gas is charged on the basis of the therm, which is equivalent to 100,000 B.T.U.'s. Each gas undertaking is required to declare the calorific value of the gas it supplies, and this is to be maintained within 5 per cent. The calorific value is defined as "the number of B.T.U. (gross) produced by the combustion of 1 cubic foot of the gas measured at 60 deg. under a pressure of 30 in. of mercury and saturated with water vapour."

For convenience gas is measured by volume, but since the heat value per cubic foot is constant the B.T.U.s supplied in any given volume is easily calculated. Thus:

$$\text{Therms} = \frac{\text{cubic feet} \times \text{calorific value}}{100{,}000}$$

Calorific values vary between 350 and 560 B.T.U.'s per cubic foot. A common figure is 500, this being normal in London. On this basis 1,000 cubic feet will be equivalent to

$$\frac{1{,}000 \times 500}{100{,}000} = 5 \text{ therms}$$

GAS BOILERS

Figures 166 to 170 show various types of gas fired boiler.

Figs. 166 and 167 show boilers of cast iron, built up in sections with nipples similar to cast iron sectional boilers for solid fuel. They have the same limitations as to maximum head pressure and life as the latter, but are cheaper in first cost than other types. The outputs vary from 22,000 B.T.U.'s to 1,300,000 B.T.U.'s per hour. Both types are suitable for hot water heating or indirect hot water supply, and Fig. 166 may also be used for low pressure steam.

The gas jets are luminous and when the thermostatic control shuts them down they always remain alight on a low flame. Thus no pilot light is necessary, though with some forms one is fitted.

A gas governor is usually fitted to maintain a steady gas pressure, and this is followed by a diaphragm valve operated by gas pressure through a small pilot pipe controlled by the thermostat. In one type the thermostat is operated by means of a bi-metallic element.

An essential part of any gas boiler is the baffle over which the gases pass before entering the flue pipe. This device tends to prevent condensation in the flue by admitting additional air into the pipe, thus reducing the relative humidity, and at the same time it prevents down draughts from extinguishing the flame. Such an eventuality would, of course, be highly dangerous since the boiler and flues would quickly become charged with an explosive mixture. In the two forms shown the baffle is incorporated as part of the outer jacket, and it will be observed that any down draught would be deflected outside the casing rather than into the boiler combustion chamber.

These boilers are generally very neatly enclosed in an enamelled jacket packed with insulating material. The space occupied is less than with solid or liquid fuel boilers, partly due to the more compact size and partly on account of the absence of fuel storage. This, of course, is common to all gas boilers.

The efficiency of the type shown in Fig. 166 is stated to be 80 per cent. and of that in Fig. 167, 85 per cent. At these efficiencies the condensation on the heating surfaces is slight at normal water temperatures.

Figs. 168 and 169 show two types of

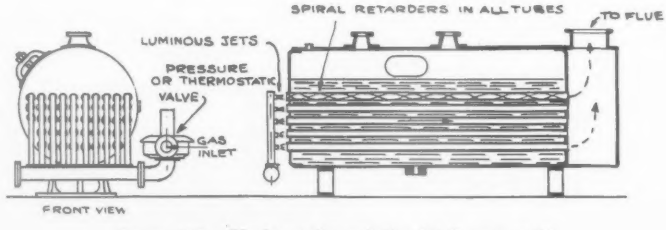


Figure 168. *Horizontal gas boiler ("Bonecourt").*

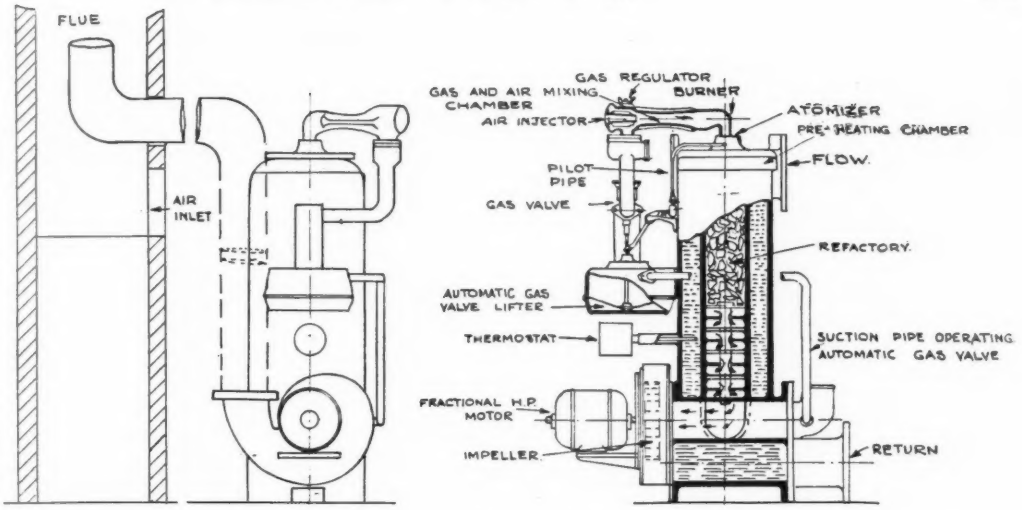


Figure 170. *High efficiency gas boiler ("Vesta").*

riveted steel gas boilers with fire tube heating surface. Either is suitable for water heating or for high pressure steam, on account of which they are frequently used for giving steam supplies to kitchens, laundries, printing works and other places where a small supply of high pressure steam is necessary and where space is a serious consideration.

Fig. 168 has plain tubes with spiral metal "retarders" in each. These serve to produce a higher transmission from the heating surface due to the swirling effect on the gases. The burners are luminous, and when the thermostatic or pressurestat control cuts down the gas, these jets always remain alight as small flames, which are not then pulled through the tubes but burn upwards into the atmosphere. This makes the boiler house hot if it is in a confined space, and the heat so produced is wasted. The working efficiency of this type is stated to be about 84 per cent.

Fig. 169 has tubes of a special wave form, again with the object of raising the transmission per foot run over that of plain tubes. The tubes are stated to be 2½ times as effective per foot of length as plain tubes.

The burners and controls are similar to the type shown in Fig. 168, but as the boiler is vertical no waste occurs on minimum flame. The efficiency is about the same for both types and each range in size from about 100,000 to 2,000,000 B.T.U.'s per hour.

Fig. 170 illustrates what is probably the most efficient gas boiler yet developed commercially. The impeller or fan draws air through the system and immediately on starting this lifts the gas valve and pilot valve. The gas is mixed with the air to form an explosive mixture with no excess oxygen whatever and this enters through the atomiser at a speed in excess of the rate of flame propagation. The combustion takes place in the silica refractory material, which glows at white heat at a temperature of about 3,700 deg. F. Subsequently the gases pass through the tortuous passages in the lower portion of the body and are expelled by the fan to the flue. The efficiency is stated to be 90 per cent., and test figures up to 92 per cent. have been obtained, the gases being brought down to within 20 deg. of the return water temperature. As the system operates on the counter-flow principle, with the hottest gases meeting the

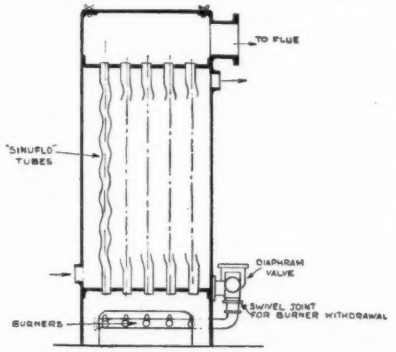


Figure 169. *Vertical gas boiler ("Sinuflo") for steam or hot water.*

hottest water and the coolest gases the coolest water, the exit temperature with a return water at 140 deg. may be no more than 160 deg. F. Copious condensation is thus produced in the lower portions, which, whilst raising the efficiency, would cause corrosion to occur were not this prevented by the use of a special alloy for the metal of the boiler. Means are provided for draining this condensation away.

The gases are discharged in a pipe to the flue, which has to be six times the area of the pipe so as to dilute the mixture and reduce condensation in the stack.

The thermostat is placed near the return inlet so as to respond more quickly to the call for heat, at the same time preventing overheating. This thermostat is electrical, simply starting and stopping the fan.

When the fan is stopped the main flame is completely extinguished and the small pilot only remains alight, thus the no-load consumption may be no more than 1 or 2 cubic feet per hour.

One incidental advantage of the downward flow of gases is that when the fan is stopped the flue effect of the high temperature refractory tends to negative the pull of the chimney, but as a flow of warm air cannot take place through the small orifices in the atomiser the system remains hot for long periods. Wastage which normally occurs with the pull of the flue drawing cold air through the boiler is thus very largely eliminated.

This boiler is suitable for water heating, though a similar design is available for high pressure steam. Capacities range from 80,000 to 1,200,000 B.T.U.'s per hour in one unit, but the units may be increased indefinitely, the floor space occupied being extremely small. Even for the

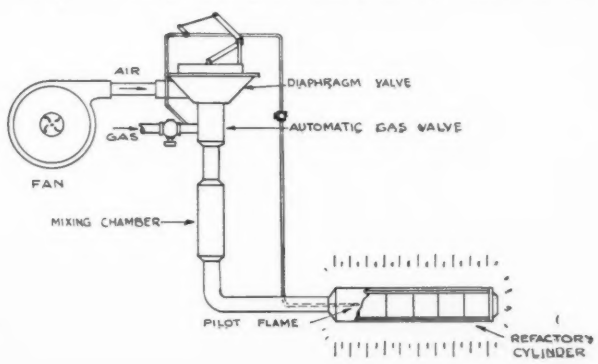


Figure 171. *Radiant gas firing unit (Cox's).*

largest size the fan motor is only ¾ h.p., whilst for the smallest it is ¼ h.p., and the electrical consumption is therefore negligible.

These boilers have been used for the heating of schools and cinemas, where, obviously, gas shows up to best advantage; but installations in public buildings, flats and swimming baths also, apparently, have been carried out with economical results where low prices are available for the supply.

A further type of burner suitable for firing boilers, either of special type or for the conversion of existing coal or oil fired types is shown in Fig. 171. This incorporates a fan for the injection of the air, and the combustion takes place in the refractory cylinder at high temperature without flame. Again a high efficiency is obtainable, this being about 85 per cent.

A burner was developed a few years ago, operating on the principle of *submerged combustion*. An air-gas mixture was burned actually in the water to be heated, so that nearly 100 per cent. efficiency was obtained, the products of combustion, water, sulphurous acids and carbon dioxide being dissolved in the water and the danger of corrosion in the heating system was the reason for many being nervous of its adoption. It was stated that these effects were negligible, but nothing short of a long period trial would be convincing on this point.

Gas Boiler Flues.—Due to the danger of condensation in the flues from gas boilers*, it is common practice to install these in asbestos cement instead of in iron, similarly it is desirable for the chimney to which such flue pipes are connected to be lined with a fire tile lining. Such linings vary in thickness from ¾ in. to 1½ in. according to the size of the flue and are placed in sections vertically above one another, the ordinary brickwork being built round them. If such a lining is not provided there is a danger of staining through the brickwork particularly at the upper levels.

Below the point at which the flues enter a large opening is generally left, provided either with a plain grating or a draught stabilizer. The latter is particularly necessary where the draught is required to pull the gases through the flue tubes as with the boiler shown in Fig. 168. Such an opening also serves as an explosion relief in the event of some fault occurring in the ignition.

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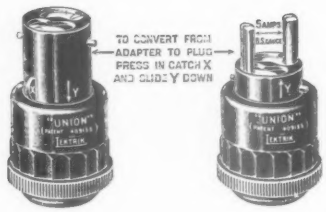
Announcement

Lt.-Col. G. Reavell, F.R.I.B.A., of Alnwick, is taking into the practice his daughter, Miss Mary Procter Reavell, A.R.I.B.A., DIP. ARCH., Dunelm. The address will remain Lloyds Bank Chambers, Alnwick.

* Due to the high percentage of hydrogen which on burning with oxygen produces water.



TRADE NOTES

The amount of work involved in the Editorship of "Specification" makes it impossible for Mr. F. R. S. Yorke to continue to write these Trade Notes: it has been decided, therefore, that the general editorship of this series shall be in the hands of Mr. Philip Scholberg, with occasional contributions on specialized subjects by other authors, including Mr. Yorke and Mr. W. E. J. Budgen. All notes, other than those by the General Editor, will be initialled by the authors concerned.

Automatic Water Softening

THE early types of base exchange water softener did, at least, provide soft water, but there were innumerable taps to twiddle and the various pipe runs peered out at awkward angles so that, when the local plumber had done the fitting, the final result was rather a fearsome tangle.

Since those days there has been a steady simplification, and there are now on the market several softeners with single-wheel control for regeneration and conveniently arranged pipe runs. The final simplification seems now to have been produced by the "Permutit" people.

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The new automatic model does away with the need for weighing salt or turning valves, for the whole regenerating process is carried out by an electric motor which turns the necessary valves, the motor being controlled by a simple switch, by a time clock or by a water meter which will start regeneration after a specific number of gallons have passed through the softener.

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With the time clock it is only necessary to set the hands at any desired hour, day or night, for the plant to regenerate. Once this is done the plant operates at that particular hour without any further attention. It is never necessary to wind the clock, as it is self-winding, and should the electric current fail at any time the clock will continue to work for 24 hours without electricity.

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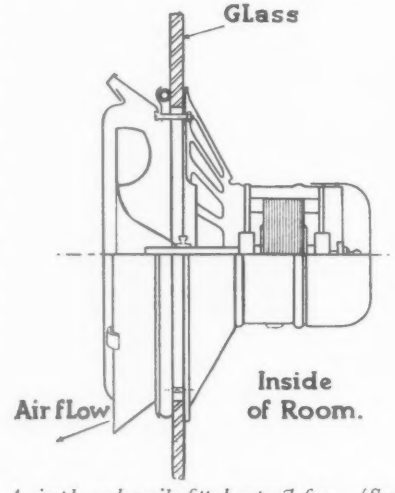
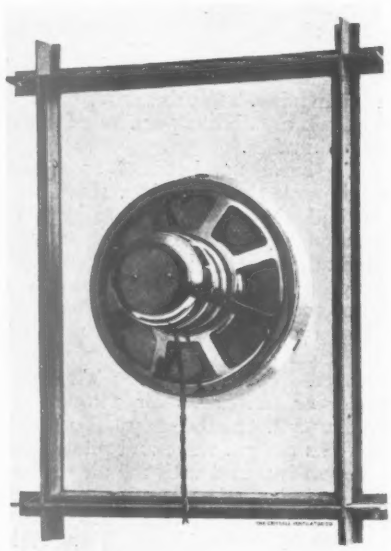
This model is fairly expensive: £125 for a capacity of about 2,000 gallons between regenerations for water of 16 degrees hardness, but it may well be useful in large houses where cost is of little importance, or in small blocks of flats where a limited staff cannot always be trusted to do a job at the right time.

Simple Ventilation

For small and medium-sized jobs which cannot carry the cost of a full air-condition-



A simple and easily fitted extract fan. (See accompanying note.) The headpiece shows a combined B.C. adapter and standard two-pin plug.



ing plant, the Crittall Ventilator Co. has evolved a small and easily-fitted extract fan which is baffled to prevent the admission of draughts and dirt from outside.

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As the illustrations show, it is designed for fitting to any window, a 6½ in. diameter hole being the only alteration necessary, when the fan, which is 8 in. diameter overall, can be clamped to the glass with waterproof jointing rings. The window can, of course, still be used in the usual way. Running costs are low, the current consumption being only ½ unit for 12 hours' continuous running, and a single fan is suitable for a room 18 ft. by 14 ft. and 9 ft. 6 in high.

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The price, finished in lacquered bronze, is £5 5s., and the fitting should be very suitable for removing smells from kitchens or steam from bathrooms.

A Two-purpose Adapter

The headpiece to these notes shows a combined bayonet catch adapter and two-pin plug which is a straightforward and logical solution to a problem that has been staring the electrical industry in the face for years. Everybody is only too familiar with the infuriating way in which the flex of portable electrical apparatus seems always to have the wrong type of fitting : now there is no need why it should.

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Electrically, this fitting seems perfectly sound, for the plug pins have non-closing slots, and the bakelite barrier ridge round the sunk B.C. contact plates provides a long leakage path. A price of 12s. a dozen seems very reasonable ; the makers are A. P. Lundberg and Sons.

The Buildings Illustrated

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :—

Housing Scheme, Cambridge (pages 298-301). General contractors, Stevens Bros. Sub-contractors : Grovebury Brickworks Co., facing bricks ; Henry Hope and Sons, Ltd., metal windows ; Triplex Foundry Co., ranges ; A. Christmas and Sons, special entrance doors ; Cambridge Artificial Stone Co., Ltd., artificial stone ; Marley Concrete Tile Co. and The Diamond Concrete Co., roofing tiles ; Allin & Co., internal hot and cold water services ; A. W. Morlin, coal fireplaces ; Parkinson Stove Co., Ltd., gas fires ; Parker, Winder and Achurch, fencing ; Wm. Harland and Sons, paint ; Mander Bros., stains ; E. Cork, electrical work.

New Wing, Westfield College, Hampstead, N.W.3 (pages 309-312). General contractors, Rice and Son, Ltd. Quantity surveyors, Messrs. Donald Cameron. Sub-contractors : Aston Construction Co., Ltd., steelwork ; F. Bradford & Co., structural floors ; G. N. Haden and Sons, Ltd., heating and hot water installation ; Matthew Hall & Co., Ltd., plumbing and gas installation ; Messrs. George Jennings, Ltd., sanitary fittings ; Troughton and Young, Ltd., electrical installation ; Messrs. Best and Lloyd, Ltd., special light fittings ; James Gibbons, Ltd., metal windows and doors ; J. and E. Hall, Ltd., lift ; South-Western Stone Co., Ltd., Portland stone ; F. Bradford & Co., Ltd., artificial stone ; Hollis Bros. & Co., Ltd., Indian Gurjun flooring ; D. Anderson and Son, Ltd., Thermotile flat roofing ; George Jennings, Ltd., wall and floor tiling ; Chiswick Guild, flush doors ; Light Steelwork, Ltd., handrails to stairs and balconies ; Bratt Colbran & Co., Ltd., fireplaces.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILES RADIUS)

DARTFORD. *Hospital Extensions.* The Corporation has approved the proposal of the Joint Board for the extension of the Bow Arrow isolation hospital at a cost of £65,200.

ENFIELD. *Housing Scheme.* The U.D.C. is acquiring 50 acres near the Great Cambridge Road for a housing scheme.

ENFIELD. *Pavilions.* Enfield U.D.C. has instructed the surveyor to prepare plans for pavilions, etc., at the playing fields, the cost being estimated at £23,000.

SOUTHERN COUNTIES

BOGNOR. *Police premises.* West Sussex C.C. is to erect police premises at Bognor at a cost of £20,000.

BOGNOR. *School.* West Sussex Education Committee is to erect a school in Westcoats Lane, Bognor, at a cost of £59,000.

BOSCOMBE. *Houses.* Armstrong Estates, Ltd., have prepared a scheme for the erection of 224 flats between Sea Road and Michelgrove Road, Boscombe, Hants.

BOURNEMOUTH. *Baths.* The Corporation is now to obtain tenders for the construction of baths at the pier approach at an estimated cost of £68,000.

CHICHESTER. *Courthouse.* The Corporation is preparing plans for the erection of a new court house.

FISHERGATE. *School.* West Sussex Education Committee has approved plans for the erection of a junior school at Fishergate.

HASTINGS. *Mission Hall.* The Rev. W. D. Graham, of Ore Rectory, has obtained a site from the Hastings Corporation on the Broomgrove housing estate for the erection of a mission hall.

LANCING. *School.* West Sussex Education Committee is acquiring land for extensions at the Lancing junior school.

NEWPORT (I.O.W.). *Cinema.* On behalf of Odeon (Newport), Ltd., Mr. A. Mather has submitted plans to the Newport (I.O.W.) Corporation for the erection of a cinema at the corner of Town Lane and Pyle Street.

SHOREHAM. *School.* West Sussex Education Committee has approved the plans of the county architect for the erection of a junior school for 336 in Victoria Road, Shoreham.

SOUTHLANDS. *Hospital.* East Sussex C.C. is to improve and enlarge the Southlands Hospital at a cost of £7,365.

SOUTHWATER. *Bridges.* West Sussex C.C. is to reconstruct railway bridges at Southwater and Bamber at a cost of £14,130.

WEST WITTERING. *Promenade.* West Sussex C.C. has arranged terms for the development by the Ecclesiastical Commissioners of West Wittering, where the foreshore is to be reclaimed and laid out as a seaside resort.

EASTERN COUNTIES

YARMOUTH. *Shelters.* Yarmouth Corporation is considering a scheme for the construction of new shelters at a cost of £10,000.

YARMOUTH. *Clearance Scheme.* The Corporation is to demolish buildings in the clearance areas at a cost of £7,000.

YARMOUTH. *Police and Fire Station.* The Corporation has acquired land for enlarging the police and fire station in Middlegate Street and decided to acquire a site at Gorleston for a new police and fire station.

MIDLAND COUNTIES

CRADLEY. *School.* Worcestershire Education Committee is in negotiation for a site in Cradley for the erection of a senior school.

DROITWICH. *School.* Worcestershire Education Committee is to erect an elementary school at Droitwich.

FENTON. *Inn.* Plans passed at Fenton, Staffs : rebuilding Albion Inn, Church Street, for Messrs. Ind Coope and Allsopp, Ltd.

HALESOWEN. *School.* Worcestershire Education Committee is to prepare plans for the erection of new premises for the technical school on a site in Furnace Lane, Halesowen.

KIDDERMINSTER. *School.* The Board of Education has approved the plans of the governors for extension at the King Charles School, Kidderminster, at a cost of £4,455.

MALVERN. *School.* Worcestershire Education Committee is to acquire a site at Malvern for the erection of a senior school.

REDDITCH. *Schools.* Worcestershire Education Committee is to obtain sites in Redditch for the erection of two senior schools.

TENBURY. *School.* Worcestershire Education Committee is to obtain a site at Tenbury for the erection of a senior school.

NORTHERN COUNTIES

BLACKPOOL. *Houses.* Mr. H. Eckersley proposes to erect 43 houses in Macauley Avenue, Blackpool.

BLYTH. *School.* Northumberland Education Committee has purchased a site in Plessy Road, Blyth, for the erection of a junior instruction centre.

DAVYHULME. *Dispensary.* Lancashire C.C. is to erect a dispensary at the Park Hospital, Davyhulme, at a cost of £6,000.

DOUGLAS. *Customs House.* Douglas (I.O.M.) Corporation has offered a site in the New Street area to the Insular Government for the erection of a Customs House.

FARNWORTH. *School Extension.* Lancashire Education Committee is to extend the Farnworth Grammar school at a cost of £4,825.

SCARBOROUGH. *School.* The Corporation has sold a site on the Sandybed estate for the erection of a high school for girls.

SCARBOROUGH. *Town Hall extensions.* The Corporation has instructed the borough engineer to prepare a scheme for the extension of the town hall buildings.

SOUTH SHIELDS. *Houses.* The Corporation has approved a scheme for the erection of 210 houses for the aged in Quarry Lane at a cost of £48,050.

SOUTH SHIELDS. *Libraries.* The Corporation recommends two sites in Marsden Road and Stanhope Road for the erection of branch libraries.

WAKEFIELD. *Church and Schools.* The Yorkshire Congregational Union and Home Missionary Society is to obtain a site in Wakefield for the erection of a church and schools.

WAKEFIELD. *Houses.* The Corporation is negotiating for sites for the erection of 150 small type houses.

WALLASEY. *Ferry Pier.* Wallasey Corporation has obtained sanction to borrow £21,454 for the reconstruction of New Brighton ferry pier.

SCOTLAND

GLASGOW. *Baths.* The Corporation is to improve and enlarge seven district baths at a total cost of £32,700.

GLASGOW. *Fire Station.* The Corporation is to erect a new fire station in the north-western area at a cost of £5,000.

GLASGOW. *Fire Stations.* The Corporation is to enlarge fire stations at Springburn at a cost of £3,750 and at Queen's Park at a cost of £3,900.

RATES OF WAGES

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

			I s. d.	II 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	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_2	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	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 7½	1 2½
	Do. (12-15 miles radius)		1 7	1 2½
A	Long Eaton ..	Mid. Counties	1 5½	1 1½
A	Loughborough	Mid. Counties	1 5½	1 1½
A	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	0
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	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
2" Broken Brick . . . . ,,		8	0
¾" ,, ,, ... ,,		10	3
Pan Breeze . . . . . ,,		6	6
Coke Breeze . . . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

	4"			6"		
	s.	d.		s.	d.	
Straight Pipes . . per F.R.	0	9		1	1	
Bends . . . . each	1	9		2	6	
Taper Bends . . ,,	3	6		5	3	
Rest Bends . . ,,	4	3		6	3	
Single Junctions . . ,,	3	6		5	3	
Double . . . ,,	4	9		6	6	
Straight channels . . per F.R.	1	6		2	6	
¾" Channel bends . . each	2	9		4	0	
Channel junctions . ,,	4	6		6	6	
Channel tapers . . ,,	2	9		4	0	
Yard gullies . . ,,	6	9		8	9	
Interceptors . . ,,	16	0		19	6	
IRON DRAINS:						
Iron drain pipe . . per F.R.	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	0
Multicoloured Facings . . ,,	7	10	0
Luton Facings . . . . ,,	7	10	0
Phorpres White Facings . . ,,	3	17	3
,, Rustic Facings . . ,,	3	12	3
Midburst 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
,, 1¼" . . . ,,	1	4	0
Rough boarding ¾" . . . ,,		16	0
,, 1" . . . ,,		18	0
,, 1¼" . . . ,,	1	6	0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			¾"		
Qualities	A	B	BB	A	B	BB	A	B	BB	A	B	BB
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch 60 × 48	4	2½	2	5	3	2½	7	5	4	8	6	5
Cheap Alder	–	2	1½	–	3½	2	–	–	–	–	–	–
Oregon Pine	–	2½	–	3	2½	–	4	3½	–	5	4½	–
Gaboon Mahogany	4	3½	–	5	4½	–	7	6½	–	8	7	–
Figured Oak	6½	5	–	7½	5½	–	10	8	0	1/–	9	–

	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.)

	½"	¾"	1"	1¼"	2"
	s. d.	s. d.	s. d.	s. d.	s. 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 . . .	61¼	,, 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" . . ,,	10	6
,, ,, ½" . . ,,	10	3
,, ,, ⅝" . . ,,	10	0
,, ,, ¾" . . ,,	9	6
,, ,, ⅞" . . ,,	9	6
,, ,, 1" . . ,,	9	6
,, ,, 1¼" . . ,,	9	6
,, ,, 1½" . . ,,	9	6

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	s. d. 4" 8	s. d. 6" 10
Shoes . . . . each	2 0	3 0
Anti-splash shoes . . ,,	4 6	8 0
Boots . . . . ,,	3 0	4 0
Bends . . . . ,,	2 7	3 9
,, with access door . ,,	—	6 3
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	3 9	6 0
Plinth bends, 4½" to 6" . ,,	3 9	5 3
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	6
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s.	d.
Lead, milled sheets . . . cwt.	22	0
,, drawn pipes . . . ,,	21	6
,, soil pipe . . . . ,,	24	6
,, 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	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£	s.	d.
Lime, chalk . . . . per ton	2	5	0
Plaster, coarse . . . ,,	2	10	0
,, fine . . . ,,	4	15	0
Hydrated lime . . . ,,	3	0	9
Sirapite . . . . ,,	3	6	0
Keene's cement . . . ,,	5	0	0
Gothite Plaster . . . ,,	3	6	0
Pioneer Plaster . . . ,,	3	6	0
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.	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	0	and 2	0
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	0
,, ,, ,, 5 ft. . ,,			4	0
,, ,, ,, 7 ft. . ,,			5	0
,, ,, ,, 15 ft. . ,,			6	0
,, ,, ,, over 15 ft. . ,,			7	6
"Calorex" sheet 21 oz., and 32 oz. ,,	2	6	and 3	6
,, rough cast ¼" and ½" ,,			8½ ,, 1	0
Putty, linseed oil . . . lb.				3

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

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

PAINTER

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

CURRENT PRICES FOR MEASURED WORK

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

EXCAVATOR AND CONCRETOR

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

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra, only for bends	Each	2 8	3 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 0½
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, laid to a 4" gauge, nailed every fourth course	" 3 0 0
Do., all as last, but of machine-made tiles	" 2 16 0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	" 2 16 0
" " " " " (green)	" 4 15 0

CARPENTER AND JOINER

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

CARPENTER AND JOINER—*continued*

		s. d.
1⅛" 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, ⅝" parting beads, and with brass faced axle pulleys, etc., fixed complete		3 7
2" " " "	"	3 10
Extra only for moulded horns	Each	6
1⅛" deal four-panel square, both sides, door	F.S.	2 0
2" " " "	"	2 8
1⅛" , but moulded both sides	"	2 4
2" " " "	"	3 0
4" × 3" deal, rebated and moulded frames	F.R.	1 0
4½" × 3½" " "	"	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
1½" × 1½" " "	"	2 9
3" × 3" deal wrought framed newels	F.R.	1 3
Extra only for newel caps	Each	6 0
Do., pendants	"	6 0

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt. 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, ⅜" 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 15 6
Do. in flashings	"	1 19 0
Do. in covering to turrets	"	2 6 6
Do. in soakers	"	1 11 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	—	—	—
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

2

3.

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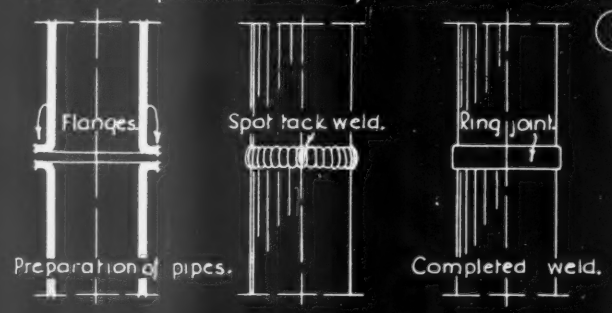
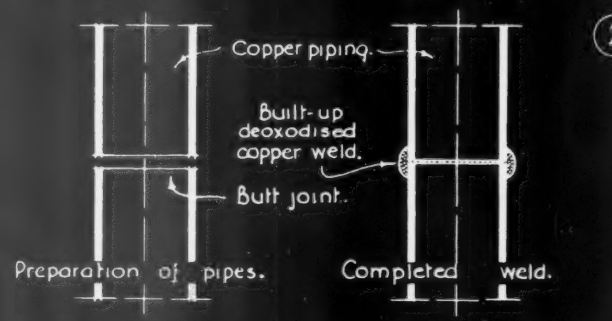
TYPES OF (DEOXODISED) COPPER AUTOGENOUS WELDED JOINTS :



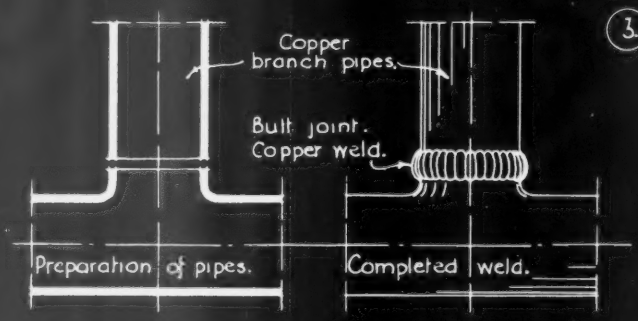
1. FLANGED BUTT RING JOINT :

The ends of the pipe to be welded are flanged to a depth of 1½ times the gauge, placed together, spot welded either side, and the weld made by running down the flanges, no filler rod being used. The weld may then be smooth ring jointed for plating, burnishing etc. by the use of a fine file or portable buffer, and finished with fine emery paper.



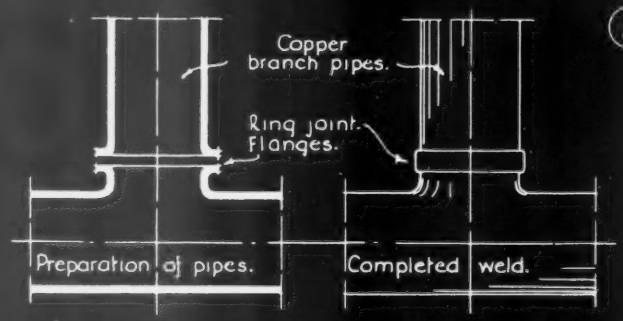
2. PLAIN BUTT JOINT BUILT UP :

The ends of the copper pipes to be welded are cut square, they are placed together and spot tack welded on either side . The weld is then made by feeding around the junction a deoxodised copper filling rod in the manner described before under Bronze Welded Joints.



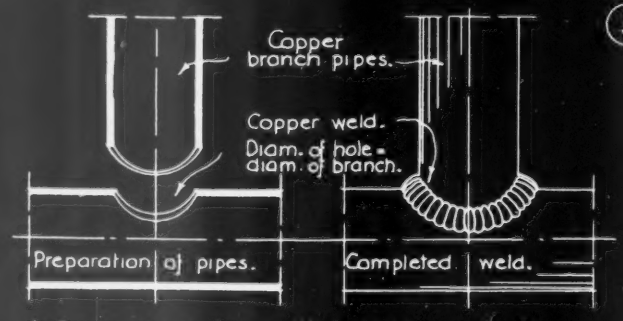
3. PLAIN BUTT TEE JOINT BUILT UP :

To prepare this joint a hole is bored in the body of the pipe where the connection is to be made and the edges worked out to form a projection of equal diameter to the branch pipe. The ends are then butted together and the joint is welded by feeding on a deoxodised copper rod.



4. FLANGED TEE JOINT :

A hole is bored in the body of the pipe and the edges worked out to form a flange as shown on the adjoining diagram. The end of the pipe to be connected is also flanged, the ends are then butted together and the weld completed by running down the flanges, no filler rod being used.



5. FITTED TEE JOINT BUILT UP :

A hole corresponding to the diameter of the branch to be connected is bored in the body of the pipe The end of the branch to be joined is then shaped to fit accurately and is placed in position and the weld completed by feeding on a deoxodised copper filling rod.

Information from W. L. Kilburn, R. P.

Issued by British Oxygen Co. Ltd.

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

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INFORMATION SHEET

• 251 •

PLUMBING IN WELDED COPPER PIPING

This Information Sheet is the fourth of a series showing methods of jointing light gauge copper pipes.

The first Sheet (No. 225) gave a summary of the various methods ; the second and third Sheets (Nos. 234 and 243) were devoted to the details of jointing by the Bronze weld method.

This Sheet gives in detail the method used in Copper autogenous welded joints.

It will be seen that two different methods are used according to which is more suitable for the particular purpose.

(a) The autogenous weld.
(b) The built-up weld.

The autogenous weld is one in which the ends of the pipes are worked out to form projecting flanges. When the pipes are butted together, the material of these flanges is used to make the weld, the flanges being fused together to form a solid weld.

The built-up weld is one in which the pipes are cut square and butted together, the welding material being fed on to the joint from a "filler rod" which is used for the purpose.

Type of Copper :

It is essential in copper welding that the correct type of copper should be used both for the material of the pipe and for the filler rod. The difficulties and uncertainties of welding ordinary tough pitch copper have long been recognized and numerous experiments have shown conclusively that commercial tough pitch sheet is seldom suitable for welding.

Deoxidized copper should always be used, and is obtainable.

It is important here to note that deoxidized copper should always be particularly specified for autogenous welded work, otherwise ordinary commercial copper may be supplied and unsatisfactory work will result.

Deoxidized Copper :

Deoxidized copper is copper practically free from oxide, and therefore contains insufficient cuprous oxides to cause trouble in the welding process. This type of copper is equally as strong as the ordinary grades of copper, and there is no difficulty in working it by the usual coppersmith methods. The resistance to corrosion is as great as that of ordinary grade copper.

Information from : The British Oxygen Co., Ltd.

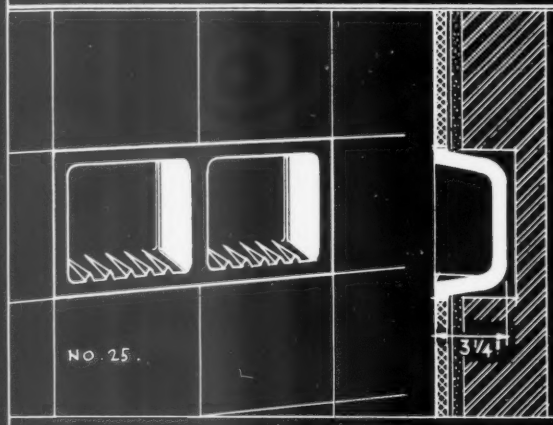
Address : Victoria Station House, London, S.W.1

Telephone : Victoria 9225

291.

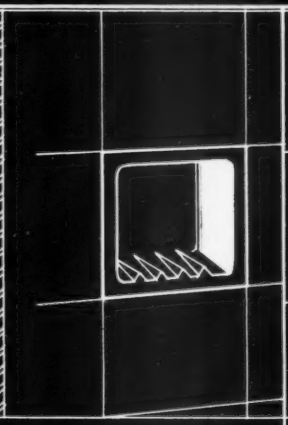
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION.

BUILT-IN SOAP, SPONGE & TUMBLER HOLDERS IN GLAZED EARTHENWARE.



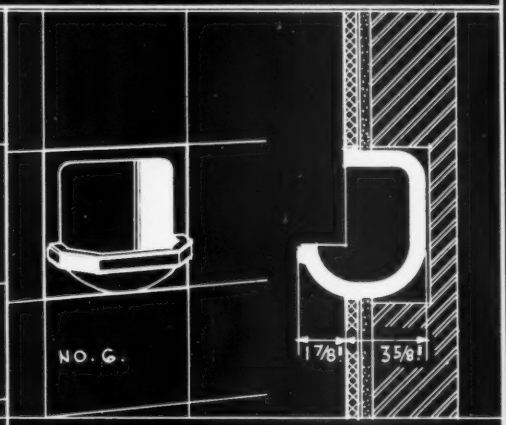
DOUBLE: 12" x 6"

NO. 25. Lipless Sponge & soap holder.
NO. 43. Sim. to above, but without partition.



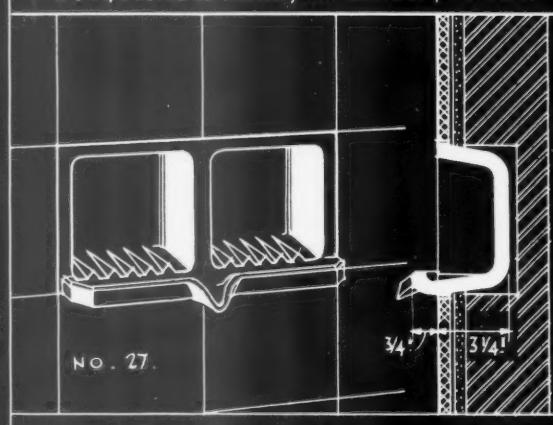
SINGLE: 6" x 6"

NO. 4. Lipless Soap Holder.



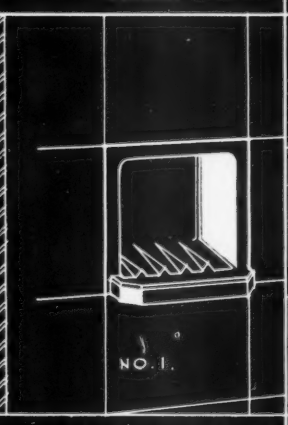
SINGLE: 6" x 6"

NO. 6. Sponge holder without drip hole.
NO. 6A. " " with " " .
NO. 107. Cigarette end receptacle: Inscribed: "Cigarette-ends"



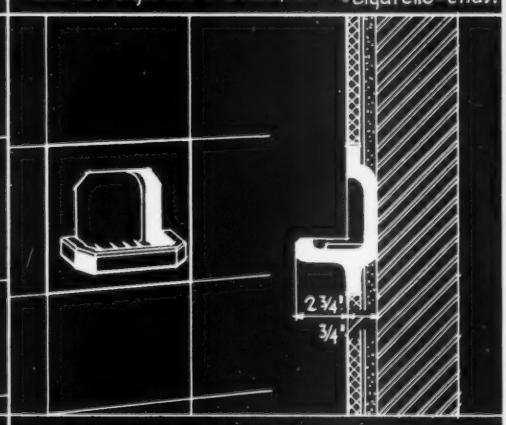
DOUBLE: 12" x 6"

NO. 26. Plain-lipped sponge & soap holder.
NO. 27. Tongue-lipped. " " " .
NO. 44. As NO. 26, But without partition.
NO. 45. As NO. 27, " " " .



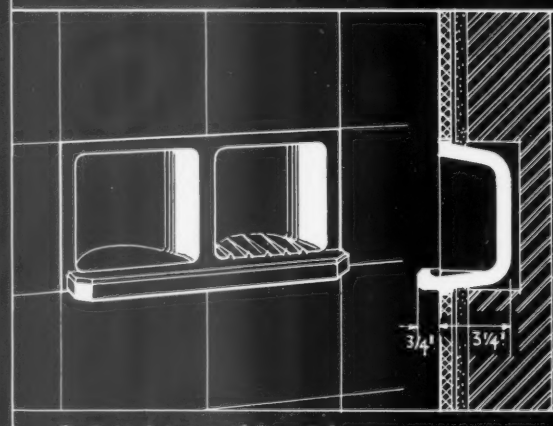
SINGLE: 6" x 6"

NO. 1. Plain-lipped Soap holder.
No. 19. Tongue-lipped Soap holder.



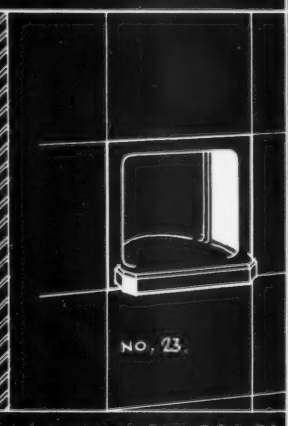
SINGLE: 6" x 6"

No. 91. Projecting Soap Dish, Semi-recessed. (without drip hole.)



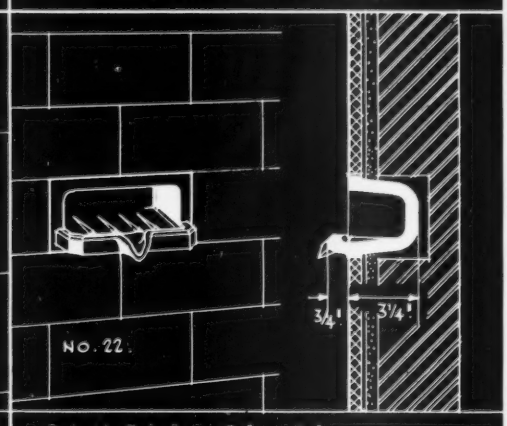
DOUBLE: 12" x 6"

NO. 32. Plain-lipped tumbler and soap holder.



SINGLE: 6" x 6"

NO. 23. Plain-lipped Tumbler holder.
NO. 24. Lipless, do.



SINGLE: 6" x 3"

NO. 7. Lipless soap holder.
NO. 8. Plain-lipped Soap holder.
NO. 22. Tongue-lipped " " .

Information from Richards Tiles Limited.

INFORMATION SHEET: BATHROOM EQUIPMENT: RECESSO FITTINGS. 1.

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

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INFORMATION SHEET

• 252 •

BATHROOM EQUIPMENT

OF GLAZED EARTHENWARE

Name of Product : Recesso Fittings

Types Illustrated : Soap, Sponge and Tumbler Holders and Cigarette Receptacles

Description :

Recesso Fittings are a range of receptacles of glazed earthenware, for soap, sponges, toilet-paper, toothbrush tumbler, etc. They are used in bathrooms, cloakrooms, kitchens, in bedroom basin splashbacks, etc. Fixed *in*, not *on*, the wall. They are neat, clean, sanitary and practically everlasting.

Building-in :

The sizes and depths required for building-in are shown on the drawings. Semi-recessed fittings, designed for use in thin partitions, will be given on future sheets.

Colours :

The fittings can be supplied in white glaze and in an almost unlimited range of colour glazes, either plain or mottled, bright or matt, to match the manufacturers' wall tiling glazes.

Previous Sheets :

This is the first of a series of four sheets giving details of the full range of Recesso Fittings ; this series supersedes Sheets Nos. 92, 93 and 99, published in 1934, which are now obsolete.

List of Fittings :

Makers' Number		
1.	6×6″	Plain-lipped Soap Holder
2	,,	,, grip Soap Holder
3	,,	Plain Toilet-paper Holder
4	,,	Lipless Soap Holder
5	,,	Hooded Toilet-paper Holder
6	,,	Sponge Holder, without drip hole
6A	,,	,, ,, with ,, ,,
7	6×3″	Lipless Soap Holder
8	,,	Plain-lipped ,, ,,
10	,,	Tooth-brush Rack
11	3×3″	Shelf Brackets, for 5″ shelf
12	,,	Towel-rail Brackets, for square rail
12A	,,	Centre Bracket to ditto
15	,,	Tumbler and Tooth-brush Rack
19	6×6″	Tongue-lipped Soap Holder
20	,,	,, grip Soap Holder
21	,,	Lipless ,, ,,
22	6×3″	Tongue-lipped Soap Holder
23	6×6″	Plain-lipped Tumbler Holder
24	,,	Lipless ,, ,,
25	12×6″	,, Sponge and Soap Holder
26	,,	Plain-lipped ,, ,, ,, ,,
27	,,	Tongue-lipped ,, ,, ,, ,,
28	,,	Lipless grip Sponge and Soap Holder
29	,,	Plain-lipped grip ,, ,, ,, ,,
30	,,	Tongue-lipped grip ,, ,, ,, ,,
32	12×6″	Plain-lipped Tumbler and Soap Holder
33	9×3″	Tooth-brush, Tooth-paste and Tumbler Rack
34	6×3″	Tooth-brush and Tooth-paste Rack
36	,,	Plain Soap Dish
38	,,	Grip
39	9×3″	Toilet-paper Holder
40	3×3″	Razor Strop Hook
42	,,	Coat Hook
43	12×6″	Lipless Sponge and Soap Holder, without partition
44	,,	Plain-lipped Sponge and Soap Holder, without partition
45	,,	Tongue-lipped Sponge and Soap Holder, without partition
46	6×3″	Coat Hook
47	,,	Tumbler and Tooth-brush Rack
52	8×4″	Lipless Soap Holder
53	,,	Plain-lipped ,, ,,
54	,,	Tongue-lipped ,, ,,
55	,,	Lipless grip ,, ,,
56	,,	Plain-lipped ,, ,, ,,
57	,,	Tongue-lipped ,, ,, ,,
58	,,	Toilet-paper Holder
59	4×4″	Tumbler and Tooth-brush Rack
60	,,	Soap Dish
61	,,	Coat Hook
62	,,	Towel-rail Brackets, for square rail
62A	,,	Centre Bracket to ditto
63	,,	Shelf Brackets, for 5″ shelf
64	,,	Tooth-brush and Tooth-paste Rack
66	3×3″	Used Razor Blade Receptacle
67	6×3″	Towel-rail Brackets, for round rail
67A	,,	Centre Bracket, to ditto
69	3×3″	Shelf Brackets, for 5″ shelf
70	6×6″	Semi-recessed Plain Toilet-paper Holder
71	,,	,, ,, Hooded Toilet-paper Holder
72	6×3″	,, ,, Plain-lipped Soap Holder
73	,,	,, ,, Tongue-lipped ,, ,,
74	6×6″	,, ,, Plain-lipped ,, ,,
75	,,	,, ,, Tongue-lipped ,, ,,
76	,,	,, ,, Plain-lipped grip ,, ,,
77	,,	,, ,, Tongue-lipped ,, ,, ,,
78	,,	,, ,, Tumbler ,,
79	,,	,, ,, Sponge Holder
81	6×4½″	Sill Soap Dish
82	4×4″	Gargoyle
83	6×3″	Tongued Soap Dish
86	6×6″	Toilet-paper Box
88	9×6″	Sponge Holder
89	6×6″	Toilet-paper Holder
90	6×4″	Lamp Holder (with 4×4″ Fixing Bracket)
91	6×6″	Soap Dish
93	4×4″	Ash Tray
94	6×6″	,, ,,
95	12×6″	Plain-lipped grip Sponge and Soap Holder without partition
96	,,	Tongue-lipped grip Sponge and Soap Holder without partition
97	8×8″	Toilet-paper Holder
98	4×4″	Double Coat Hook
101	3×3″	Towel-rail Brackets for Round Rail
101A	,,	Centre Bracket to ditto
102	4×4″	Towel-Rail Brackets for Round Rail
102A	,,	Centre Bracket to ditto
104	12×6″	Plain-lipped Deep Sponge and Soap Holder
105	,,	Tongue-lipped Deep Sponge and Soap Holder
107	6×6″	Cigarette End Receptacle
108	4″	Faience Shelf of 4×4″ Units
		MIRRORS
16	Oval Mirror, 24×18″	
17	Round ,, 19″	
92	"Octo" ,, 21×16″	
106	Shelf ,, 19×14″	

Name of Manufacturers : Richards' Tiles, Limited

Address : Tunstall, Stoke-on-Trent

Telephone : Hanley 7215-8

London Office : 25 Victoria Street, S.W.1

Telephone : Victoria 9128

Glasgow Office : 53 Bothwell Street, Glasgow, C.2

Telephone : Central 1768