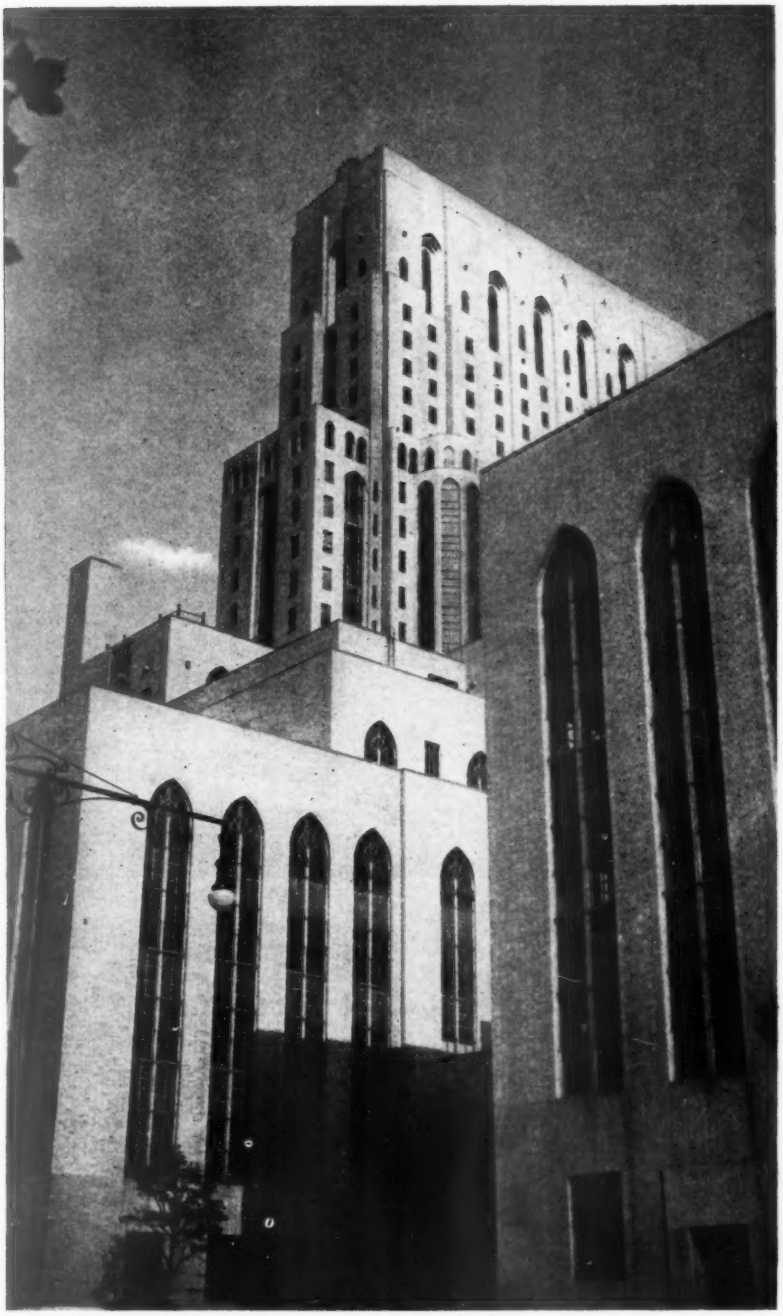
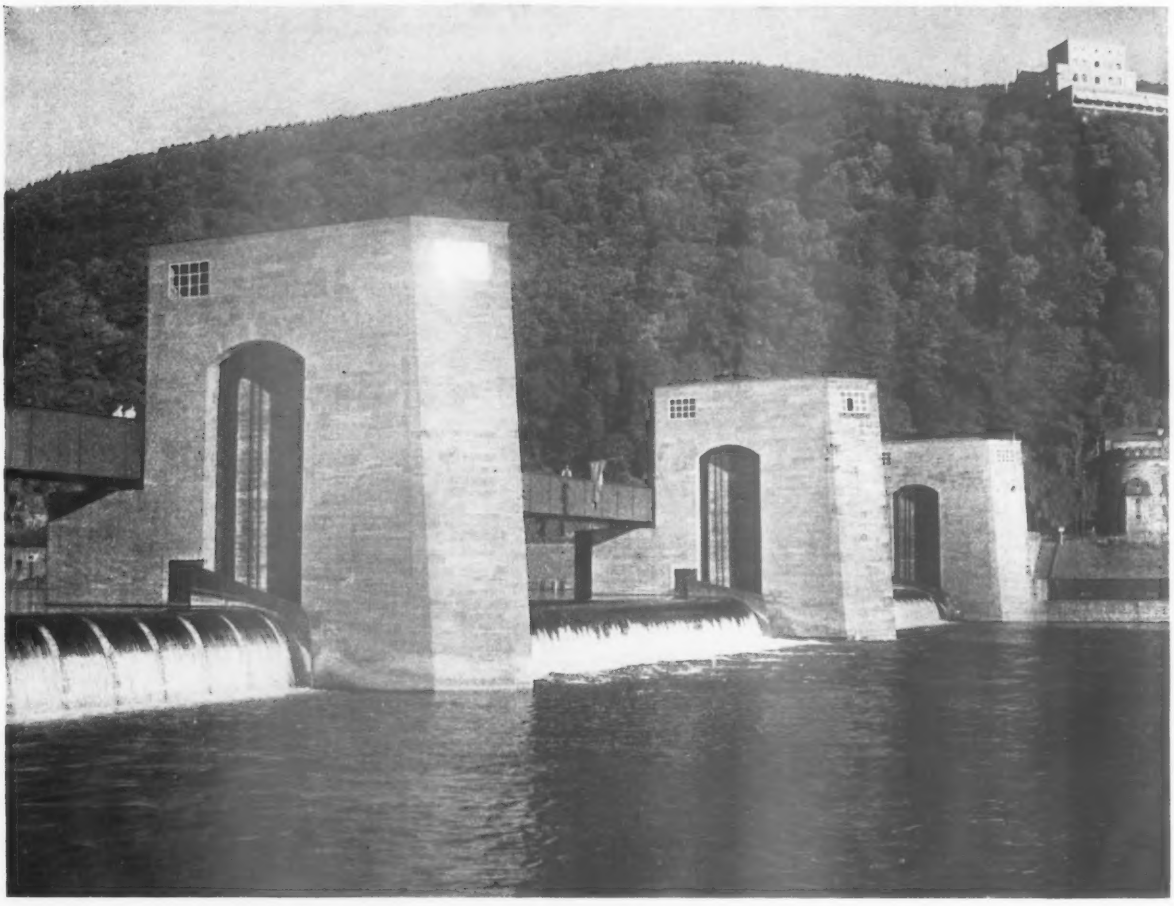
THE VERTICAL HOSPITAL



A DETAIL of the central block of the recently completed New York Hospital, an example of the vertically planned type of hospital which is common in American cities.



DAM AT HEIDELBERG

The river barrage and dam which has been built over the Neckar above Heidelberg during the last four years. On the right is the observation and rack railway station above the town.

A FORTNIGHT AWAY

A FEW days ago, in one of those almost undiscoverable streets in Knightsbridge which house agents call quietly secluded, a youthful conductor was overheard trying out new talent for the carol-singing season.

The principal voice, if we may borrow a phrase, himself a little uncertain after twelve months lying fallow, was outspoken concerning both the tone and volume of the support he received. In his opinion, it seemed, one band of waits at least was not yet in that unison which would justify a public appearance.

The week's respite which this decision seemed to promise in some measure offset the irritation caused by the rehearsal being broadcast at extremely close range, but the departure of the artistes, so up to date in their consciousness of their mission to the public, brought home to the observer a proper realization of what lies in store for us in the next weeks.

Christmas is all but upon us, and the inhabitants of the British Isles (for in these days of nationalism one cannot be too careful) will be expected to give their sentiments a holiday from the protective arrest in which they have been safe from public assault during the rest of the year.

Nowadays even the Post Office in all its glory cannot make St. Valentine's Day more than one for jokes as anonymous as they are poor, and Cambridge alumni are no longer forbidden to go to the Gogs during the May Day revels, for the very good reason that there are now no revels on May Day—at least none near the Gog Magogs. The progress of civilization has thus left us no time in which to express the sentiment publicly that being alive can be tolerable—except Christmas. And with Christmas (for the benefit of those who live north of Northumberland) we naturally include New Year.

It is now, then, that architects realize that once again they have forgotten to design their own Christmas cards or to select one standard one out of the execrable plethora which they will probably be compelled to turn over. They may be modernists of the purest and most simple kind; but that will not prevent their seeing a thousand Tudor mansions, warmly comforting amongst five feet of snow, with candlelight glowing through the windows more powerful than any neon sign, all set in an Oxford frame and with no mention of the fact that sanitation is E.C.

But it is not only the storm troops of progress in architecture who, by a kind of annual visitation of Providence, will be put through it before very long. Commerce has cashed in on the public's desire to wear their sentiments on their sleeves for a day or two, and Freud and Sir James Fraser between them would be hard put to it to find an inhibition or a folktale which had not been brought in to help them all along.

So flustered does everybody get with fairy lights in the basement, elves' castles on the mezzanine, Aladdin's Palace in the grand concourse (Present for All on production of a Receipted Bill), and the young people's own house in the bazaar, that it is very questionable whether the grandest of traditionalists would be much put out if a werewolf offered him a drink in the café.

Once caught up in public sentiment blowing off steam, terrible things can happen. A skilled auctioneer selling a dubious kettle for a fiver is nothing to what a Christmas bazaar can do to the judgment of the most fastidious of men. Perhaps the awfulness of Aladdin's Palace neutralizes the bottle-glass windows of the toddlers' cottage, and the fairies' grotto offsets some of the horrors of the books for children—but a very potent influence is certainly present when an architect can purchase without winking a doll's house which would be rejected under the local amenity clause by every local authority in Britain.

The truth of the matter is that most of the population of these islands like to keep their sentiments unspoiled by any dreary process of thought, and the minority don't really object to a holiday from the things that matter a lot to them. And at Christmas time is it possible for opposites to agree—and what, at such a time, do reasons matter? Last week the majority who thought of the Crystal Palace after it had given the greatest of all its shows as "the dear old Palace, the ugliest building ever" did at least agree in their regret with those to whom that building was something more. And in these days it is a lot to agree—however different the reasons.

Such a sentiment may be a good one to keep at one's side while the rest share a public outing this month. Amongst the millions of purchases made before Christmas, the mass may be appalling when submitted to the taste of calmer moments—but there is a percentage, an increasing percentage, of things appearing which are better designed and better produced. And if we struggle to make that percentage greater during eleven months, we may permissibly refrain from shuddering at the way that percentage and the rest are sold during the twelfth.

If laymen are in December all fairy princes in pursuit of fairy princesses, and insist on the draughty hesitation of untriplexed coaches and frozy battlements, who are architects to spoil the fun? We will hear about the horrors of the dripping tap very soon after the New Year.

The Architects' Journal
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NOTES & TOPICS

THE ECONOMICS OF CULTURE

"ONE of the main elements in the pull of London is its possession of superior amenities," says the current broadsheet issued by P.E.P. (No. 87A), whose author represents London as having a stranglehold, both administrative and economic, on the rest of the United Kingdom.

*

His case is this: Efforts are being made to stimulate regional cultural life in the "provinces," but it isn't possible to maintain a flourishing culture in a place where its natural leaders are looking to London for ideas, for promotion, for instruction or for initiative, as they are in fact doing today, whether they come from Birmingham or South Wales.

*

The words of the hyper-Nordic Nazi, "When I hear the word Culture I feel for my revolver," may find their echo in the breasts of British business men, but the fact remains that cultural life, existence of, is in fact a business asset to any community which only the eternally myopic vision of the hard-headed can miss.

*

This is how the writer of the broadsheet puts it: "No progressive community can afford to allow its amenities (i.e. opportunities of cultural life) to fall to a level at which they cease to keep any hold on its more active and enterprising members, for once they go elsewhere decay will set in and will sooner or later be likely to be followed by acute economic depression. The problem of providing amenities covers, therefore, much more than trying to make places look pretty in order to console their inhabitants for unemployment (special areas). It is fundamentally a problem of making it worth while for a sufficient number of the natural leaders who are thrown up in each region to stay in it happily, doing constructive work, instead of becoming narrowed and embittered, or quitting it in favour of somewhere more attractive." "*Only in this way can organic growth be maintained in each region, and no attempt to check the drift to London and the south can succeed without taking this factor into account.*"

*

The context is the siting of industry, but the burden of the argument is that, *vide* the special areas, you cannot force people either to work or live in surroundings which are sub- or anti-human. The conclusion?—that "the problem of providing what are in fact amenities requires study, and, in view of the expense and organization involved, it is by no means impossible that a new profession of amenity engineers may emerge to meet the need." Amenity *engineers*, mark you.

SUNSHINE AND RAIN

There is something fundamentally sound about the ceremony of foundation stone laying. All the infant worries of the scheme over, teething completed and the idea just emerging from the nursery of paper onto the open site of reality.

*

And ceremony there has been on quite small jobs—red carpet, canopy, refreshments near at hand and a useful half-hour's rest and beer all round to the operatives. Wet or fine the ceremony goes on—I remember on one occasion the very old and charming mother of the managing director descending a slippery ladder to attain site level and the silver trowel.

*

Are we to lose this ceremony now that one can press a button in one's bath and set devices in motion to do the job electrically?

*

I hope not, and deplore that the L.C.C. arranged the stone-laying of their new Hackney Marsh scheme in their own Conference Hall. Health and happiness, air and sunshine belong to a real housing scheme—using the weather as an excuse to avoid the site ceremony seems to me doubtful showmanship, to say the least.

TELEVISED ARCHITECTURE

Whether or not the B.B.C. has been properly impressed by my demands for televised architecture I do not know, but the fact remains that Mr. Gloag and Mr. Chermayeff are being televised to-morrow, Friday, at 3 o'clock, and again in the evening at 9.

*

And, oddly enough, about architecture: their "turn" being based, so Mr. Gloag tells me, on a model of a new house in Church Street, designed by his opposite number.

*

So tomorrow afternoon Astragal will be seen creeping shyly into one of London's larger stores and peering hopefully over someone else's shoulder at the mystic scene; praying the while for a minimum of atmospherics.

*

For a television set is, so far, beyond my modest purse, unless, of course, my numerous admirers feeling like a real expression of their esteem so near Christmas. And now that I have done my begging so deftly, may I add that I've plenty of boxwood scales already, thank you.

SOUTHEND ROAD

Early last week my travels took me along the Southend road—you know that dreary stretch which starts as, I think, Eastern Avenue and peters out among the tramlines of Southend-on-Sea.

*

It was a mild and brilliant day, crisp and sparkling, which

Scene from "Liliom," recently presented by the R.I.B.A. Dramatic Society at the R.I.B.A. headquarters. The photo shows (left to right): Julie (Miss E. Thomas), Mrs. Hollander (Lady MacAlister), Marie (Miss R. Timmins), Wolf Beifeld (Mr. Halliburton-Smith) and (kneeling) Young Hollander (Mr. Milson).

only made the collection of shacks and other buildings which stretch almost all the way from Ilford seem drabber, nastier and more incoherent and tumble-down than ever.

*

There was only one thing to do and that was to concentrate entirely on the road, drive faster and faster and try to get some slight joy out of speed.

*

After a mile or two of this we slackened pace, with the thought—how many people have done this thing; how many people have been forced to speed through the sheer deadness of the road's surroundings?

*

Incidentally, it is quite easy to go round some of the Southend Road roundabouts at about 40 miles an hour—even these seem to lack reasoned design.

ANY IDEAS ?

No, I *don't* know what to do with the Crystal Palace site, though it would seem that lack of money provides the inevitable answer. Such suggestions as I have seen vary from a faithful rebuilding via sanatoriums, schools and the like, to plain open spaces.

*

Even with the stimulus of half-guinea prizes, few of the *Daily Express's* readers produced any brighter ideas.

DANCING ON ITS GRAVE . . .

The day after the fire I walked into the Building Centre about tea time, and was confronted by a lavish display of all Mr. Yerbury's magnificent coloured prints of the Palace : by Nash, Baxter, and others un-named.

*

Such a sense of "news values," coupled with such speed, suggests that Mr. Yerbury has for years been wasted outside Fleet Street, but it prompts me also to ask whether anybody can faithfully vouch for his whereabouts the night before.

CRITICS AND SILENCE

Has the Oxford Union yet debated the subject of critics and criticism and the banning thereof by the so-powerful Goebbels ? If not, it's high time they did so, for seldom have I heard such a barrage of different views as I did last week end from various Oxford friends of mine who are full of diametrically opposed ideas about exactly what should be put where, and what it should look like, be it building or a new cycle park.

*

Was it not Eric Gill who once said "The artist does the work and the critic supplies the inspiration" ? There is obviously a certain amount of truth in this, but my young friends seemed sublimely confident that they could do the job, as well as the criticism, quite easily in their spare time, if only they weren't interfered with, that I began to wonder where criticism stopped and practice began.

*

Oxford's older generation, of course, at any rate in its public utterances, regularly indulges in bitter complaints that Oxford is being destroyed by noise and vibration from passing traffic. And they *have* at last got a by-pass round the North side, from the Uxbridge to the Witney Road.

*

But one of the best offers, ignoring for the moment Lord Nuffield's positively Renaissance sense of scale, has come from the Federated Malay States, who have offered, via the Rubber Growers' Association, £10,000 to the Oxford Preservation Trust if they will pave the High, from Carfax to Magdalen Bridge, with rubber blocks.

*

And a very quietening process too, though my experience depends only on the few yards of New Bridge Street, but there the difference between racketing steel-tyred drays on setts and on rubber is so startling as to be almost uncanny.

ELUSIVE HAPPINESS

Last Friday Lord Horder opened a miniature housing exhibition in the hall of the Charing Cross Underground. In his speech he said that there were four really basic necessities for a healthy and happy life, and of these four three intimately concerned architects.

*

So much for our social importance. But how much progress has really been made towards providing for every citizen : suitable shelter at a suitable rent, access to fresh air and reasonable quiet?

*

The first two desirables still seem unobtainable in full without State subsidy on a terrific scale. And the last . . . well, parts of Lord Horder's speech were lost through the noise of the trains passing below; but it was questionable whether those trains approached the racket made by a tram in an averagely wide street or by children shouting in a narrow court.

ASTRAGAL

The series entitled Working Details will be suspended during publication of the articles on shops (the third of which is printed on pages 815–820) and will afterwards be continued.

NEWS

POINTS FROM THIS ISSUE

L.C.C. DEVELOPMENT PROTEST

Residents and property owners of Tufnell Park, Islington, are protesting to the London County Council against its policy of mixed development in housing. A resolution passed last week states that the L.C.C. policy is contrary to good town planning principles and calls for scientific treatment of housing instead of the acquisition of small sites merely because they included large gardens.

GROWTH OF THE GREEN BELT

The Green Belt round London now covers 28,500 acres of land safe from building development. A review of the scheme, prepared for the London County Council, shows a ring stretching from Egham to Rickmansworth in the west, eastwards towards Chipping Barnet and Epping, and southwards to the north bank of the Thames near Rainham. The southern section includes parts of the North Downs in Kent and Surrey and bears westwards towards Runnymede.

The latest acquisitions proposed are 212 acres near Fulwell Station, Middlesex, and Elmstead Woods, Mottingham.

BLACKPOOL TOWN HALL SITE

The Blackpool Town Council decided last week to rescind a previous resolution to build a new town hall on the North Promenade and to use the site of the present town hall instead, and combine the new hall with a shopping centre on the market area.

THE LEEDS SCHOOL OF ARCHITECTURE

Mr. J. S. Allen has been appointed vice-principal of the Leeds College of Art, and will retain his present position as head of the School of Architecture.

The announcement of the first awards of the scholarships set up under the will of the late Mr. Hoffman Wood has been made. The successful candidates are Messrs. K. J. Caton and G. V. Robertshaw, who are fifth-year students at the Leeds School of Architecture (College of Art). The scholarships, which are of the value of £250 and £150 respectively this year, have been founded for " the advancement of architectural training, either by study or travel in ancient or modern cities, of any boy or girl born within Yorkshire of one or two Yorkshire parents." An approved course of post-graduate study and travel (possibly in America) will be undertaken by the successful candidates.

Subject to the final agreement of the Traders' Associations, the School of Architecture has been asked to design the Coronation Decorations for the whole of the centre of the city. The total length of route involved is approximately 2,000 yards, and includes the Headrow, Briggate, Boar Lane, Park Row and Bond Street. In the Headrow brightly-coloured pylons will be erected in the middle of the street, in the positions occupied by the lamp standards, whilst banners 25 ft. long will be suspended from the buildings lining the route. At other suitable points banners suspended from poles will be used to give continuity to the decorative scheme. This is probably the largest single scheme of decoration for the Coronation yet undertaken in the provinces. An exhibition showing a number of suggestions for street decoration was recently held by the School in collaboration with the West Yorkshire Society of Architects.

THE ARCHITECTS' DIARY

Thursday, December 10

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Exhibition of photographs taken by members on the A.A. Excursion to Czecho-Slovakia. Until December 12.*

BUILDING CENTRE, 158 *New Bond Street, W.1. Exhibition of designs submitted in the Timber Development Association's Competition for designs for a tourist camp.*

BLUE CIRCLE DRAMATIC SOCIETY. *At the Arts Theatre Club, St. Newport Street, W.C.2. Presentation of " Sweet Aloes," a play by Jay Mallory, in aid of the Builders' Clerks' Benevolent Institution. 8.30 p.m.*

LONDON MASTER BUILDERS' ASSOCIATION. *Annual Dinner. At the Dorchester Hotel, W.1. 7 p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, W.1. " Excavations at Pevensey Castle." By F. Cotrill. 7 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS, YORKSHIRE BRANCH. *At the Hotel Metropole, Leeds. " Rehousing." By R. A. H. Livett. 7 p.m. At the Institution of Civil Engineers, Gt. George Street, W.1. " Steel Scaffolding." By P. M. Andrews. 6.30 p.m.*

Friday, December 11

TOWN PLANNING INSTITUTE. *At the Caxton Hall, Westminster, S.W.1. " Planning for Town and Country." By G. L. Pepler. 6 p.m.*

FACULTY OF ARCHITECTS AND SURVEYORS. *Annual Dinner. At the Hotel Victoria, Northumberland Avenue, W.C. 7.15 p.m.*

Saturday, December 12

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY. *Visit to Cutlers' Hall. Warwick Lane, E.C.4. 2.30 p.m.*

Monday, December 14

R.I.B.A., 66 *Portland Place, W.1. Musical Evening arranged by the Social Committee.*

LONDON SOCIETY. *Visit to the Watermen and Lightermen's Hall, 18 St. Mary-at-Hill, E.C.3. 2.45 p.m.*

Tuesday, December 15

R.I.B.A., 66 *Portland Place, W.1. Dance organized by the R.I.B.A. Dance Club. 9 p.m.*

SOUTH-EASTERN SOCIETY OF ARCHITECTS. *At 1 Edridge Road, Croydon. " Roofs." By R. Fitzmaurice. 8 p.m.*

Wednesday, December 16

CHARTERED SURVEYORS' INSTITUTION. *Annual Dinner of the Quantity Surveyor Members. At the Savoy Hotel, W.C.2. 7.30 p.m.*

TEAM VALLEY TRADING ESTATE

The contract for the construction of factories and buildings on the Government-fostered Team Valley Trading Estate, near Gateshead, has been awarded to the two firms of Stephen Easten, Ltd., Newcastle-on-Tyne, and H. E. Pitt, Ltd., Sunderland. Immediate construction will be started on nine factories and the central administrative block, a bank, canteen, power sub-station, and a central garage capable of housing 500 commercial vehicles. The consulting architect to the Team Valley estate is Professor W. G. Holford, A.R.I.B.A.

PERSHORE ABBEY

Sir Charles Peers has been appointed consulting architect to Pershore Abbey, in succession to the late Mr. Francis B. Andrews, of Pershore, and Mr. Claude Andrews, B.SC., A.R.I.B.A., has been appointed architect.

FLATS AT PURLEY

In our issue for November 26, under " The Week's Building News," we omitted to print the names of architects for 42 flats, Whytecliffe Road, Purley. They are Messrs. F. H. Stodart & Co.

TRUSCON

The annual supper-dance of the Trussed Concrete Steel Company was held at the Wharnecliffe Rooms, London, N.W., on Friday last. About 250 guests were present, including Sir John Brown, K.C.B., and Messrs. C. H. Aslin, Joseph Emberton, R. J. Hugh Minty, Lionel Pearson, Frank Scarlett, and J. Alan Slater.

R. I. B. A.

ELECTION OF MEMBERS

At a recent Council Meeting of the R.I.B.A., the following members were elected :—

As Hon. Corresponding Member (1) : Mr. S. F. Voorhees (New York).

As Fellows (5) : Messrs. P. Cummings (Manchester); H. T. Jackson (Coventry); H. D. Kidd (London); P. B. Gregory (Belfast), and W. Broadbent (Leeds).

As Associates (124) : Messrs. V. Abbott (Newcastle-upon-Tyne); J. Adam (London); F. Adie (London); G. Alderson (Scarborough); G. Aldis (London); (Miss) M. Atkins (Tunbridge Wells); G. Baines (Preston); J. Baker (Gravesend, Kent); H. Bennett (Worthing, Sussex); F. Bickerton (Eaglescliffe, Co. Durham); R. Brett (Wimborne, Dorset); E. Broughton (London); C. Brown (Banstead, Surrey); K. Brundle (Pitsea, Essex); B. Burroughes (Ipswich, Suffolk); A. Carter (Yeovil); W. Chan (Federated Malay States); J. Charter (London); C. Cole (New Milton, Hants); A. Cooper (Portsmouth); E. Cooper (High Wycombe); F. Craddock (London); F. Daly (New Malden, Surrey); T. Davies (Stoke-on-Trent); W. Dawson (Leigh-on-Sea, Essex); D. Dent (Norwich); M. Desai (London); K. Dexter (Chingford); A. Dod (Liverpool); J. Donaldson (Edinburgh); C. Doody

(Ilford, Essex); J. Fernandes (Bombay); J. Fiszpan (London); D. FitzGerald (London); G. Fox (Toddington, near Dunstable, Beds); A. Fraser (Eastbourne); W. Frost (Derby); H. Gibberd (Birmingham); J. Goodman (Birmingham); T. Gratton (Glasgow); A. Gravell (Esher, Surrey); J. Greenwood (West Town, near Bristol); E. Haigh (Durham); D. Hall (Upminster Common, Essex); F. Hannam (Bristol); A. Harris (Preston); R. Hartley (London); J. Hastie (Edinburgh); H. Hayns (London); J. Heald (Purley, Surrey); J. Hill (Brighton); G. Hopkinson (Huddersfield); R. Horsman (London); J. Hurst (Wakefield); G. Hutton (Trowbridge, Wilts); E. Ixer (Sheffield); A. Jeffrey (Fence Houses, Co. Durham); N. Johnson (Northallerton, N. Yorks); E. Jones (Newport, Mon.); F. Kirby (Bishop Auckland); P. Lamb (Tangshan, N. China); J. Lawson (Newcastle-upon-Tyne); A. Lazenby (Hull); R. Leacroft (London); E. Levy (Manchester); G. Lowe (Sanderstead, Surrey); E. McDonnell (Liverpool); P. McManus (Edinburgh); F. Meeson (Tipton, Staffs); J. Melvin (London); G. Mennell (London); R. Mills (Derby); W. Mills (Birmingham); (Miss) R. Morrison (Edinburgh); J. Motafram (Bombay); K. Nealon (Croydon, Surrey); C. Neil (Leigh-on-Sea); K. Ng (Singapore); J. Nicholls (London); R. Nicholls (Liverpool); H. Nuttall (Eastbourne); F. Orman (London); W. Patrick (London); G. Pearson (London); (Miss) C. Pettiward (Salisbury, Wiltshire); H. Pite (Sidcup, Kent); A. Prior (London); H. Pursell (London); G. Raven (Rotherham); J. Rivett (London); C. Roberts (Whimple, Devon); H. Robinson (Hove); J. Samuel (Newarthill, By Motherwell); C. Sandeman (Taunton); L. Scates (Eastcote, Middlesex); H. Scott (Dumfries); R. Seward (Wellington, New Zealand); R. Shannon (Morden, Surrey); R. Shapley (Alderley Edge, near Manchester); C. Sharp (Bedford); A. Shelbourn (Beverley, Yorks); S. Simpson (Leeds); (Miss) E. Smeall (London); W. Stenner (Bristol); N. Stirrup (Sale, Cheshire); F. Stobart (Harpenden, Herts); G. Stubbs (London); J. Suggitt (Birmingham); P. Taylor (Bristol); A. Tipling (Wolverhampton); R. Tubbs (London); H. Wakeford (London); F. Whitehead (Heckmondwike, Yorks); H. Whitwham (Bingley); F. Wicker (Gravesend, Kent); C. Wilcox (Stoke-on-Trent); J. Wilkinson (Bournemouth); H. Williams (Manchester); I. Williams (Gloucester); L. Williams (London); M. Williams (Taunton); J. Wylson (London); R. Yarburgh-Bateson (London), and J. Young (Edinburgh).

As Licentiates (14): Messrs. A. Blay (Rickmansworth, Herts); F. Bromige (London); A. Brown (London); C. Brown (Derby); J. Findlay (Leeds); H. Hill (Harpenden); W. Jenkins (Swansea); A. Leon (Cardiff); H. Peppiatt (London); J. Pickavance (Stafford); E. Smallwood (London); W. Stephen-Evans (Stafford); H. Turk (London), and W. Tuthill (Sheringham, Norfolk).

OBITUARY

It is with deep regret that we record the death of Sir Charles Holmes, who died on Monday morning at the age of sixty-eight. Starting in the publishing house of Rivington, he made one or two moves from one firm to another, stimulated at the same time by Charles Ricketts to paint during his short hours of leisure. From 1903 to 1909 he edited the Burlington Magazine, during which time he was Slade Professor at Oxford. Sir Charles was appointed Director of the National Portrait Gallery in 1909, and remained there until 1916, when he went, somewhat against his will, to the National Gallery, where he stayed until his resignation in 1928. After leaving the National Gallery he devoted himself to painting, writing, and advisory work, and was consultant, amongst other firms, to Josiah Wedgwood and Sons.

CRY HAVOC!

By Francis Watson

COMING at the time that it did, the evening newspaper bill "Alhambra to be Demolished" was almost as startling as that celebrated poster that was once said to have sold out every edition with "Fire on the Underground: Passengers Alight." For we had but lately been made aware of the irreparable damage done to the Alcázar at Toledo by shell-fire, by dynamite and by the mismanaged vowels of the B.B.C. announcers, whom even the warning accent of *The Times* case-room could not deflect; and it seemed reasonable to suppose that the Philistine fury of the combatants would stop at nothing in its determination to force upon Karl Baedeker a new and starless edition of *Spain and Portugal*, hitherto unrevised since 1913.

Lisbon est abimé et l'on danse à Paris, wrote Voltaire after the earthquake of 1755. Nobody stopped dancing in London, but for the time required to read an evening paper on the homeward tube there was a general shocked opinion that something worth far more than human lives, something as good as the Cloth Hall of Ypres, had been wantonly razed to the ground, and those who had had the good fortune to visit Toledo before the Serpent entered Paradise were the object of an envy coyly accepted as flattery. There was even some talk of rescuing the Toledo El Grecos before it should be too late, since it was fancied that the harassed Spanish Government would be prepared to part with such treasures at bargain prices. But nothing came of it. The war went on, and the pictures, as far as could be ascertained, remained untouched.

So did Toledo Cathedral. So did the churches, the mosques, the synagogues, the Alcantara Bridge. The *Posada de la Sangre*, associated with Cervantes, lived up to its picturesque name, but the smoking ruins of the Alcázar were all that we saw in the news-reels. One could see that it had possessed a spacious and well-arcaded courtyard, such as is found all over the Peninsula. Crowning the rock with its four bold turrets it was a handsome and venerable building, two years older than the Eiffel Tower.

Unless some new social order pulls down churches and palaces to erect flats and cinemas, Toledo will probably be found when it is all over to have sacrified little of her mediæval claim to be "The Light of the World," the second and pleasanter capital of Spain. There will have been one more siege in the history of a city battered and transformed by sieges, and the tale of it will find its way into the guitarists' *coplas*. *Ay de mi, Alcázar!* they will sing, and the visitor will take it for a love-song. Whatever be the outcome of the rebellion, the wounds of Toledo will be exhibited as unashamedly as a Spanish beggar shows his scars—or as an urchin showed me a church in Granada burned by Communists, not as a loss to the city but as an additional sight. As for the Alcázar itself, it is a fortress, not a scheduled monument. And fortresses, the Spaniard will say, are made to be besieged as piecrust is made to be broken. There may even be a new Alcázar of reinforced concrete, a symbol of architecture's debt to the arts of war.

The rebel forces, as I write, are halted in the suburbs of Madrid, and it is still too early to dismiss as negligible the destruction of works of art in the conflict. It is almost certain, however, that accounts of "vandalism" in the English Press have hitherto been grossly exaggerated. Apart from assaults of a strictly military nature, such as those on Toledo and on the garrisoned cathedral of Siguenza, there have been local outbursts of fetishistic revenge as fierce and as senseless as that which in 1789 impelled the French revolutionaries to besiege a Bastille containing a handful of quite unimportant prisoners. A number of churches have been gutted, a quantity of ecclesiastical treasures broken up and burned in the public squares. Whether by accident or design, however, iconoclasm seems to have expressed itself at the expense of buildings of which the foreign connoisseur is comparatively ignorant. In spite of that alarming poster, we do not hear of the Alhambra suffering further injury than had already been inflicted upon it by Ferdinand and Isabella and several centuries of neglect. Seville, Burgos, Cordova would appear to be safe for the present, and while the normal wish is to see the whole country restored to peace as rapidly as possible, it may be argued that what there has so far been of annihilation may have the effect of enhancing the value of the remainder. The market can be depressed as seriously by a glut of baroque churches as by an over-production of diamonds, and Spain was notoriously well provided in the former respect. A little thinning-out may be found even by devotees of the churrigueresque style to have done no great harm.

For the threat to Madrid I am scarcely qualified to speak, since my only view of a capital celebrated rather for the height than for the elegance of

its public buildings was obtained from between two detectives in the back seat of a fast-moving car; and when, before committing me to a cell already occupied by fourteen others, they bade me admire the elevation of the central police-headquarters, I could summon little enthusiasm. The pictures in the Prado, however, are said to be assured of adequate protection, and the war has already had the result of adding to that collection a number of excellent works which had for many years been stored as pledges in the vaults of various banks.

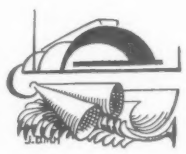
It is far from my intention to advocate war as an instrument of policy, or indeed to discuss it in any such light. But it is certainly possible to overestimate its destructive effects upon architecture. Buildings whose form and situation are finally conditioned by military principles occupy a good deal of attention in the guide-books, and even among business-men there are probably few who would sacrifice the Tower of London for a parade for peaceful shoppers. I have known a heartless companion to thank the stars for the Thirty Years' War, which gave Bavarian baroque its opportunity and yet spared a wealth of gothic for our delight. That this conflict, which left Germany prostrate for two centuries, permitted upwards of half a dozen complete walled cities to remain almost in their sixteenth-century condition, should be the cause of some reflection to Englishmen, who, with no assistance from foreign aggressors and comparatively little from civil war, have contrived to root out even the memory of English mediæval art and to reach the twentieth century encumbered only by a number of mutilated cathedrals, some unregarded village churches, a row of house-fronts in Holborn and another in Chester, and a few other mocking relics that can be dealt with as occasion offers.

We have, of course, our museums—filled for the most part with the loot of other lands. Spain has few museums, for the Spaniard has not yet been inoculated against art by the museum-sense. We are great collectors, preferring the zoologist's cabinet to the song of birds, and the Courts of the Victoria and Albert Museum to a handsome street for business purposes. At the same time the tradition of the Grand Tour is strong upon us, and what we refuse to preserve in our own country we demand to find on the Continent when on holiday. Less than a century ago the Provost of Eton insisted on covering up the fifteenth-century wall-paintings that had survived by a miracle in the College Chapel, and was only restrained by the intervention of the Prince Consort from destroying them entirely. Imagine the indignation of such a man, the thunder in the common-room, the letters to the *Times*, if a vacation trip to Assisi had revealed that somebody had stripped the Giotto frescoes from the walls.

And thus, while the drill and the pick make brave music in Adelphi Terrace, the Englishman who will scarcely look up at the offices which are to replace it finds passion to execrate Spaniards for their lack of consideration (while engaged in a struggle that by all accounts means a good deal to both sides) for the amenities expected by the tourist. In defence of the Adelphi there has at least been an audible, though ineffective protest. In defence of much else that is vanishing under the demands of commerce far faster than anything in Spain is yielding to military necessity, one can only speak in despair. For Park Lane one has relatively few regrets, but it might have been thought that enough rent was already collected in Mayfair to have saved such buildings as Chesterfield House. In Kensington High Street, of which only a nation of shopkeepers could now be proud, the flats are about to eat up Edwardes Terrace, saved by a slump in 1910 but sacrificed to a bubble in 1936. The last defence of Oxford Street against vulgarity, Wyatt's Pantheon, is now to go. Traffic demands between Hammersmith and the Great West Road are to be met, not by the obvious widening of King Street—an eyesore and a death-trap which provides good ground-rents—but by the invasion of unique riverside property which does not. As for the squares, one of the few features of London planning which discerning foreigners formerly came to observe, their case seems hopeless. It began in 1913 with the removal of the house occupied by Newton and afterwards by the Burneys at the south side of Leicester Square, a house which Macaulay asserted would "continue to be well known as long as our island retains any trace of civilization." He seems to have been correct, for since 1920 we have laboured unremittingly to effect what the German airmen would have been happy to undertake free of charge during the war. The latest attacks are developing in the most valuable sectors, in Portman Square and Soho Square, but the prize of the present campaign is likely to be secured by the column which is preparing to advance on St. James's Square itself. It is understood that Norfolk House (1742-56) will be retained for the Earl Marshal's duties until the Coronation, but few seem willing to answer for it thereafter.

The catalogue could be extended almost indefinitely, and heaven knows what work of Adam or Hawksmoor or Gibbs or Soane may not collapse under the bombardment before the truce of another building-slump enables us to survey the ruins. But it should be said in defence of the public conscience that, having thwarted Wren and outwitted Nash, we have passed through Parliament a Town-Planning Bill so effective that a Society has recently been formed to promote the operation of its first clause.

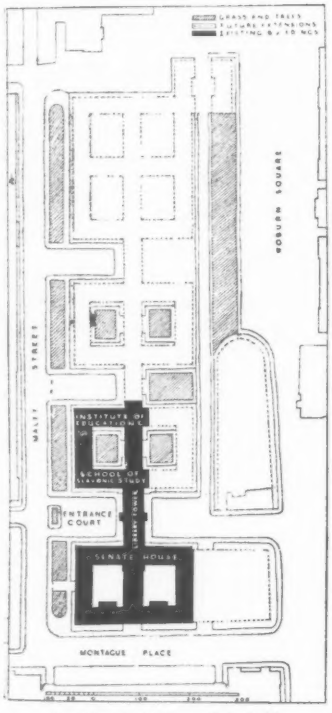
And the moral? People who live near the Crystal Palace shouldn't throw fireworks.



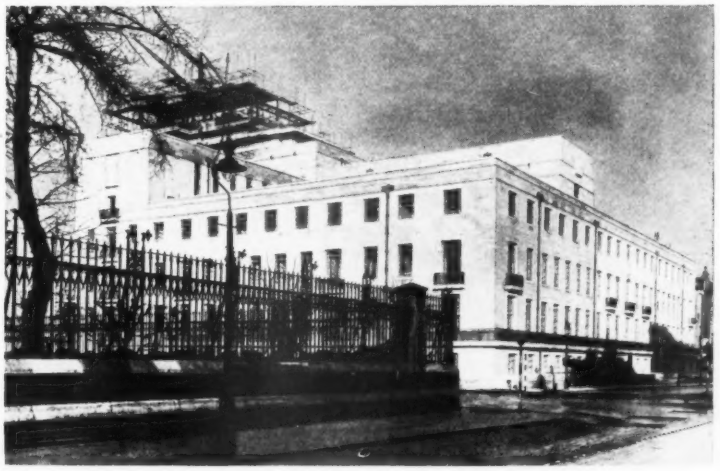
Announcement

Mr. W. H. Watkins, F.R.I.B.A., Chartered Architect, of Bristol, has recently opened an office in London. All communications should be addressed to Trafalgar House, Waterloo Place, London, S.W.1. Telephone No.: Whitehall 8355.

SENATE HOUSE, UNIVERSITY OF LONDON:

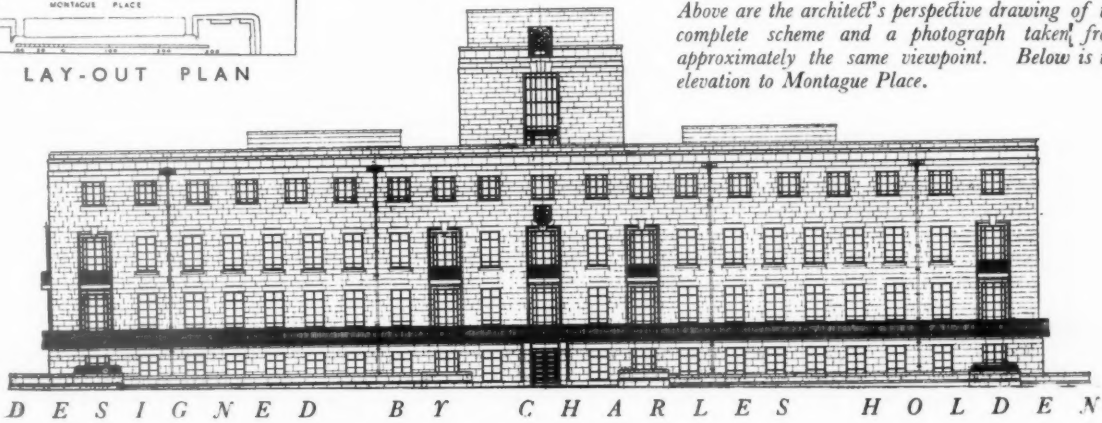


LAY-OUT PLAN



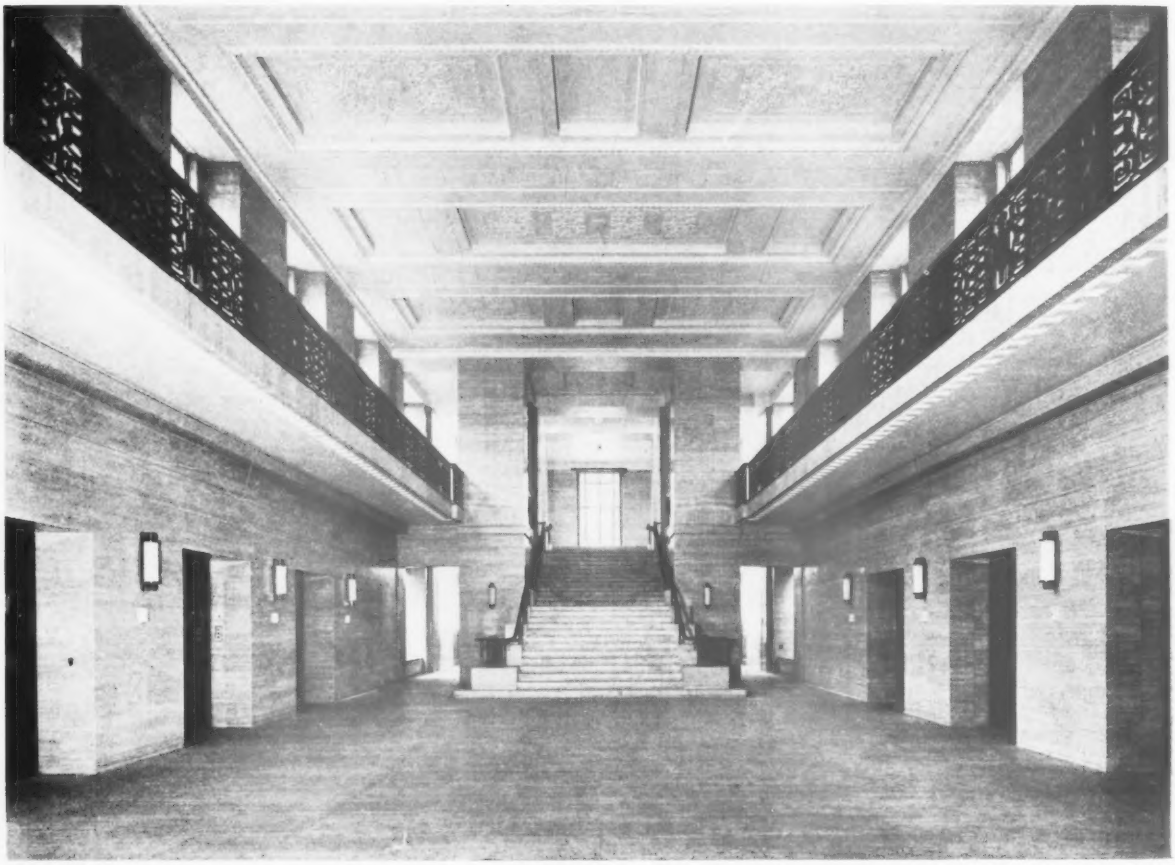
GENERAL PROBLEM — *The Senate House is the first portion to be completed of the new buildings for the University of London. It contains administrative offices, Senate room, court room, small hall to seat about 500, ceremonial hall and staircase, conference and dining hall, kitchen and refectories. The main entrance will be at the base of the central tower. The new buildings, when completed, will form one of the largest single building enterprises ever carried out in the centre of London.*

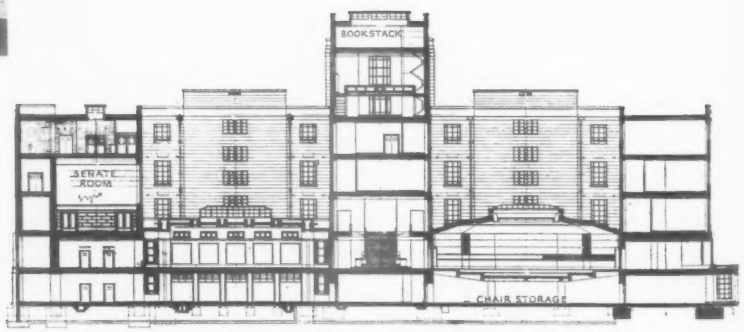
Above are the architect's perspective drawing of the complete scheme and a photograph taken from approximately the same viewpoint. Below is the elevation to Montague Place.



DESIGNED BY CHARLES HOLDEN

SENATE HOUSE, UNIVERSITY OF LONDON:





SECTION

PLAN—*The vertebrate form of plan was dictated by the special requirement that allowance should be made for a 20 per cent. extension to nearly all departments. The extensions will be on the east side of the spine adjacent to each department. Owing to the central position of the building on the site there is no interference with rights of light—not even in the case of the tower. Services, staircases and lifts are all centralized in the spine, as are vertical shafts containing all pipes. The courts are alternately open and enclosed and an open "cloister" in the spine on the ground floor links up the east and west courts.*

The photographs show: the ceremonial hall and staircase and the conference and dining hall. On the facing page is a detail of the ceiling in the ceremonial hall.

DESIGNED BY CHARLES HOLDEN

SENATE HOUSE, UNIVERSITY OF LONDON:

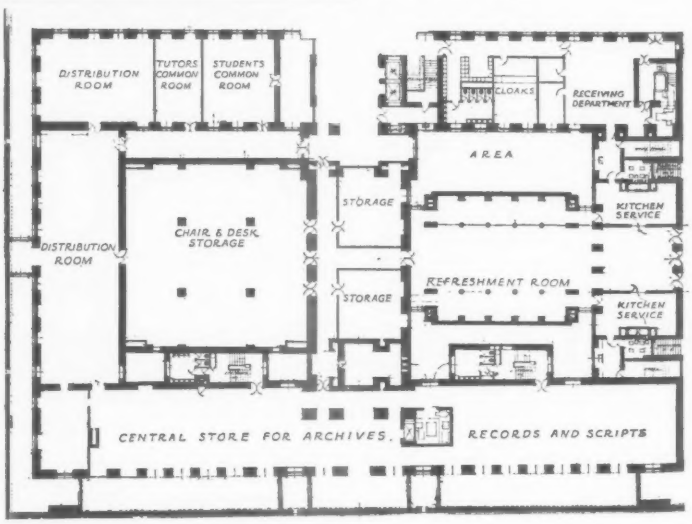
CONSTRUCTION—*Walls are brick faced with Portland stone above first-floor level, and with Cornish granite below. Floors are in steel and concrete in single span between external walls. The steel frame within the tower forms a separate structure to carry the great load of books in the bookstack and to distribute the load more evenly upon the foundations which form a continuous raft in the case of the tower.*

FLOOR CONSTRUCTION — *Twin beams on piers with the main slab flush with the underside of the beams to enable rooms to be partitioned off at will. The teak floors are laid on joists and bearers, intervening space being used for conduits, the web of the girders being drilled at regular intervals.*

The windows are spaced fairly regularly to enable rooms to be subdivided. The R.W. pipes and heads are in cast lead; the balustrade is in wrought iron.

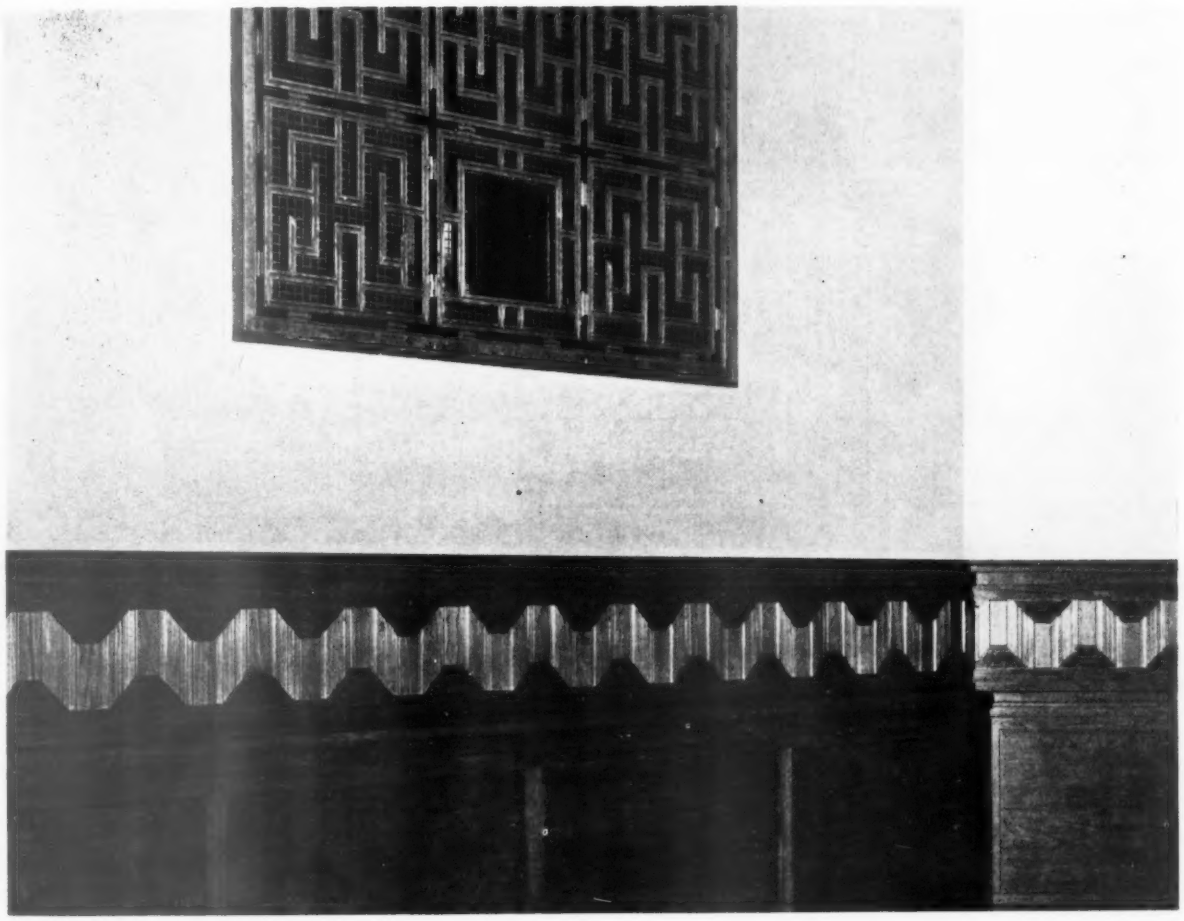
INTERNAL FINISH — *The walls and floors of the main halls and the ceremonial staircase are finished in travertine marble, all other staircases in Biancola with upstanding curbs. The ceremonial staircase has a wrought-iron balustrade with bronze handrail; all other staircases have cast-iron balusters with bronze handrails. The war memorial casket is in bronze on a travertine pedestal, with the inscription in bronze.*

The photographs are of the doors leading from the ceremonial hall to the small hall.

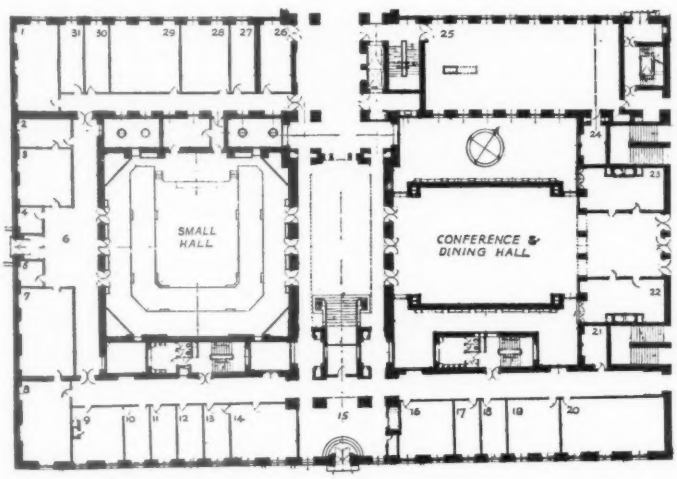


BASEMENT PLAN

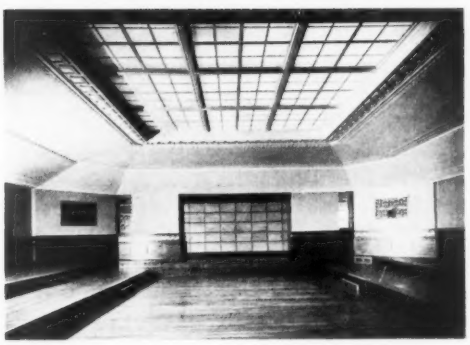
DESIGNED BY CHARLES HOLDEN



The photographs are, above, a detail of panelling and a ventilation grille in the small hall ; right, the small hall.



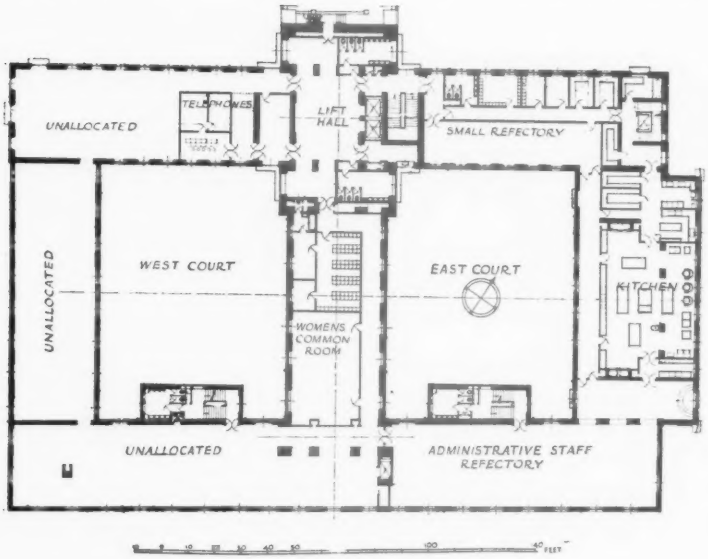
GROUND FLOOR PLAN



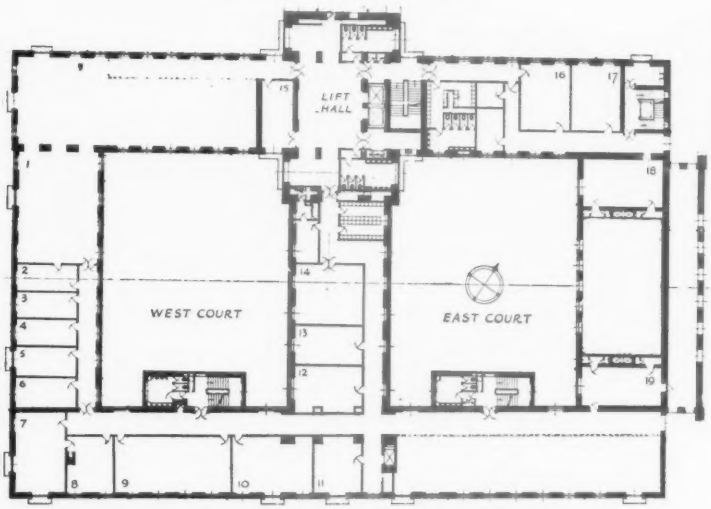
KEY TO ACCOMMODATION

1. Intermediates
2. Training college delegacy secretary
3. Clerks
4. Waiting-room
5. " "
6. Entrance hall
7. Clerks
8. "
9. "
10. Deputy registrar
11. Higher degrees
12. Clerks
13. Registrar
14. Secretaries and clerks
15. Entrance hall
16. Secretaries' room
17. Registrar
18. Deputy registrar
19. Secretary and clerks
20. Clerks
21. Interviewing room
22. Kitchen service
23. " "
24. Office
25. Examinations dept.
26. Typists' room
27. Special intermediates
28. Overseas examinations
29. Finals
30. Superintendents' room
31. Senior secretary

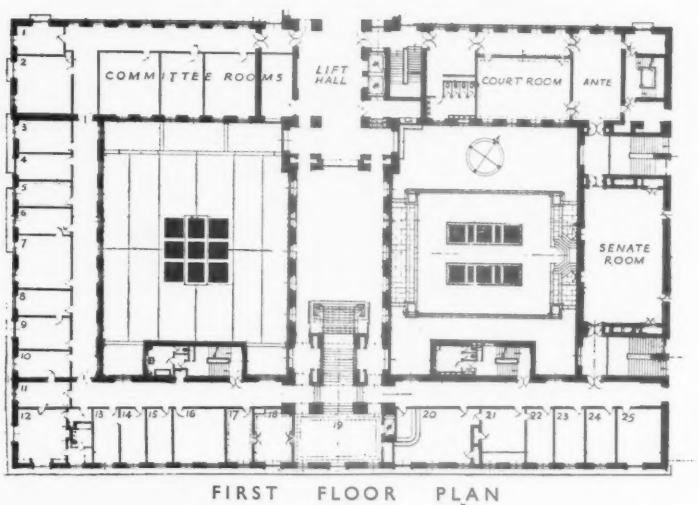
SENATE HOUSE, UNIVERSITY OF LONDON



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

KEY TO ACCOMMODATION

FIRST FLOOR PLAN

1. Establishment secretary
2. Clerks
3. Chairman of Convocation
4. Clerk of Convocation
5. Chairman of Court
6. Spare
7. Court staff
8. Assistant clerk of court
9. Clerk of the court
10. Principal's secretary and clerk
11. Spare
12. Principal
13. Secretary of Senate
14. Secretary of Senate staff
15. Secretary of Senate staff
16. Printing clerks and assistants
17. Ante
18. Vice-Chancellor
19. Ante
20. Cashier and clerks
21. Clerks and machines
22. Assistant accountant
23. Accountant
24. Auditors
25. Committee room

SECOND FLOOR PLAN

1. School Examinations Department clerks
2. Store
3. Senior secretary
4. Secretary to Council
5. School examinations secretaries
6. Diploma writers
7. Central typing-room
8. Central typing-room
9. Central filing-room.
10. Central posting and stationery department
11. Committee room and waiting-room
12. Committee room
13. Administrative staff men's common room
14. Administrative staff men's common room
15. Library and bureau clerks
16. Domestic staff men's canteen
17. Domestic staff women's canteen
18. Domestic women's common room
19. Stationery store

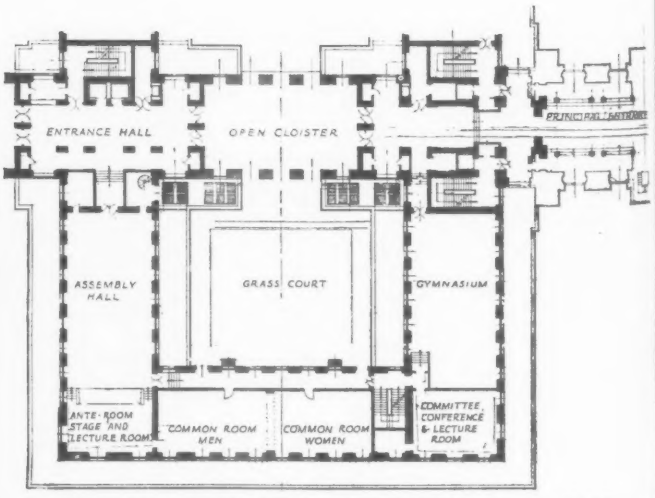
SERVICES—*Dry electric heating is installed throughout the building and is supplied from behind marble panels in the window backs. Conditioned air is supplied to the small hall, the conference and dining rooms and the Senate room.*

The photographs show: the staircase in the ceremonial hall, and the Senate room. The photograph on the facing page is taken at the top of the ceremonial staircase.

DESIGNED BY CHARLES HOLDEN

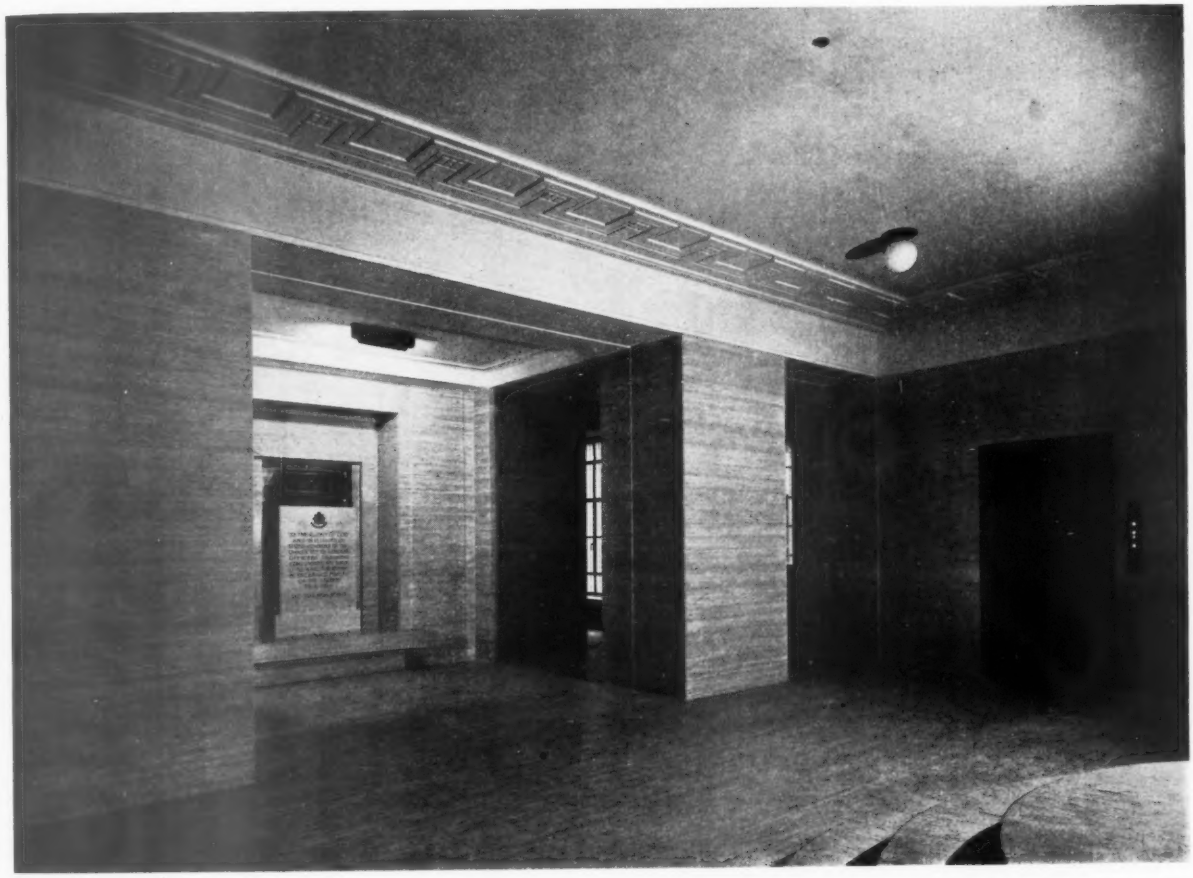
SENATE HOUSE, UNIVERSITY OF LONDON:

The photographs show : above, the students' common room ; left, No. 1 staircase.



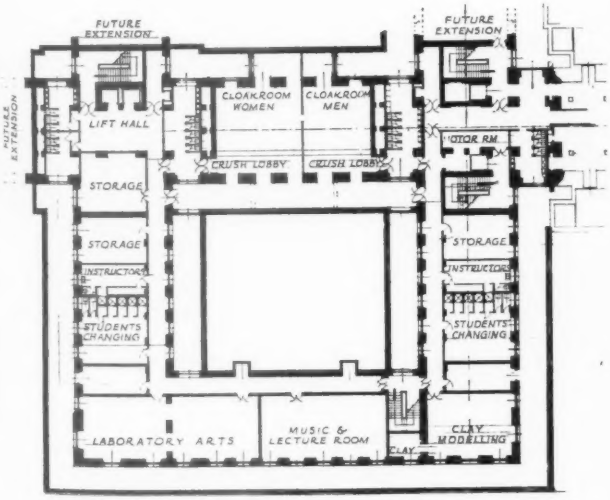
INSTITUTE OF EDUCATION AND SCHOOL OF SLAVONIC STUDIES : GROUND FLOOR PLAN

DESIGNED BY CHARLES HOLDEN



The photographs show : above, the entrance hall from Montague Place ; right, the war memorial.

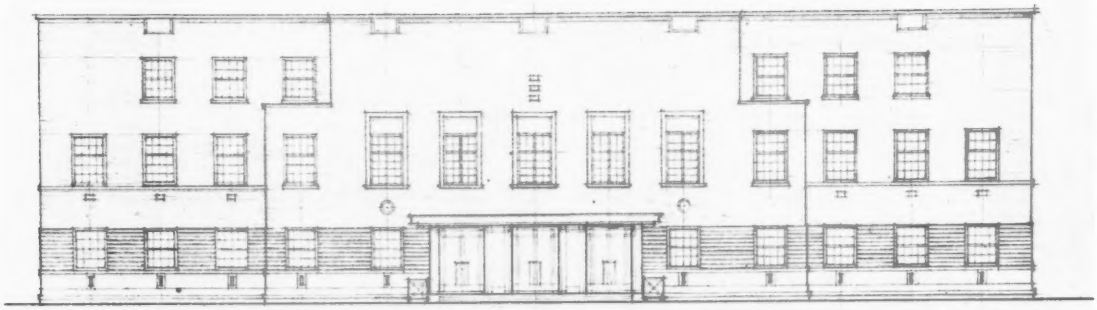
For list of general and sub-contractors see page 825.



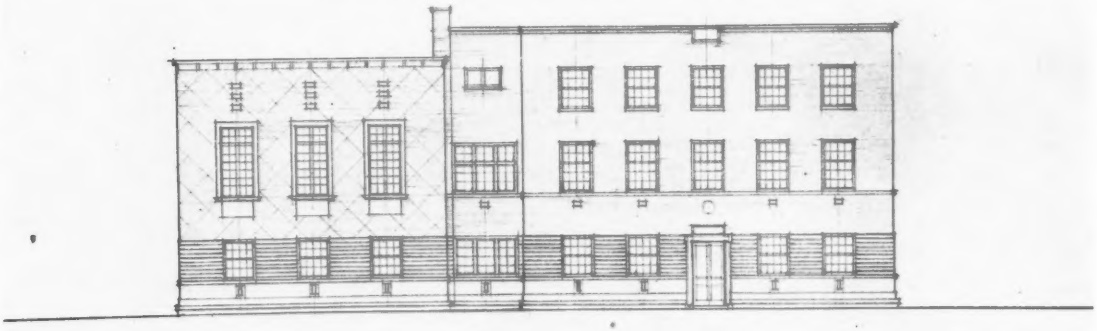
INSTITUTE OF EDUCATION AND SCHOOL OF SLAVONIC STUDIES : BASEMENT PLAN

D

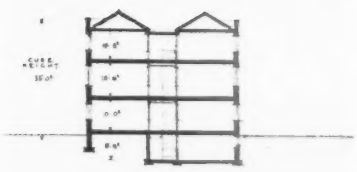
COMPETITION FOR PROPOSED MUNICIPAL



ELEVATION TO SOUTH



ELEVATION TO WEST



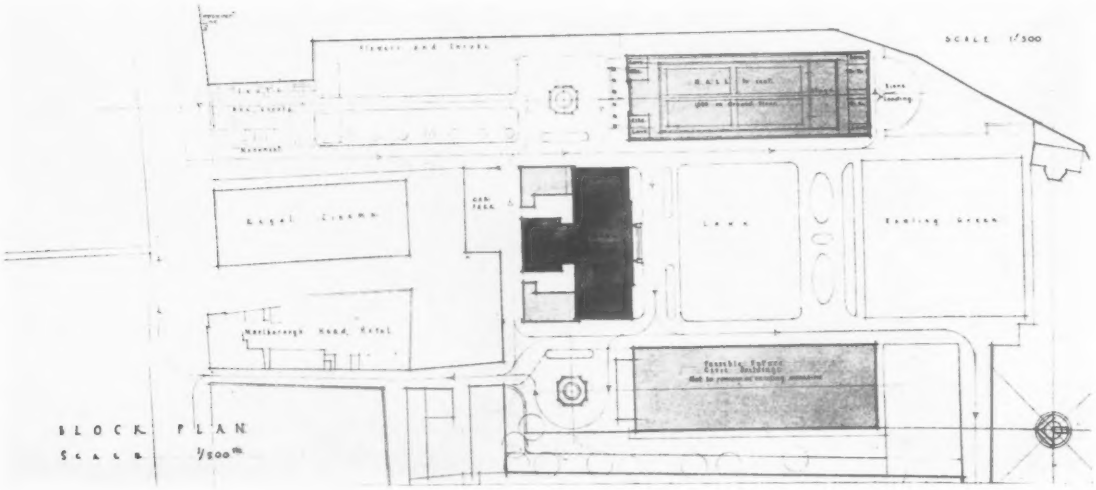
SECTION C.D

Mr. E. Vincent Harris, A.R.A., F.R.I.B.A., the assessor in the competition for proposed municipal offices, Farnham, Surrey, has made his award as follows :—

Design placed first (£250) : Professor R. A. Cordingley and Donald McIntyre, F. and A.R.I.B.A.

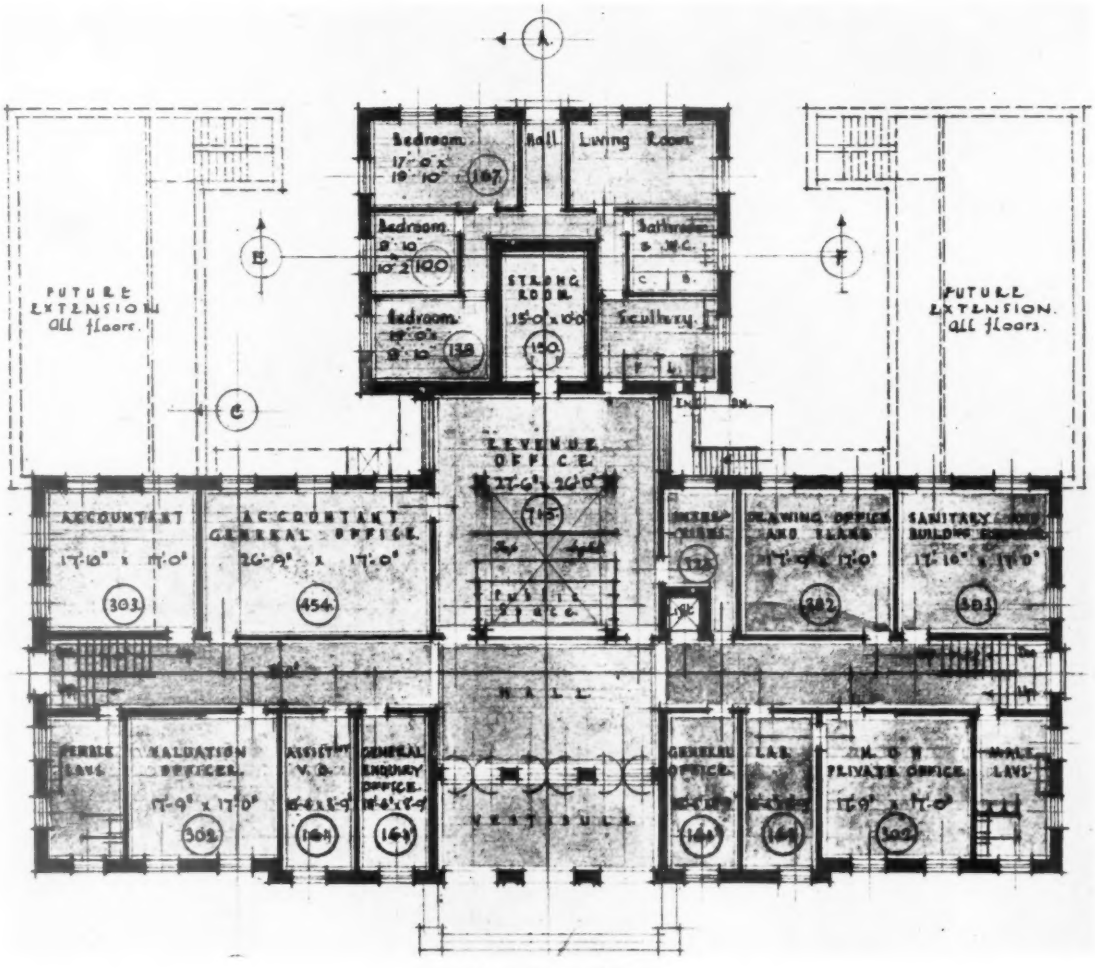
Designs placed second and third (£150 and £100) : Messrs. Grace and Farmer, FF.R.I.B.A.

The designs submitted in the competition will remain on exhibition at the Chestnuts, East Street, Farnham, until December 12, between the hours of 10 a.m. and 7 p.m. The winning design is illustrated in this and the two following pages.

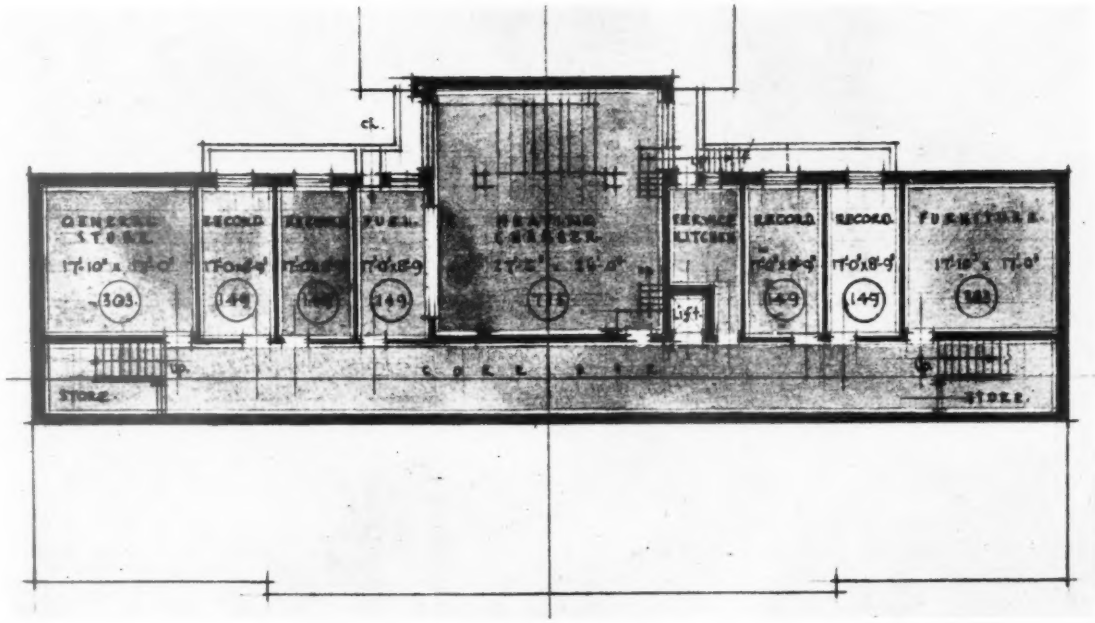


BLOCK PLAN

OFFICES, FARNHAM: THE WINNING DESIGN



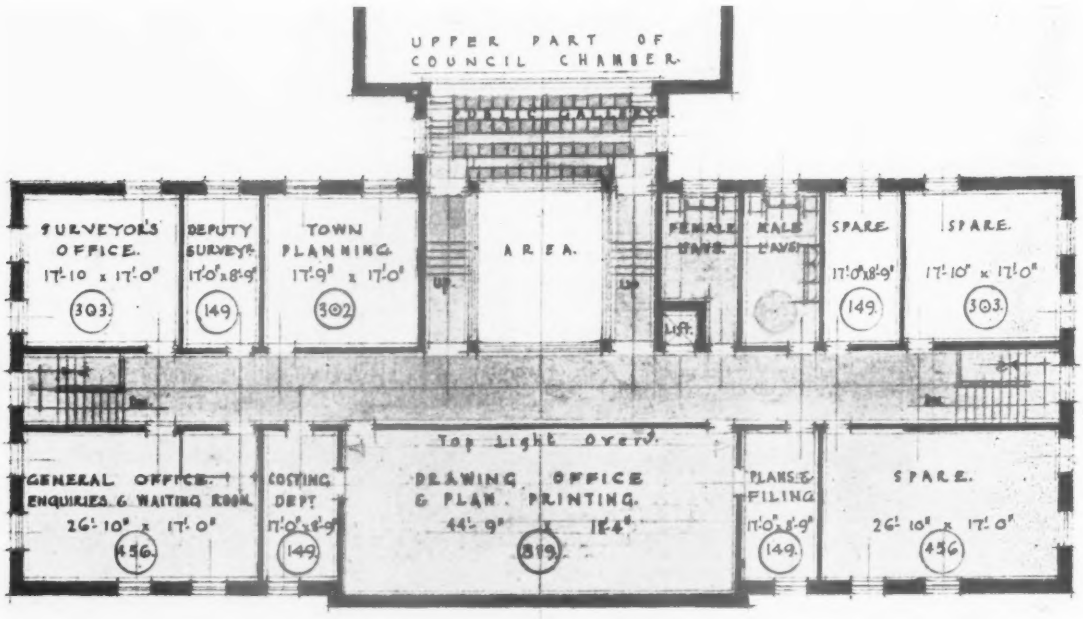
Ground floor plan



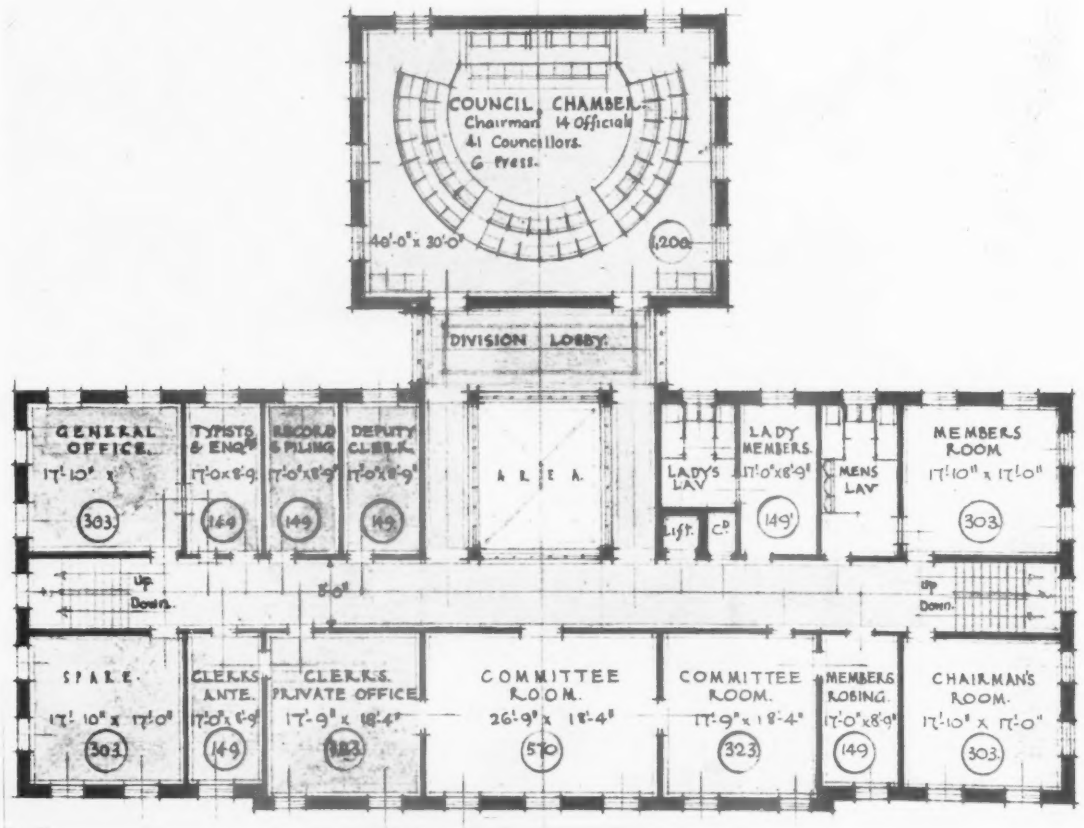
Basement plan

BY R. A. CORDINGLEY AND DONALD McINTYRE

COMPETITION FOR MUNICIPAL OFFICES, FARNHAM



Above : second floor plan ; below, first floor plan



WINNING DESIGN : BY R. A. CORDINGLEY AND DONALD McINTYRE

The Architects' Journal Library of Planning

SHOPS

Sites in Detail

TRAFFIC, PARKING AND ENTRANCES

[By Bryan Westwood and Norman Westwood]

IN the previous article we have dealt with the subject of siting down to the point of factors influencing the choice of neighbourhood. We shall now proceed to considerations of traffic and features of the site itself.

Influence of Traffic

The effect of traffic on sales value of a site is still not fully understood, as was illustrated in the first article, but certain general principles have emerged.

(i) *Exclusive or "B" Class Shops*

It is better to place high-class shops in streets joining main traffic arteries rather than in such streets themselves.

Apart from actual physical discomfort due to jostling on crowded pavements the effect of heavy traffic is very distracting, a fact which is immediately apparent if it suddenly stops.

The average customer goes to shops of this kind to purchase goods which require careful selection and general consideration, and for this reason freedom from disturbing influences is more important than ready accessibility. As a point of interest Bond Street is said to have been a better selling centre before the intrusion of the bus route.

(ii) *Shops selling necessities, or Class "A"*

The "A" class shop selling necessities or standard or cheap luxuries depends for its livelihood in being able to outdo its rival through more accessible siting. Such a store finds it worth while at any price to secure a site near a bus stop or other place such as a railway station or amusement centre where large numbers of people congregate.

The potential customer will have made a mental note of the position of the "B" shop and will not mind going back to it, but if he just wants a packet of cigarettes or some razor blades he goes to the nearest place, which *on the average* is likely to be in one of the situations mentioned.

Traffic Restrictions

It seems unnecessary to consider the effects of "one-way," "unilateral," or "no parking" streets in detail because the evidence is overwhelming that any of these factors are highly detrimental wherever there are alternative shopping centres available free from restrictions.

Removal of "through" traffic from a shopping centre by construction of a by-pass road is not necessarily detrimental. We understand that trade in Guildford High Street has improved since the Guildford and Godalming by-pass was opened, presumably because, although reduced in numbers, the passing motorists are more inclined to stop, as manœuvring is so much easier.

Parking Facilities

Proximity of squares where customers can

Exclusive furniture shop in Grafton Street, W. By Erno Goldfinger. There is nothing arbitrary about the placing and arrangement of the door and steps, and the same care is apparent in all the elements of the front such as lettering, blinds and means of ventilation.

park their cars is becoming increasingly important in site selection in central urban areas, as it is still considered uneconomic to give up part of the site for the purpose. Customers will patronize shops where they can leave their cars even if it means travelling a greater distance to them.

This is so important that at least one large London store has made arrangements with a near-by garage to park customers' cars free on production of a receipted bill.

It would seem quite possible that the larger shops in the future will have to reserve the ground floor for parking and display only.

In suburban schemes, where land costs are not unduly high, provision of forecourt parking space where small shops are grouped would seem well worth while.

It is this kind of provision which gives an orderly and planned appearance which can add so much to the character of a town. In addition, recent Orders under the Restriction of Ribbon Development are likely to make the provision of such facilities obligatory within a few years.

(i) *Corner Sites*

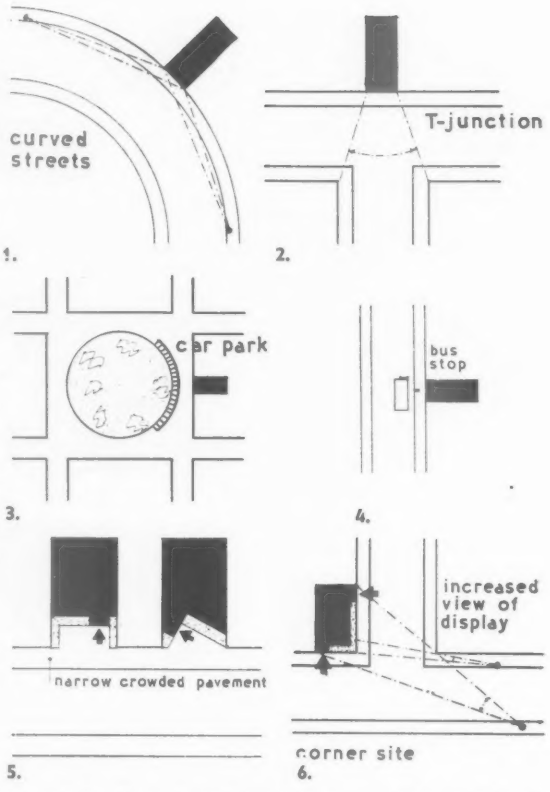
As a rule corner sites are at least 30 per cent. more valuable than those with only one frontage, for the following reasons :—

Better light and ventilation.
Choice of street frontages for entrance.
Greater length of display space which is also more valuable per foot run.
Avoidance of obscuring main frontage by vehicles loading or unloading.

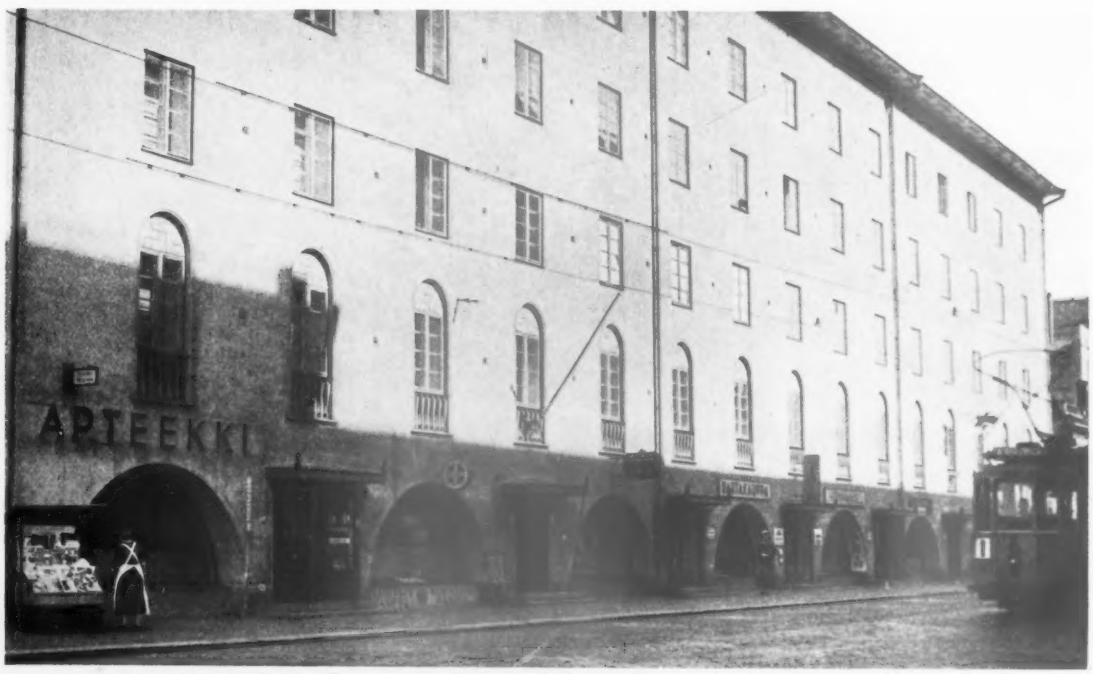
These advantages are sometimes considerably offset by pavement congestion at road junctions.

(ii) *Sun or Shade*

In England shops on the sunny side of the street have better publicity value for the greater part of the year.



1 and 2 : Shops in positions like these can be seen by the passer-by long before he gets near them. Display is accordingly likely to be more valuable. 3 : Proximity to a car park may be the making of a shop whose clientele is the very wealthy, such as exclusive tailors and beauty parlours. 4 : It is not only Lyons and Woolworths but also the high-class shop which benefits by being near a bus stop *if such a stop is regularly used by potential customers*, cf. Simpsons, Piccadilly. 5 : Recessed windows of this kind can be attractive in themselves as well as being a practical necessity, cf. "Shanks," Bond Street. 6 : A corner site not only gives greater length of window, but that window is more valuable per foot run for a similar reason to the two first diagrams above.



Shops at Abo, Finland. Treatment of doors and windows giving a unified general appearance.

Showroom in New Bond Street, showing front recessed to allow standing space in a crowded street. Designed by Oliver Hill

The last survivor of the old shops in Princes Street, Edinburgh, which were all approached by flights of steps. Other show-windows are in the semi-basement.

Against this, they have to be fitted with blinds, as nearly all goods are affected by continual exposure to sunlight.

Greater lighting control over display can be exercised in the shaded windows.

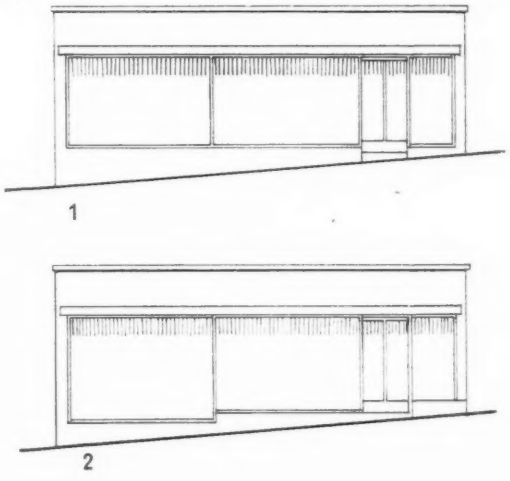
If there is a choice it is better to have morning sun.

The value of a sunny or shady site really depends on individual trade requirements. For instance, delicate fabrics must be kept from the sun, but the goods in a hardware shop will not suffer by exposure to the sun and will look more attractive in the bright light.

(iii) *Sloping Sites*

Such sites occasionally produce an architectural *tour-de-force* but generally an inconvenience to customers.

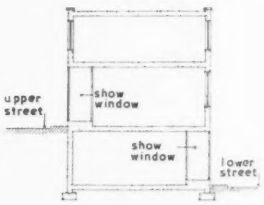
If windows are stepped so as to be kept at an



Methods of treating fronts on a street slope. (1) Window cases at different heights from pavement—useful for displaying different types of goods. (2) Windows stepped to same average heights of stallboard. (3) Use of steps to overcome slight slope.

even height above the pavement, internal treatment is often difficult.

Sometimes it is desirable to have window bases at different heights from the ground in order that varying types of goods displayed will all be viewed at eye level; in which case the slope can



Sites sometimes occur where streets at front and rear are at different levels, so that, in effect, two ground floors are obtained with obvious advantages.

be turned to good account by keeping all window heads level.

Customers do not like to park their cars on a steep slope and pedestrians tend to pass the windows without pausing.

(iv) *Curved Streets and T-junctions*

Best site on the outer curve as it can be seen for a considerable distance in both directions.

For similar reasons a site closing a vista is a good one.

(v) *Arcades and Culs-de-sac*

Arcades are not much use except for shops of the luxury type, but in places where there is a considerable volume of traffic through them, and provided they are not closed at night, tobacconists and newsagents seem to prosper.

Their actual value depends largely on local habits of the population. In Edinburgh, for instance, we were particularly struck with the number of people who walked into a *cul-de-sac* arcade just to look in the shop windows, whereas in London even arcades which constitute a through way and a short cut are but little patronized.

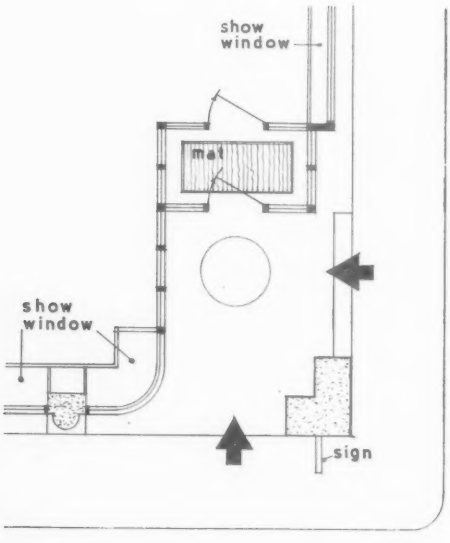
Cul-de-sac roads adjacent to busy shopping streets are good places for very high-class shops, such as exclusive tailors, because cars can be parked.

Entrances

Placing and treatment of the entrance is one of the practical problems which arise in most cases even where almost everything else is determined by "circumstances over which the architect has no control." For this reason, at the risk of being accused of going over old ground, we shall deal with this subject and the question of display fairly fully.

Owing to the value of display it is generally necessary to utilize ground floor frontage as fully as possible, and the actual doors are therefore small. Except in shops of the Woolworth type, catering for very large numbers of people, a large door is not essential from any point of view. What is important is that the door should not be hidden by showcases or obstructed during business hours by vans unloading outside.

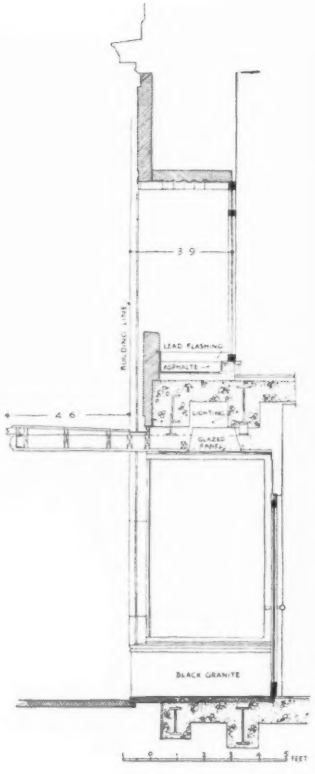
Still stressing the importance of good display,

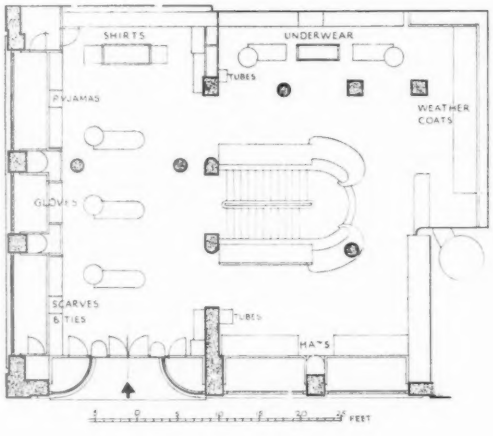


Space has been given up in order to give a generous character to the entrance. The disadvantage is that the lobby is used by pedestrians as a short cut. Designed by Gustavo Finale.

SHOPS

MAN'S SHOP AT GLASGOW • *By Sir John Burnet, Tait and Lorne*





A "Man's Shop" of good quality type in Renfield Street, Glasgow.

Window-frames, cills, canopy edge and door fittings of bronze. Black granite base and Portland stone facing. Threshold is of golden travertine.

Internally, panelling is mainly of walnut veneer with French gold inlay bands; floors of close pile carpeting; stair treads are of "Korkoid" with rubber nosings; handrails and grilles are of tubular white metal; and glazing in corridors of "Thermolux" and mirrored glass.

it is seldom advisable to place the entrance on the angle of a corner site (the one point where goods can be seen from some distance). Customers emerging from such a door find themselves in the most crowded part of the street, and also more dust is blown into a shop through a corner entrance than through one placed to avoid the general stream of the wind, i.e. a door on either of the sides.

Doors

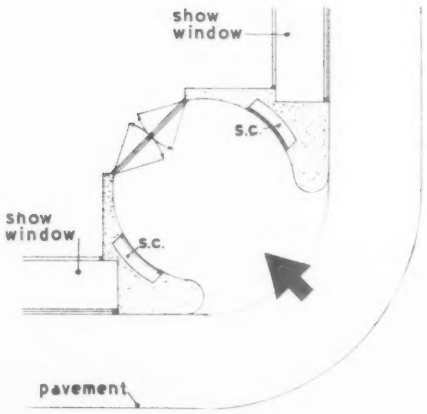
For large shops two doors should be provided at each entrance capable of swinging both ways, allowing customers to enter and leave at the same time. A series of single doors are desirable if a very large number of people are using the shop as there is one door for each person entering or leaving. In small shops the single door is quite sufficient, but should not be less than 2 ft. 9 ins. wide. Doors opening outwards must clear the building line when open. This is usually of no disadvantage as the door is set at the back of the show cases forming a lobby in front, which is a restful pausing space between pavement and shop.

Steps at the entrance, if unavoidable, should be kept back from the frontage as well as having a landing provided in front of the doors.

Goods Delivery and Dispatch

Where only one frontage is available vans delivering goods are bound to be a source of annoyance to customers arriving by car. The only mitigation is to keep the goods entrance as far away as possible from the shop entrance.

Frontage to a street at the rear is very desirable as it simplifies the whole circulation of the shop as well as leaving the main front free from avoidable obstruction.



A corner entrance is usually disadvantageous, since a corner display window is very valuable. A very inviting entrance, which is itself a display space, can get over this and the other drawbacks mentioned. The lobby must be at least about 10 ft. wide in order to achieve these objects. Designed by Oliver P. Bernard.

LETTERS FROM READERS

The Crystal Palace

SIR,—It is with regret that we have noticed the omission of any reference to its importance as a landmark in the evolution of modern architecture from the descriptions of the Crystal Palace that have appeared in the daily press.

It seems to have been regarded by those who have written about it as a building of no æsthetic value and of an interest only brought to it by its associations with various historical occasions in the nineteenth century and later. It has been valued for sentimental reasons only, and even ridiculed as a piece of architectural design.

It is with great distress, Sir, that we, representing the modern architects in this country, have observed this attitude. It is not too much to say that in losing the Crystal Palace, Great Britain has lost the evidence of her most important claim to have made an original contribution to modern architecture. It had the distinction of being one of the first important uses of those typical modern materials, iron and glass, in combination; and of being the first large-scale use of the modern principle of mass production. In designing the building in standardized pre-fabricated units of iron and glass, Sir Joseph Paxton was anticipating by many years one of the most important contributions that the industrial age was to make to building science.

The Crystal Palace, then, was not, as writers in the press have implied, a relic of a past age, but a fore-runner of a modern age, an architectural age that is only now dawning. And it is noteworthy (and typical, we fear, of our habitual regard for our national achievements in the arts) that while this courageous building has been despised by the descendants of the men who built it, it has been for many years an object of pilgrimage by the leading modern architects from the Continent, who regard it rightly as one of the pioneer buildings of the modern age.

FOR THE MARS GROUP,
C. SWEETT,
General Secretary.

Agricultural Housing Needs

SIR,—In view of the increasing necessity for the development of our agricultural resources, may I again call attention to the present serious shortage of cottages for farm labourers in many parts of the country?

C. SWEETT (GENERAL SECRETARY, MARS GROUP)

H. L. NATHAN, M.P.

ONE STUDENT OF THE ARCHITECTURAL ASSOCIATION SCHOOL OF ARCHITECTURE

DAVID TO GOLIATH

JOHN C. TICKLE

The most effective contribution made to agricultural housing since the war was the provision of 30,114 new cottages (28,218 by rural district councils and 1,896 by private enterprise) in agricultural parishes under the terms of the Wheatley Housing Act of 1924. This last-mentioned scheme was, most unfortunately, terminated by the Government in December, 1932.

With regard to the question of slum clearance and rehousing, progress in rural districts appears to be unduly slow. In 1934 the rural district councils of England and Wales adopted programmes involving the destruction of 38,071 insanitary cottages and their replacement by new dwellings to be provided under the Greenwood Housing Act of 1930. These programmes are due to be completed by March 31, 1938, but up to the end of September, 1936, only 8,673 replacement houses had been erected by rural district councils under the Act of 1930. It is, therefore, hard to understand the complacent statement contained in the Ministry of Health's recently published Annual Report for 1935-36 that "the slum clearance programmes in rural districts should be completed without difficulty by the end of the five-year period." It is, moreover, somewhat disconcerting to read in the same Report that "there is no express statutory obligation to replace every individual house demolished as a result of a demolition order." In view of the situation, the Minister of Health should surely exert his influence so that a new cottage is normally provided for every insanitary dwelling destroyed.

The Government's attempt to encourage private enterprise to erect houses to let at low rents has proved a failure in urban areas and a disastrous failure in rural districts. According to a reply given by the Minister of Health in the House of Commons on November 23, 1936, guarantees under the much vaunted Housing Act of 1933 had been given by rural district councils in respect of only 1,859 houses up to September 30, 1936. It was also stated that the average weekly rental (exclusive of rates) of these houses was 8s. 10d., a figure far beyond the capacity of the agricultural population.

It is too early to estimate how far rural district councils will make use of the new provisions contained in the Housing Act, 1935, for the abatement of overcrowding. Much will depend on the policy adopted by the Minister of Health's Rural Housing Committee with respect to the award of the Exchequer grants available under that Act.

If the standard of agricultural housing is to be raised, sustained publicity is essential. The time is indeed ripe for a national campaign on behalf of the housing needs of this most deserving class of workers.

H. L. NATHAN

Epstein's "Day"

SIR,—The letter printed in your columns and signed by a group of students suffering from the usual illusions, only goes to illustrate the old, old story.

I do not doubt for one moment their statement that Fascism suppresses freedom of expression in art; but on the other side, my observations lead me to suspect that under the party, the name of which they so carefully omit, there is very little art to suppress.

Moral, do not mix art and politics.

ONE STUDENT OF THE ARCHITECTURAL ASSOCIATION SCHOOL OF ARCHITECTURE

Building Regulations

SIR,—The letter from "Realist" is no exaggeration. The Town Planning Act as administered by the present London County Council is an attack on the landowner that has backfired and hit the building developer. It is having the effect, to the knowledge of the present writer, of stopping legitimate projects. No doubt this evidence can be reinforced from the recent experiences of others.

The regulations as to the size of internal lighting courts (ridiculously large for most reasonable uses), the restriction on heights (which even cause reductions, on rebuilding, of those at present enjoyed), are reducing floor spaces in buildings to such an extent as to prevent even a modest return on outlay, which is killing building enterprise in many parts of London. These regulations even prevent the fulfilment of agreements between neighbours, which is purely unjust where one party to the agreement has already rebuilt and is enjoying the rights given him by his agreement, while the other now finds himself prevented from enjoying a right that the Council has robbed him of.

The high-handed administration of the Act where it concerns change of user, according to some secret and arbitrary rule applied to parts of London where the user of industry, commerce and residence are interlocked, is a mischievous hardship and prevention of progress. The activities of industry, commerce, and residence have ebbed and flowed and interlocked for centuries and are as

indeterminate as to boundaries as the fringes of the waves of the tides. The London County Council in trying to apply hard and fast lines to these is attempting an impossibility, for it defies the centuries. Even Canute would not have attempted it. Industry cannot be confined to one side of the street and commerce to the other. That they should dovetail together in building is not unreasonably to be expected as they do already in fact. The attempt to apply such a rule is driving concerns out of London in numbers that can only increase as the actions of the Council, now only beginning, become more vigorous. This exodus is leaving derelict and empty premises behind it, and what is worse, is leaving behind a mass of unemployment, for no concern can afford, in its forced emigration, to take with it any but a few of its leading employees.

No wonder the London County Council wishes to rate empty premises, for it has started a boomerang movement that in returning hits the thrower. By preventing a firm from expanding the firm is driven out leaving premises which are unsaleable by reason of the Council's restrictions on user. These are the premises that the Council is now asking should be subject to rates, even though it is their own action that has rendered them empty and unsaleable.

It might be useful and instructive to hear the comments of the Minister of Labour on the unemployment being created by the Council in this way.

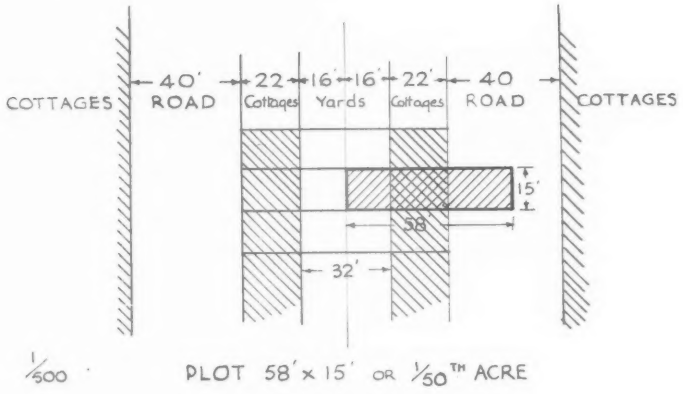
It will be remembered that some six years ago clauses were inserted in the London County Council's General Powers Bill requiring a drive-in to be provided to every new building. This proposal was instigated by the Ministry of Transport and the Commissioner of Police. It created such an outcry, both in Parliament and outside it, that the Council, rather than run the risk of losing their Bill, withdrew the Clauses. Now, some years later when that has been forgotten, similar clauses get slipped into the Ribbon Development Bill, which is a Bill ostensibly dealing with the country. These clauses are got through unnoticed. Then the Ministry issues an Order, as a result of which it is discovered for the first time that these clauses are to be made to apply to built-up areas, and the Order hands over the administration of this part of the Act to our old friends the London County Council. The hush-hush method by which this legislation was obtained is not creditable to those concerned. It remains, however, that it is legislation.

Henceforward, every building in London of over 250,000 cubic feet (not a very large building), and every public building of whatever size, is to have a draw in and out for traffic. The effect of this is that in future our pavements, hitherto reserved for pedestrians, will inevitably become part of the carriageway itself, for the pavements will be intersected at frequent intervals by crossing traffic entering buildings, with more or less numerous islands for the safety of pedestrians. One shudders to think what such a street as Oxford Street will be like when this regulation has had time to be enforced. Confusion will be worse confounded, with danger to life and limb immeasurably increased. The Minister of Transport's frantic appeals for safety on our roads are being defeated by himself, and in future can only be regarded as Belisha's ballyhoo.

Pelion is piled on Ossa, for here again the building developer and landowner is to pay. Old and decrepit buildings will be preserved long after their time, for none can afford to build under this conglomeration of punitive and political regulation. This is a fact that will become increasingly apparent to those who have not already had the experience of having legitimate projects killed by the blunder, muddle and political administration of the London County Council.

Some day the whale that is London, through its discomforts, will disgorge this Jonah of a Council from its belly, and be the better for it.

DAVID TO GOLIATH



See letter by J. C. Tickle

Housing

SIR,—It would be service to architects interested in housing if you can publish further details of Miss Denby's most instructive paper.

Personally, I cannot see how *any amenities* can be provided if houses are built at 50 to the gross acre; in fact it is only just possible to build the late Victorian "byelaw cottage" at this density!

Fifty to the acre is 97 sq. yds. per cottage, or, say, a rectangle of 58 ft. by 15 ft. If we ignore all side roads and the problem of back access, a cottage of sorts can just be squeezed on this area, as the annexed diagram shows. It's up to Miss Denby to produce a layout, but I doubt if anything decent can be done at a greater density than 20 or 25 to the gross acre.

JOHN C. TICKLE

TOWN PLANNING: BELFAST

Some of the more prominent questions and difficulties facing the citizens of Belfast were emphasized by Mr. E. Maxwell Fry in his second talk in the series, "Town Planning in Northern Ireland," broadcast in the Northern Ireland Programme on November 10.

Belfast, sixth port in the United Kingdom, he first saw from that curve in the Crumlin Road, grey and inert, under a pall of smoke. But when he came down into it, he found it true to the established pattern; hard and inhuman, shapeless, without structure, without meaning.

"For a long time," he said, "I walked the streets where most Belfast people live. The houses in them were not much different from their counterpart in St. Helen's or Leeds. A *very* narrow front just wide enough to take a window, a door and sufficient brickwork to hold the house together; a room in front—half a room behind, a dark well of a yard behind that again, and a narrow passage. Then the same thing was repeated backwards, and so you had one block of dwellings. A narrow street with narrow pavements completed the picture.

"In these houses that form the greater part of Belfast, the means of decent living are almost entirely lacking, and I thought that they were rather a poor sort of thing to have been turned out by the same people who have built great ships of which they are so proud. The ships sail away but the houses remain."

If you look at a map you will see two things—one this piece of street planning, the other the piece of industrial planning which is the harbour and the ship-yards. Everything else is more or less of a muddle. The shipbuilders said to themselves, what is the best way of laying out a shipyard that will serve our purposes now, and well into the future? They planned their work town. But nobody planned the living town.

SOCIETIES AND INSTITUTIONS

ROYAL SOCIETY OF ARTS

Following are some extracts from a paper entitled "Unlearning Architecture," read by Mr. Charles Marriott at a meeting of the Royal Society of Arts last week :

It is possible that the title of my address needs some explanation, and I can best explain what it is intended to convey by saying that I had thought of adding as a sub-title "A Plea for the Innocent Eye," but a desire for brevity prevailed. Whatever its title, and I could not think of a better one for the purpose, my address is prompted by the belief that the appreciation of contemporary architecture, of all architecture in fact, is hindered, not by too little, but by too much knowledge of, or rather about, the subject; by too much information of the wrong kind; and that the way to a proper appreciation of architecture is by a process of unlearning rather than of learning. Works of art, of visual art in particular, ought not to, and do not, need knowledge for their appreciation, any more than appreciation of a good dinner needs a knowledge of cooking or of the history of the subject. If I quote the remark of the Italian sculptor, Canova, that "Englishmen see with their ears," it will give you a broad hint of the general lines of my argument and of the bearing of the proposed sub-title, "A Plea for the Innocent Eye," on what I have to say.

Is it not evident that, in order to arrive at a standard for judging architecture, we must get down to something which, like the standard for humanity, is irrespective of period or style or historical or sentimental associations? We must have something which can be applied with equal validity to any kind of building. Architecture, like history itself, is continuous in time, and does not end with the last stylistic revival, and it is universal in extent, and does not end below a certain social rank of building. That there is such a thing as mere building may be allowed, but the moment a building has been considered for its looks as well as for its practical function it comes into the province of architecture—though it may be bad architecture.

Sir Reginald Blomfield, R.A., has called architecture "the art of ordered building," and the definition is good enough for practical purposes. Though it is not the whole story of architecture, orderliness, or even tidiness, will go a long way. But for present purposes it may be better to speak of form and proportion as the values which are constant in all periods and all kinds of architecture, as values which can be looked for equally in the cathedral and the cowshed. "Form," perhaps, needs a little discussion, because it means something more than "shape." If you identify it with shape you are in danger of attaching it to particular forms, such as columns or pointed arches. In the artistic sense form may be said to mean that control of shapes, or disposition of parts, which results in an effect of unity; of something complete and self-sufficing, like a plant or an animal. Though, as I said, "shape" is a risky word, everybody knows what is meant by "shapeliness," and when we say that a person is "in good form" we mean very much the same thing. In contemporary architecture form is largely a question of the composition, or ordering, of quadrangular masses. In fact, from the necessities of the case, including the principle of construction, architecture is becoming more and more obviously, what it always was under the distractions of style, comprising in terms of solid geometry. This does not preclude ornament, but if a building is right in the geometrical respect it is good architecture as far as it goes. Proportion, I think, explains itself, and it may be said to be involved in form, because if door or window openings are too wide for their height, or the other way about, or if they are too large or too small in area for the size of the building as a whole, if what is called "the relation between voids and solids" is wrong, the effect of unity will be destroyed.

No doubt it will be said that a sense of form and proportion needs learning. I should prefer to say that it can be cultivated, and that it can best be cultivated by a process of unlearning; by detaching our impression of a building from all that we may happen to know about its history or associations or stylistic character. This, as I know by experience, is by no means easy, because bits of knowledge, all right in their proper place, but irrelevant in the act of seeing, will creep in to corrupt the eye. The building has an interesting history or associations; we approve or disapprove of its purpose; we are taken by a preference in style; or we like or dislike a particular kind of ornamental detail. Observe that in pleading for the innocent eye in looking at architecture, I am pleading for nothing new.

That great and much misunderstood man, John Ruskin, summed up the whole question when he warned the student against painting things for their associations. If you do, he said in effect, you will find yourself painting some horrible villa because She once looked out of one of its windows. The rudiments of a sense of order, form and proportion, and of such associated values as rhythm and balance, grace of line and dignity of mass, all values which are independent of style in the historical meaning, are present in almost everybody; otherwise it would be silly to talk about the universal appeal of art: but in too many of us it is cramped in exercise and distorted in judgment by hearsay information. To turn to another art, there can be no doubt that the appreciation of painting has been hindered by the habit of reading pictures in terms of their subject-interest. Observe, this is not to say that a picture should not have subject-interest, any more than it is to say that a building should not have stylistic character. Many wholehearted exercises in the traditional styles are good in form and proportion. No doubt there are some people who are "form blind," in the sense in which others are "tune deaf"—and there is a closer analogy between the two conditions than might be supposed—but they are in a minority. To take a simple illustration of what I mean, the "golden section"—the ratio of three to five I think it is—in the division of space is found to be almost universally satisfying. The reason why it should be so is obscure—it may depend upon convenience in the movements of the eye—but it is a fact, just as it is a fact that to the majority of people sugar tastes sweet and vinegar sour. Incidentally, I have often thought of trying a new parlour game, giving the company rectangles of paper and asking them to place the moon where they feel it ought to be in a landscape. I believe that in the majority of cases its placing would correspond roughly to the golden section, in both dimensions of the paper, and the prize would be given to the person who placed it exactly, as tested by measurement. This is not to say that good architecture can be designed by any such mathematical rules; it is only to say that the architect is the person, who, by instinct and training, can control the values of order, form, proportion, rhythm, balance, what not, in building operations.

In one of his books Mr. R. R. Wilenski said that the best way to appreciate and understand the painting of the past was to begin with that of the present and work backwards, and I believe that that is even more true of architecture. Except in the sense that you and I are, in our degree, historical subjects, architecture is not a historical subject; it is a constant effort to order building operations—to make them, as the Americans would say, "Easy to look at." After observing how contemporary architects are giving order, form and proportion to the practical requirements of the present day, it is easier to work back and see how the architects of the past did the same with their practical problems; and how what we call "the styles" are simply the formulation for visual effect of all the factors involved at a particular period with a particular method of building construction.

There is a point about photographs of architecture which, I think, ought to be made. In several instances it may seem to you that the building has not the merits in form and proportion which are claimed for it. That depends upon the great difference between architectural and pictorial composition—a difference which I do not remember to have seen noted. In looking at an actual building our impression of it is bounded only by the field of vision—roughly an oval, fading off at the edges. In a photograph the building is seen in relation to the rectangular boundary of the picture space—one of the most important, if not the most important, factors in pictorial composition. To put it another way, in looking at a building everything is referred to the centre of gravity; in looking at a picture everything is referred to the boundaries of the picture space. The better the photographer, as a pictorial composer, the more likely he is, in taking the picture, to choose a point of view, or an angle, which will make this relation satisfactory. That is to say, he sacrifices the architectural to the pictorial composition. That is one reason why indifferent architecture often looks very well in a picture, while first-rate architecture may not. Incidentally, it explains why artists, as painters, are dangerous guides in architectural questions. They often find their best material in picturesque decay.

LIVERPOOL ARCHITECTURAL SOCIETY

Mr. John Gloag, public affairs director of the Timber Development Association, and Mr. E. H. B. Boulton, technical director, lectured to the Liverpool Architectural Society recently on "The Design of Timber Buildings in Relation to the Modern Movement, and Timber as a Structural Material." They showed a variety of lantern slides illustrating types of steel,

concrete, and timber houses in England and Canada and on the Continent.

The architects of today, said Mr. Gloag, were not trying to work within the framework of any tradition. They were concentrating on such things as light and fresh air and straight lines. It was not, he thought, unfair criticism to say that if he wanted to buy a steel and concrete house he would choose it, from the point of view of comfort, on the worst November day. While the modern movement was a gallant experiment, we had not yet solved the problem of adapting it to our climate. It could be expressed quite as well in timber as in steel and concrete, and, actually, a large number of buildings had been constructed in timber. For timber was cheaper, and consequently they could have larger houses which did not clash with local building traditions. It was essential that these ideas which were coming from abroad should be Anglicised, and the way to do that was to use traditional English materials.

Mr. Boulton said that a timber house could be 33 per cent. cheaper than a house built of any other materials. The great difficulty was to obtain skilled men who understood timber construction. But the Minister of Health had stated that local authorities had no power to ban any material, and all exterior walls could be built of timber. Mr. Boulton went on to describe the great durability of western red cedar, of which Canadian houses are constructed. It required, he said, no paint or other protection.

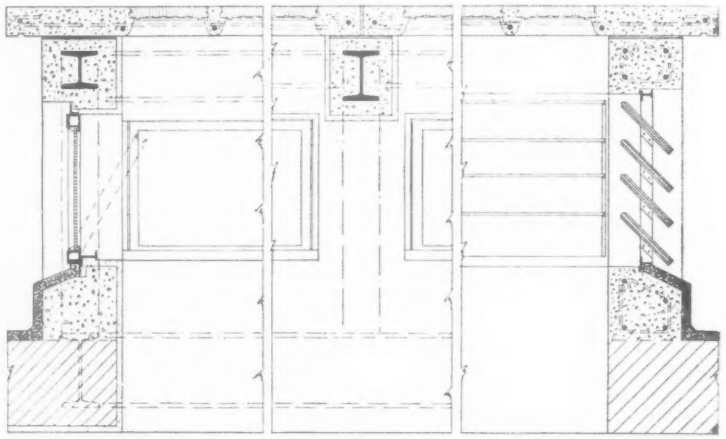
WELSH SCHOOL OF ARCHITECTURE

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Welsh School of Architecture, the Technical College, Cardiff, the Annual Exhibition of the work of the students of the School was held recently in the Assembly Hall of the Technical College.

In declaring the exhibition open the Lord Mayor of Cardiff (Alderman Herbert Hiles, M.B.E., J.P.) said that few realized how much they owed to the work of architects. On the previous day he had entertained the High Commissioner of Rhodesia, who was very impressed with the beauty of Cardiff's civic buildings. He (the Lord Mayor) felt certain that if members of the City Council accepted the views of the architects and their advice generally about the layout of the new buildings in front of the Great Western Railway Station, in years to come other visitors to the city would use similar expressions to those used by the High Commissioner of Rhodesia.

Mr. W. S. Purchon, M.A., F.R.I.B.A., Head of the Welsh School of Architecture, mentioned in his report that at the R.I.B.A. prize distribution held early in the year both the Archibald Dawnay Scholarships were awarded to students of the school—N. P. Thomas and L. W. D. Wall—while the Soane Medallion and £150 for Design was awarded to D. W. Roberts, another student of the school. He pointed out that at the annual general meeting of the R.I.B.A., Mr. Gilbert H. Jenkins, F.R.I.B.A., in reviewing the annual report, drew attention to the fact that the English schools with over 1,000 students won seven leading awards, the Scottish schools with about 300 students won three, and the one Welsh school with 40 students also won three.

Mr. Purchon also mentioned that the School of Art at Manchester and the University of Liverpool borrowed and exhibited the drawings prepared during the first three years of their course by the Welsh school's two Dawnay scholars, while the School of Architecture at Armstrong College, Newcastle (Durham University) made similar use of a set of theses prepared in the Welsh School of Architecture. He considered these events not only as tributes to the standard of work achieved by his students but also as an indication of the friendly co-operation which exists between the leading Schools of Architecture.



Bottom Hung Sashes in framing of cased steelwork. | Where beams are necessary this section applies. | Glass Louvres in framing of reinforced concrete.

TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Concrete and Glass . . .

NOW that so many architects are using the old and well-tried pavement light form and applying it to roofs, canopies, partitions and windows, it is as well to look round and see exactly how many ways there are of providing a solution to the two problems of weatherproofness and adequate light transmission.

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A new booklet from King's provides a good many different answers and explains quite simply the various ways of dealing with expansion, and gives brief notes on the suitability of different types of construction for different types of job. The booklet is laid out in a sensible way, with drawings (like the lantern light section shown at the head of these notes) and photographs showing what each method looks like when it is actually built.

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No indication of price is given, as presumably the cost varies widely with the size and the general layout of each job. None the less the booklet is a valuable one, for it gives a lot of information in quite a small space.

. . . and just Glass

Much the same bouquet may be handed to James Clark and Son, who have produced an eight-page folder which tells you practically everything worth knowing about glass. Four pages on the various *kinds* of glass and when and how and where to use it, and four more pages on the working of glass, bevelling, embossing, sandblasting and all the other surprising things that people do with glass nowadays.

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Exactly the right type of information to hand out to architects; terse and lucid, with no nonsense about it.

Chemists Forward

From time to time the Bureau International des Applications de l'Aluminium organizes competitions for the use or treatment of aluminium. So far as I remember the last one was for an aluminium chair, and was won by Marcel Breuer. The present competition, which has just been announced, is "to encourage researches into the chemical production of surface coatings on aluminium and its alloys, with the object of evolving a process which should constitute an improvement on the process known under the name of the M.B.V. process. The competition does not cover processes of protection by lacquers, varnishes, paints, waxes, or similar applied coatings."

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The M.B.V. process consists of immersion of the articles to be treated for ten minutes in a hot solution of anhydrous sodium carbonate and sodium chromate.

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Surface coatings submitted to the competition must be obtained by chemical means and without the aid of electric current. They must be applicable to both aluminium and its alloys, although it is not

essential that identically the same process should be employed for both. Modifications in the treatment according to the nature of the metal being treated may, however, only involve concentration, temperature, pressure, addition or suppression of various constituents, etc., and not the fundamental principle forming the basis of the process. The process submitted may, if desired, include after-treatment designed to improve the quality of the coating.

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The principal qualities required for the coating are, in order of importance :—

(*a*) It should provide a high degree of protection for the metal against attack by natural agents or by chemical reagents. This protection must at least be as good as that afforded by the M.B.V. process.

(*b*) It should be as transparent and colourless as possible and at the same time possess a mechanical strength at least as good as that of the film produced by the M.B.V. process.

(*c*) It should be capable of being coloured when required by an additional treatment based on the use of mineral or organic colouring agents.

(*d*) It should be smooth to the touch and must not readily show finger marks.

First prize is 25,000 French francs, and conditions are obtainable from L'Aluminium Française, 23 bis, Rue de Balzac, Paris. The British Aluminium Company, is, of course, a participator in the scheme, which is promoted by the principal European producing companies.

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Not, I am afraid, a competition likely to be won by an architect, but it shows none the less that the companies are anxious to conduct a thorough research in as wide a field as possible.

Addresses

J. A. King & Co., Ltd., Bridge House, 181 Queen Victoria Street, E.C.4.

James Clark and Son, Ltd., Blackfriars, S.E.1.

THE BUILDINGS ILLUSTRATED

SENATE HOUSE BLOCK, UNIVERSITY OF LONDON (pages 803-811). The general contractors were Holland & Hannen and Cubitts, Ltd., who were also responsible for the decorative joinery work; and the principal sub-contractors and suppliers included the following : Dorman Long & Co., Ltd., structural steel; Fenning & Co., Ltd., granite work; Holland & Hannen and Cubitts, Ltd., Portland stone; Limmer & Trinidad Lake Asphalt Co., asphalte; Stevens & Adams, Ltd., teak flooring; Trussed Concrete Steel Co., reinforced concrete stairs; Matthew Hall & Co., Ltd., plumbing and drainage; Waygood-Otis, Ltd., lift installation; Caxton Floors, Ltd., hollow tile floors; Henry Hope & Sons, metal windows and gearing; Crittall Manufacturing Co. Ltd., lift enclosure; C. Isler & Co. Ltd., artesian well; Acme Flooring and Paving Co., Ltd., teak block flooring; Conway & Co., Ltd., and Leeds Fireclay Co., white glazed tiling; Birmingham Guild, Ltd., architectural bronze work; Plastering, Ltd., plain plastering; T. Clarke & Co., Ltd., electric lighting, heating and power; J. A. King & Co., Ltd., "Glas-crete" roof lights; Fredk. Braby & Co., Ltd., covers to cable ducts; J. Whitehead and Sons, Ltd., travertine marble work; Carter & Co. (London), Ltd., Medmenham wall tiling; W. B. Simpson and Sons, Ltd., Adamantine tile paving; Joseph Armitage, plaster ceiling enrichments; James Slater & Co. (Engineers), Ltd., kitchen equipment; Samuel Elliott and Sons, Ltd., decorative joinery work, flush teak doors; Gordon Russell, Ltd., decorative joinery work: Crompton Parkinson, Ltd., main switch room equipment; H. H. Martyn & Co., Ltd., wall lining and panelling and wrot iron railings; Ashwell & Nesbit, Ltd., air conditioning and ventilating plant; Art Pavements and Decorations, Ltd., Biancola work; Tarpaving and Tarmacadam, Ltd., tarmacadam roadway: Ham River Grit Co., aggregates; Farnley Iron Co., glazed bricks; Sussex Brick Co., Lingfield, engineering wirecuts; General Electric Co., heating panel units.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICT (15 miles radius)

SOUTHGATE. *Houses.* Plans passed by the Southgate Corporation : Nine houses, Arnos Grove, Messrs. Vine and Vine; six houses, Stonehall Road, Mr. C. E. Ward; six houses, Gloucester Gardens, Cockfosters, Messrs. Alliston and Drew; six houses, Kenwood Avenue, Messrs. J. Charles & Co.; nine houses, Vicars Moor Lane, Messrs. Smith and Lobb; 12 houses, rear of "The Laurels," Church Hill, Mr. W. J. Mitchell.

FULHAM. *Flats.* The Fulham B.C. has approved plans for the erection of 90 flats on St. James's Home site, at a cost of £62,510.

CROYDON. *Flats, etc.* Plans passed by the Croydon Corporation : 24 flats, Central Hill and Essex Grove, Mr. E. Stott; five houses, Christian Fields, Messrs. H. F. Buchan & Co., Ltd.; five houses, Woodfield Close, Messrs. W. Seymour & Co., Ltd.

MARYLEBONE. *Redevelopments.* The L.C.C. is to redevelop the Princess Street area, Marylebone, at a cost of £35,000.

DEPTFORD. *Reconstruction.* The L.C.C. is to reconstruct the Tanners Hill area, Deptford, at a cost of £80,000.

FRIERN BARNET. *Flats.* Plans passed by the Frien Barnet U.D.C. : 52 flats, Friern Park, for Glenhurst Estate.

SOUTHALL. *Houses.* Plans passed by the Southall Corporation : Five houses, Shaftesbury Avenue, Messrs. Warren and Woods; ten shops, adjoining the Dominion Cinema, The Green, Messrs. A. and B. Hanson, Ltd.; five houses, Dormers Wells Lane, Mr. F. S. Honey.

SOUTHALL. *Drill Hall.* The Middlesex Territorial Army and Air Force Association is to purchase land in Uxbridge Road, Southall, for the erection of a drill hall.

GREENWICH. *Offices and Garages.* Messrs. Broad and Montague, Ltd., are to erect offices and garages in Blackwall Lane, Greenwich.

SOUTHERN COUNTIES

BEXHILL. *Houses.* Plans passed by the Bexhill Corporation : 20 houses, Willingdon Avenue, Bexleigh Estates, Ltd.

WORTHING. *Flats.* Mr. A. T. W. Goldsmith, architect, on behalf of Mr. L. W. Macer, is to erect a block of 22 flats, caretaker's apartments and lock-up garages, at Seamill Park Avenue, Worthing.

WORTHING. *Houses, etc.* Plans passed by the Worthing Corporation : Eight houses, Chelwood Avenue, Mr. M. R. Fletcher; six houses, George V Avenue, Mr. R. Pierre; seven houses, Sea Place, Willmore Phillips, Ltd.; eight houses, West Park Lane, West Park Estates (Worthing), Ltd.; five houses, Alinora Avenue, Mr. P. Haworth; eight houses and four flats, Ardingly Drive, Chatsmore Estates, Ltd.; 16 houses, adjoining Thurlow Road and Sugden Road, Mr. F. W. Beach.

SURREY. *Technical Colleges.* The Surrey Education Committee is to prepare schemes for technical colleges, schools of art, etc., in northern Surrey, at a cost of £125,000.

ISLE OF WIGHT

FRESHWATER. *Central School.* The Isle of Wight Education Committee is to erect a central school at Freshwater, at a cost of £20,300.

MIDLAND COUNTIES

WORCESTER. *Mental Institution.* The Joint Board for Worcestershire C.C. and the Corporations of Burton-on-Trent, Dudley, Smethwick, Wolverhampton and Worcester is to erect a mental institution at a cost of £236,500 at Lea Castle Farm, near Kidderminster.

DUDLEY. *Public-house.* The Dudley Corporation has sold a site on the Rosland estate to Messrs. W. Butler & Co., Ltd., for the erection of a public-house.

DUDLEY. *Clinic.* The Dudley Corporation is to obtain tenders for the erection of a clinic on the Priory estate.

CHESTERFIELD. *Houses, etc.* Plans passed by the Chesterfield Corporation : Eight houses, Boythorpe Road, Mr. A. Clarke; new premises, Market Place, Lloyds Bank, Ltd.

CHESTERFIELD. *Flats.* The Chesterfield Corporation is to erect flats for firemen on the site in New Beetwell Street.

BOOTLE. *Extensions.* The Bootle Corporation has appointed a sub-committee to consider the proposal to extend the town hall.

NORTHERN COUNTIES

BOLTON. *Flats.* The Bolton Corporation has approved the layout of land at the junction of Crescent Road and Bradford Road, for the provision of accommodation for aged persons in the form of 15 blocks of flats, each containing four flats.

BOLTON. *Houses.* Plans passed by the Bolton Corporation : Eight houses, Durban Road, Messrs. F. and H. Douglas; 14 houses, Long Lane, Mr. David Reid; six houses, Forest Road, Mr. F. Merrison; seven houses, Albert Road West, Mr. W. Gornall.

BOLTON. *Houses.* The Bolton Corporation is to erect 196 houses on the Hulton Lane site, by direct labour, at a cost of £64,109.

BOLTON. *Cinema.* The Bolton Watch Committee has approved amended plans submitted on behalf of Messrs. Odeon (Bolton), Ltd., of the proposed cinema theatre in Ashburner Street.

BIRKENHEAD. *Elementary School.* The Birkenhead Education Committee has purchased a site at Prenton for the erection of an elementary school.

BIRKENHEAD. *Junior School.* The Birkenhead Education Committee has approved plans for the erection of a junior school at Upton.

BIRKENHEAD. *Municipal Offices.* The Birkenhead Corporation is considering a scheme for the erection of municipal offices on a site in Camperdown Street and Hamilton Street.

HULL. *Schools.* The Hull Education Committee has approved proposals for the erection of a senior department to accommodate 520 children on the Priory Road school site, and a junior mixed department to accommodate 400 children on the Taylor Avenue school site.

HULL. *Police Court.* The Hull Corporation has asked the city architect to prepare a scheme for the improvement of the accommodation for the police court staff at the Guildhall.

HULL. *Hotel.* Messrs. Moors' and Robson's Breweries, Ltd., are to erect an hotel in Portland Street, Hull.

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 5½	1 1½
A	Aberdeen ...	Scotland	1 6½	1 2
A_1	Abergavenny ...	S. Wales & M.	1 6	1 1½
A	Abingdon ...	S. Counties	1 5	1 0½
A_2	Accrington ...	N.W. Counties	1 6½	1 2
A_2	Addlestone ...	S. Counties	1 5	1 0½
A	Adlington ...	N.W. Counties	1 6½	1 2
A	Airdrie ...	Scotland	•1 6½	1 2
C	Aldeburgh ...	E. Counties	1 2½	11
A	Altrincham ...	N.W. Counties	1 6½	1 2
B_2	Appleby ...	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
B_1	Aylesbury ...	S. Counties	1 4	1 0
B_1	BANBURY ...	S. Counties	1 4	1 0
B_1	Bangor ...	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ...	Yorkshire	1 6½	1 2
B	Barnstaple ...	S.W. Counties	1 4½	1 0½
A	Barrow ...	N.W. Counties	1 6½	1 2
A	Barry	S. Wales & M.	1 6½	1 2
B_1	Basingstoke ...	S.W. Counties	1 4	1 0
A_2	Bath	S.W. Counties	1 5½	1 1½
A	Batley ...	Yorkshire	1 6½	1 2
A_2	Bedford ...	E. Counties	1 5½	1 1½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ...	Mid. Counties	1 5½	1 1½
B_2	Bicester ...	S. Counties	1 3	11½
	Birkenhead ...	N.W. Counties	•1 7½	1 2½
A	Birmingham ...	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ...	N.W. Counties	1 6½	1 2
A	Blackpool ...	N.W. Counties	1 6½	1 2
A	Blyth	N.E. Coast	1 6½	1 2
B_1	Bognor ...	S. Counties	1 4	1 0
A	Bolton ...	N.W. Counties	1 6½	1 2
A_2	Boston ...	Mid. Counties	1 5	1 0½
A_2	Bournemouth...	S. Counties	1 5½	1 1½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ...	Yorkshire	1 6½	1 2
A_2	Brentwood ...	E. Counties	1 6	1 1½
A	Bridgend ...	S. Wales & M.	1 6½	1 2
B	Bridgwater ...	S.W. Counties	1 4½	1 0½
A_1	Bridlington ...	Yorkshire	1 6	1 1½
A	Brighouse ...	Yorkshire	1 6½	1 2
A_2	Brighton ...	S. Counties	1 5½	1 1½
A	Bristol ...	S.W. Counties	1 6½	1 2
B	Brixham ...	S.W. Counties	1 3½	11½
A	Bromsgrove ...	Mid. Counties	1 5½	1 1½
B	Bromyard ...	Mid. Counties	1 3	11½
A	Burnley ...	N.W. Counties	1 6½	1 2
A	Burslem ...	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury	N.W. Counties	1 6½	1 2
A	Buxton ...	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE...	E. Counties	1 6	1 1½
B_1	Canterbury ...	S. Counties	1 4	1 0
A	Cardiff ...	S. Wales & M.	1 6½	1 2
A	Carlisle ...	N.W. Counties	1 6½	1 2
B	Carmarthen ...	S. Wales & M.	1 4½	1 0½
B	Carnarvon ...	N.W. Counties	1 4½	1 0½
A	Carnforth ...	N.W. Counties	1 6½	1 2
A	Castleford ...	Yorkshire	1 6½	1 2
A_2	Chatham ...	S. Counties	1 5	1 0½
A	Chelmsford ...	E. Counties	1 5	1 0½
A	Cheltenham ...	S.W. Counties	1 5	1 0½
A	Chester ...	N.W. Counties	1 6½	1 2
A	Chesterfield ...	Mid. Counties	1 6½	1 2
B_1	Chichester ...	S. Counties	1 4	1 0
A	Chorley ...	N.W. Counties	1 6½	1 2
B_1	Cirencester ...	S. Counties	1 4	1 0
A	Clitheroe ...	N.W. Counties	1 6½	1 2
A	Clydebank ...	Scotland	1 6½	1 2
A	Coalville ...	Mid. Counties	1 6½	1 2
A_2	Colchester ...	E. Counties	1 5½	1 1½
A	Colne	N.W. Counties	1 6	1 1½
A_2	Colwyn Bay ...	N.W. Counties	1 5½	1 1½
A_1	Consett ...	N.E. Coast	1 6	1 1½
A_2	Conway ...	N.W. Counties	1 5½	1 1½
A	Coventry ...	Mid. Counties	1 6½	1 2
A_2	Crewe	N.W. Counties	1 5½	1 1½
A	Cumberland ...	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ...	N.W. Counties	1 6½	1 2
B	Deal	S. Counties	1 4	1 0
A_2	Denbigh ...	N.W. Counties	1 5	1 0½
A	Derby	Mid. Counties	1 6½	1 2
A	Dewsbury ...	Yorkshire	1 6½	1 2
B	Didcot ...	S. Counties	1 4½	1 0½
A	Doncaster ...	Yorkshire	1 6½	1 2
B_1	Dorchester ...	S.W. Counties	1 4	1 0
A	Driffield ...	Yorkshire	1 5	1 0½
A_2	Droitwich ...	Mid. Counties	1 5½	1 1½
A	Dudley ...	Mid. Counties	1 6½	1 2
A_2	Dumfries ...	Scotland	1 6	1 1½
A	Dundee ...	Scotland	1 6½	1 2
A	Durham ...	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5½	1 1½
A_1	Ebbw Vale ...	S. Wales & M.	1 6	1 1½
A	Edinburgh ...	Scotland	1 6½	1 2
A_2	Exeter ...	S.W. Counties	•1 5½	1 1½
E	Exmouth ...	S.W. Counties	1 4½	1 0½
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ...	N.W. Counties	1 6½	1 2
B_1	Folkestone ...	S. Counties	1 4	1 0
A	Frodsham ...	N.W. Counties	1 6½	1 2
B_2	Frome ...	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
H	Gillingham ...	S. Counties	1 4½	1 0½
A_1	Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A	Glasgow ...	Scotland	1 7	1 2½
A_2	Gloucester ...	S.W. Counties	1 5½	1 1½
A_2	Goole	Yorkshire	1 5½	1 1½
A_2	Gosport ...	S. Counties	1 5½	1 1½
A_2	Grantham ...	Mid. Counties	1 5	1 0½
A_1	Gravesend ...	S. Counties	1 6	1 1½
A	Greenock ...	Scotland	•1 6½	1 2
A	Grimsby ...	Mid. Counties	1 6½	1 2
B	Guildford ...	S. Counties	1 4½	1 0½
A	HALIFAX ...	Yorkshire	1 6½	1 2
A	Hanley ...	Mid. Counties	1 6½	1 2
A	Harrogate ...	Yorkshire	1 6½	1 2
A	Hartlepools ...	N.E. Coast	1 6½	1 2
H	Harwich ...	E. Counties	1 4½	1 0½
B_1	Hastings ...	S. Counties	1 4	1 0
A_2	Hatfield ...	S. Counties	1 5½	1 1½
H	Hereford ...	S.W. Counties	1 4½	1 0½
A_2	Hertford ...	E. Counties	1 5½	1 1½
A	Heysham ...	N.W. Counties	1 6½	1 2
A	Howden ...	N.E. Coast	1 6½	1 2
A	Huddersfield ...	Yorkshire	1 6½	1 2
A	Hull	Yorkshire	1 6½	1 2
A	ILKLEY ...	Yorkshire	1 6½	1 2
A	Immingham ...	Mid. Counties	1 6½	1 2
A_2	Ipswich ...	E. Counties	1 5½	1 1½
B_2	Isle of Wight ...	S. Counties	1 4½	1 0½
A	JARROW ...	N.E. Coast	1 6½	1 2
A	KEIGHLEY ...	Yorkshire	1 6½	1 2
A_2	Kendal ...	N.W. Counties	1 5½	1 0½
A_2	Keswick ...	N.W. Counties	1 5	1 0½
A_1	Kettering ...	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn ...	E. Counties	1 4	1 0
A	LANCASTER ...	N.W. Counties	1 6½	1 2
A_1	Leamington ...	Mid. Counties	1 6	1 1½
A	Leeds	Yorkshire	1 6½	1 2
A	Leek	Mid. Counties	1 6½	1 2
A	Leicester ...	Mid. Counties	1 6½	1 2
A	Leigh	N.W. Counties	1 6½	1 2
B	Lewes	S. Counties	1 3	11½
A_2	Lichfield ...	Mid. Counties	1 5½	1 1½
A	Lincoln ...	Mid. Counties	1 6½	1 2
	Liverpool ...	N.W. Counties	•1 8	1 3
A_2	Llandudno ...	N.W. Counties	1 5½	1 1½
A	Llanelly ...	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12-15 miles radius)		1 7½	1 2½
A	Long Eaton ...	Mid. Counties	1 6½	1 2
A	Loughborough ...	Mid. Counties	1 6½	1 2
A_1	Luton	E. Counties	1 6	1 1½
A	Lytham ...	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
A_2	Maidstone ...	S. Counties	1 5	1 0½
A_2	Malvern ...	Mid. Counties	1 5	1 0½
A	Manchester ...	N.W. Counties	1 6½	1 2
A	Mansfield ...	Mid. Counties	1 6½	1 2
B_1	Margate ...	S. Counties	1 4	1 0
A	Matlock ...	Mid. Counties	1 5	1 0½
A_1	Merthyr ...	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich ...	N.W. Counties	1 5½	1 1½
B_2	Minehead ...	S.W. Counties	1 3½	11½
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe ...	N.W. Counties	1 6½	1 2
A_2	NANTWICH ...	N.W. Counties	1 5½	1 1½
A	Neath	S. Wales & M.	1 6½	1 2
A	Nelson ...	N.W. Counties	1 6½	1 2
A	Newcastle ...	N.E. Coast	1 6½	1 2
A	Newport ...	S. Wales & M.	1 6½	1 2
A	Normanton ...	Yorkshire	1 6½	1 2
A	Northampton...	Mid. Counties	1 6½	1 2
A	North Shields...	N.E. Coast	1 6½	1 2
A	North Staffs ...	Mid. Counties	1 6½	1 2
A_1	Norwich ...	E. Counties	1 6	1 1½
A	Nottingham ...	Mid. Counties	1 6½	1 2
A	Nuneaton ...	Mid. Counties	1 6½	1 2
A	OAKHAM ...	Mid. Counties	1 5	1 0½
A	Oldham ...	N.W. Counties	1 6½	1 2
A_2	Oswestry ...	N.W. Counties	1 5	1 0½
A_1	Oxford ...	S. Counties	1 6	1 1½
A	PAISLEY ...	Scotland	•1 6½	1 2
B_2	Pembroke ...	S. Wales & M.	1 3	11½
A	Perth	Scotland	•1 6½	1 2
A_1	Peterborough	E. Counties	1 6	1 1
A	Plymouth ...	S.W. Counties	•1 6½	1 2½
A	Pontefract ...	Yorkshire	1 6½	1 1
A_1	Pontypridd ...	S. Wales & M.	1 6	1 1½
A_2	Portsmouth ...	S. Counties	1 5½	1 2½
A	Preston ...	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING ...	S. Counties	1 5½	1 1½
B	Reigate ...	S. Counties	1 4½	1 0½
A	Retford ...	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A	Ripon	Yorkshire	1 5	1 0½
A	Rochdale ...	N.W. Counties	1 6½	1 2
H	Rochester ...	S. Counties	1 4½	1 0½
A_1	Ruabon ...	N.W. Counties	1 6	1 1½
A	Rugby ...	Mid. Counties	1 6½	1 2
A_2	Rugeley ...	Mid. Counties	1 5½	1 1½
A	Runcorn ...	N.W. Counties	1 6½	1 2
A_1	ST. ALBANS ...	E. Counties	1 6	1 1½
A	St. Helens ...	N.W. Counties	1 6½	1 2
B_2	Salisbury ...	S.W. Counties	1 3½	11½
A_1	Scarborough ...	Yorkshire	1 6	1 1½
A	Scunthorpe ...	Mid. Counties	1 6½	1 2
A	Sheffield ...	Yorkshire	1 6½	1 2
A	Shipley ...	Yorkshire	1 6½	1 2
A_2	Shrewsbury ...	Mid. Counties	1 5½	1 1½
A_2	Skipton ...	Yorkshire	1 5½	1 1½
A_2	Slough ...	S. Counties	1 5½	1 1½
A_1	Solihull ...	Mid. Counties	1 6	1 1½
A_2	Southampton	S. Counties	1 5½	1 1½
A_1	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ...	N.W. Counties	1 6½	1 2
A	S. Shields ...	N.E. Coast	1 6½	1 2
A_1	Stafford ...	Mid. Counties	1 6	1 1½
A	Stirling ...	Scotland	1 7	1 2½
A	Stockport ...	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
H	Stroud ...	S.W. Counties	1 4½	1 0½
A	Sunderland ...	N.E. Coast	1 6½	1 2
A	Swansea ...	S. Wales & M.	1 6½	1 2
A	Swindon ...	S.W. Counties	1 5	1 0½
A_1	TAMWORTH ...	N.W. Counties	1 6	1 1½
B	Taunton ...	S.W. Counties	1 4½	1 0½
A	Teeside Dist. ...	N.E. Counties	1 6½	1 2
A_2	Teignmouth ...	S.W. Coast	1 5½	1 1½
A	Todmorden ...	Yorkshire	1 6½	1 2
A_1	Torquay ...	S.W. Counties	1 6	1 1½
B_2	Truro	S.W. Counties	1 3½	11½
A_2	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall ...	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ...	Mid. Counties	1 6½	1 2
A	Warrington ...	N.W. Counties	1 6½	1 2
A_1	Warwick ...	Mid. Counties	1 6	1 1½
A_1	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s.-Mare	W. Counties	1 5½	1 1½
A_2	Whitby ...	Yorkshire	1 5½	1 1½
A	Widnes ...	N.W. Counties	1 6½	1 2
A	Wigan ...	N.W. Counties	1 6½	1 2
B	Winchester ...	S. Counties	1 4½	1 0½
A_2	Windsor ...	S. Counties	1 5½	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ...	Mid. Counties	1 5½	1 1½
A_2	Worksop ...	Yorkshire	1 5	1 0½
A_1	Wrexham ...	N.W. Counties	1 6	1 1½
A	Wycombe ...	S. Counties	1 5	1 0½
H	YARMOUTH ...	E. Counties	1 4½	1 0½
B	Yeovil ...	S.W. Counties	1 4½	1 0½
A	York	Yorkshire	1 6½	1 2

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

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

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	8
Carpenter	,,	1	8
Joiner	,,	1	8
Machinist	,,	1	8
Mason (Banker)	,,	1	8
,, (Fixer)	,,	1	9
Plumber	,,	1	8
Painter	,,	1	7
Paperhanger	,,	1	7
Glazier	,,	1	7
Slater	,,	1	8
Scaffolder	,,	1	4
Timberman	,,	1	4
Navvy	,,	1	3
General Labourer	,,	1	3
Lorryman	,,	1	5½
Crane Driver	,,	1	7
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

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

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	d.	6" s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest Bends	,,	4	3	6	3
Single Junctions	,,	3	6	5	3
Double ,,	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
½" 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	12	0
Grooved do.	,,	2	14	0
Phorpres bricks	,,	2	15	0
,, Cellular bricks	,,	2	15	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	14	0
,, Wirecuts	,,	7	12	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
,, Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	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	5	8
Best hand-made do. ,, ,,		4	17	6
Hips and valleys	each			9
,, hand-made	,,			9½
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, ½"	Sq.		18	6
,, 1"	,,	1	1	6
,, 1¼"	,,	1	2	0
,, 1½"	,,	1	5	0
,, 1¾"	,,	1	10	0
Deal matchings, ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	9
Rough boarding, ½"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0
Plywood, per ft. sup.				

Thickness	¼" A	¼" B	¼" BB	⅜" A	⅜" B	⅜" BB	½" A	½" B	½" BB	¾" A	¾" B	¾" BB
Qualities	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	–	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.)

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

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

	Fittings.		
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

		s.	d.
Rolled steel joists cut to length	cwt.	12	9
Mild steel reinforcing rods, ½"	,,	10	6
,, ,, ⅝"	,,	10	3
,, ,, ¾"	,,	10	0

SMITH AND FOUNDER—*continued*

		s.	d.
Mild steel reinforcing rods, ⅞"	cwt.	9	6
,, ,, 1"	,,	9	6
,, ,, 1¼"	,,	9	6
,, ,, 1½"	,,	9	6
,, ,, 1¾"	,,	9	6
,, ,, 2"	,,	9	6

		s.	d.	4" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		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.	26	3	
,, drawn pipes	,,	25	9	
,, soil pipe	,,	28	9	
,, scrap	,,	16	9	
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	0	0
Plaster, coarse	,,	2	15	0
,, fine	,,	4	7	6
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.			8
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" × 10") ,,			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 1 ,, ‡3	9
,, ,, 45 ,,			†3 3 ,, ‡4	0
,, ,, 100 ,,			†4 0 ,, ‡4	10
Vita glass, sheet, n/e 1 ft. ,,			1	0
,, ,, 2 ft. ,,			1	3
,, ,, over 2 ft. ,,			1	9
,, plate, n/e 1 ft. ,,			1	6
,, ,, 2 ft. ,,			3	0
,, ,, 5 ft. ,,			4	0
,, ,, 7 ft. ,,			5	0
,, ,, 15 ft. ,,			6	0
,, ,, over 15 ft. ,,			7	6
"Calorex" sheet 21 oz., and 32 oz. ,,	2	6 and	3	6
,, rough cast ¼" and ⅜" ,,			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.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions	,,	3	9	4	6
Gullies and gratings	,,	16	6	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

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

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	4	9
½" Vertical dampcourse	,,	7	9
¾" paving or flat	,,	6	3
1" paving or flat	,,	7	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2½
Rounded angle	,,		2½
Cesspools	Each	5	6

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

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

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	2	6
Shuttering to sides and soffits of beams	F.S.			7
,, to stanchions	,,			7
,, to staircases	,,		1	6
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
⅝" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,, ,,	,,	1	17	6
1½" ,, ,, ,, ,, ,,	,,	2	3	0
3" × 2" fir battening for Countess slating	,,		9	6
Do., for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1½" ,, ,, ,, ,,	,,		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	,,	2	10	0
1½" do.	,,	2	17	0
1" deal moulded skirting fixed on, and including grounds plugged to wall	F.S.		1	6
1½" do.	,,		1	9

CARPENTER AND JOINER—*continued*		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" ,, ,, ,, ,, ,,	,,	1	11½
1½" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" 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
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,, ,,	,,	2	8
1½" ,, but moulded both sides	,,	2	4
2" ,, ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" ,, ,, ,, ,,	,,	1	4
1½" deal tongued and moulded window board, on and including deal bearers	F.S.	1	9
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

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

PLUMBER		£	s.	d.
Milled lead and labour in flats	cwt.	2	0	3
Do. in flashings	,,	2	3	9
Do. in covering to turrets	,,	2	9	3
Do. in soakers	,,	1	14	9
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3
Close ,, ,,	,,			4

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1¼" s.	1¼" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	10		1	0	1	3	2	0	2	10	—	
Do. soil pipe and fixing with cast lead tacks	,,	—		—		—		—		—		5	6
Extra, only to bends	Each	—		—		—		—		2	0	6	9
Do. to stop ends	,,	6½		8		9		11		1	0	—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	7	0	9	6	12	6	—		—		—	

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

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

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

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		6
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3	3
Do. on woodwork	,,	3	6
Do. on steelwork	,,	3	0
Do. and brush grain and twice varnish	,,	3	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

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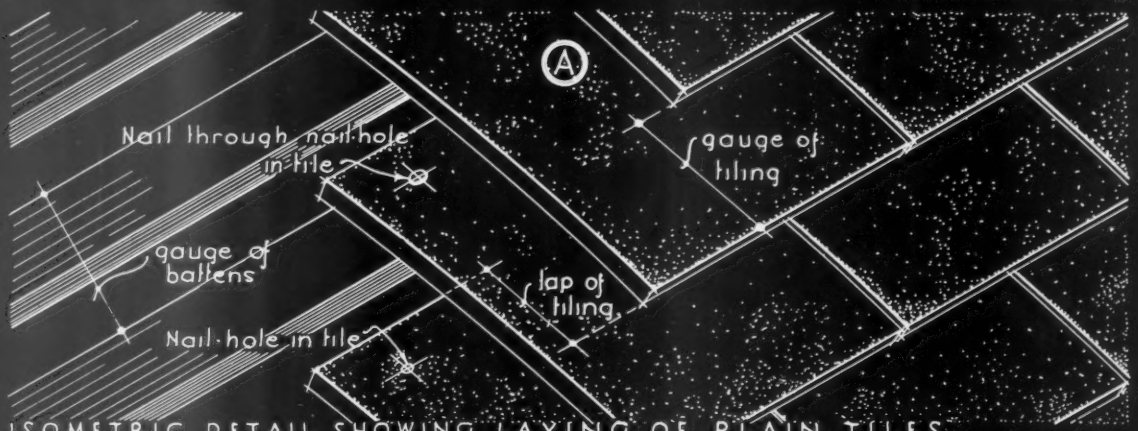
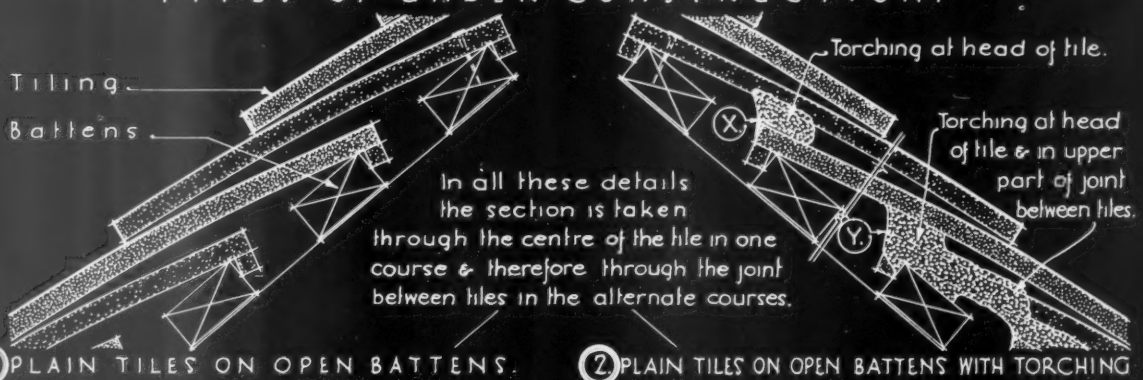
ROOF CONSTRUCTION FOR CLAY TILE ROOFS. (PLAIN TILES.)

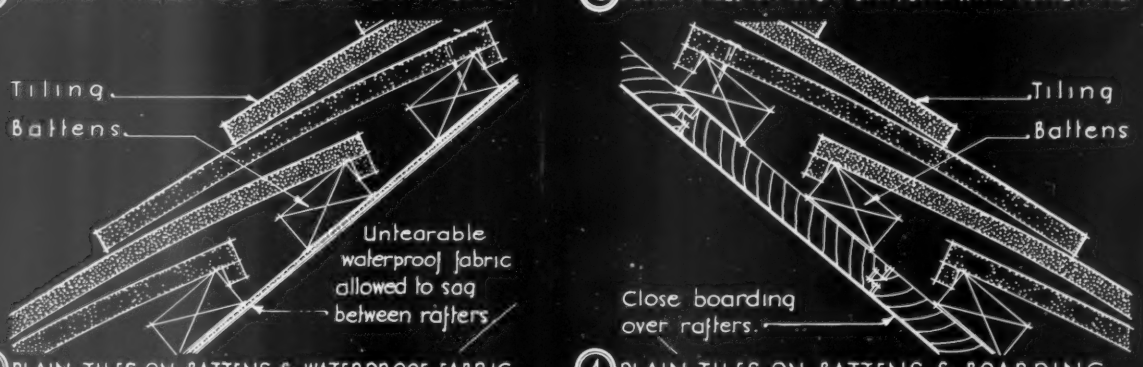


ISOMETRIC DETAIL SHOWING LAYING OF PLAIN TILES

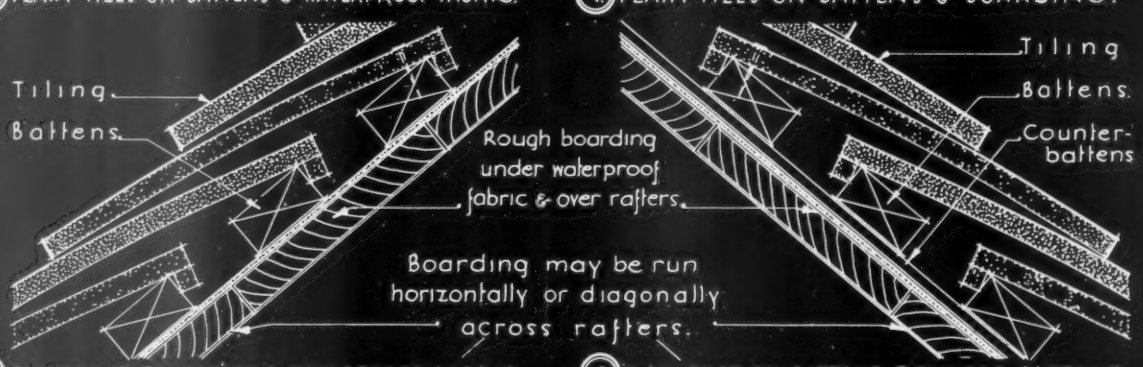
TYPES OF UNDER-CONSTRUCTION.



1. PLAIN TILES ON OPEN BATTENS.
2. PLAIN TILES ON OPEN BATTENS WITH TORCHING



3. PLAIN TILES ON BATTENS & WATERPROOF FABRIC.
4. PLAIN TILES ON BATTENS & BOARDING.



5. PLAIN TILES ON BATTENS, WATERPROOF FABRIC & BOARDING.
6. PLAIN TILES ON BATTENS, COUNTER-BATTENS, WATERPROOF FABRIC & BOARDING.

Information from Clay Products Technical Bureau of Great Britain.

INFORMATION SHEET: THE TILING OF PITCHED ROOFS WITH PLAIN TILES: No 2.

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

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INFORMATION SHEET
• 442 •
ROOFING

Subject : Sub-roof Construction beneath Clay Plain Tiles.

General Considerations :

A plain tiled roof is essentially a series of overlapped horizontal courses, each consisting of separate units arranged side by side. Long experience with clay plain tiles has shown that such an assemblage, laid to a pitch and gauge suited to local meteorological conditions, will provide complete protection in all normal circumstances. During the life of a clay-tiled roof, however, wind conditions quite abnormal to the locality occasionally occur. Such abnormal winds may force rain or dust up the horizontal or vertical joints between the individual tiles (see Diagram A). To guard against these abnormal occasions, the roof may be so designed that :—

(1) The pitch and gauge normal to the locality are maintained, and some form of light barrier construction to receive any in-blown matter is introduced beneath the tile layer, or

(2) An exaggerated pitch and/or gauge is used (a procedure which, besides increasing the cost of tiling, may also be architecturally undesirable).

Adoption of the first of these solutions has the additional advantage that the barrier construction, properly designed, will also act as a thermal insulator to reduce heat losses through the roof. Since the form of sub-roof (barrier) construction adopted will, to a certain extent, influence the determination of the most suitable pitch and gauge, the various accepted forms of such construction are dealt with on this sheet, and consideration of pitch and gauge dealt with in the succeeding sheet in this series.

Detail 1 :

This detail shows the basic form of plain tile roofing. The tiles are suspended by means of their nibs (or by nails, if the tiles be nibless) from a series of horizontal battens fastened to and spanning the intervals between consecutive rafters, up which the battens are spaced at uniform distances apart, equal to the gauge desired in the tiling. Although the weight of the individual tiles is such as should keep them tight down one over the other, it is customary, in the case of nibbed tiles, to guard against abnormal wind-lift by nailing all the tiles in one course to the battens every so often up the roof, normally one course in every five. Where such open-back tiling is used over open sheds or where large openings in the structure below may produce strong up-gusts, nailing should be more frequent.

This simple open-back form of plain tiling, besides being least expensive, also permits maximum ventilation (rapid drying) from the under-faces of the tiles, the advantage of which, however, is rather outweighed by the accompanying liability to infiltration of rain, snow and dust and the minimum heat barrier effect of such simple construction, which, therefore, is today obsolescent except for garages, outhouses, etc.

Underface Ventilation in Relation to Service Life :

Adequate ventilation :—

(1) Prevents even the cheaper grades of tile becoming so saturated as to be liable to damage should sudden onsets of frost follow continuous bouts of heavy rain.

(2) Prevents timber rot, by drying out the battens (or other exposed timber) which may have become unduly wet by absorption during spells of high humidity, etc.

(3) Eliminates any tendency of the moisture in warm air (rising up from the interior of a building) to condense on the timber or tiles during very cold weather. It should also be noted that adequately burnt clay tiles normally exhibit such a high reserve capillarity as to suck up all such condensation, thereby preventing it from coalescing into drops which, falling on to ceilings below, lead to the appearance of wet patches, not traceable on subsequent examination to any localized flaw in the roof covering.

Hence, in assessing the merits of any particular form of sub-roof construction, the degree of underface ventilation should receive attention.

Detail 2 : Torching :

This detail shows two forms (X) and (Y) of open-back tiling, the interspaces between the individual tiles of which are either (X) partially or (Y) wholly blocked with a mortar, to reduce heat losses and to eliminate any possibility of abnormal winds causing infiltration of rain, snow or dust.

This backing applied to the underside of the tiling is known traditionally as torching, and, whilst it is still practised in certain localities, it cannot be unreservedly recommended, for the following reasons :—

(1) It requires both considerable craftsmanship and time (and hence expense) to apply it, if it is not to become dislodged or cracked in after years.

(2) It forms a reservoir for moisture, thus tending to keep the tiles wet, thereby encouraging frost action. Comparative tests at the Building Research Station on torched and untorched roofs, have shown how real the frost action consequent on this reservoir effect can be.

(3) Whilst closure of the joints may reduce heat loss slightly, it does so only by sacrificing ventilation.

On balance, informed opinion today considers even the simplest (Detail 3) of the more modern sub-roof treatments to be preferable to torching.

Detail 3 : Waterproof Fabric Barrier :

This detail shows the most economical and, at the same time, functionally efficient treatment which can be used to meet the occasional danger of trouble from in-blown precipitation, etc. In this construction, before placing the tiling battens, the rafters are completely covered with lapped sheets of untearable waterproof fabric (see below) over which the tiling battens are then fixed. Any moisture or dust passing up through the joints between the tiles is trapped by the fabric, and, in the case of moisture, drains down the fabric (which incidentally usually tends to sag slightly between the rafters to form a shallow valley) and is finally delivered over the eaves tilting fillet into the gutter. In this, and subsequent details in which fabric is shown, the eaves tilting fillet should be so designed as to lift the fabric over the fillet without forming a trough.

Where cost is a primary consideration, this form of sub-roof construction is to be recommended, a recommendation which has been endorsed by the Building Research Station on several occasions. It should be noted, however, that, owing to the thinness of the interposed barrier, high thermal efficiency is not to be anticipated.

The waterproof fabric should have as long a potential life as the roof and also should not be liable to tear during placing. Woven fabrics thoroughly impregnated with asphaltic bitumen satisfy these requirements, but those impregnated with coal tar products are unsuitable, since such impregnating materials tend to lose their waterproofing capacity on ageing. As an alternative to the woven (untearable) fabrics, suitably impregnated felted fabrics, with or without a wire mesh support beneath, have been used in recent years, so far with apparent success.

Details 4 and 5 : Close Boarding over Rafters :

In these two details good thermal efficiency, together with exclusion of infiltration, is attained by interposing a continuous barrier of timber between the rafters and the battens. In addition, the boarding, laid either horizontally or obliquely to the run of the rafters, exerts a bracing effect, thereby contributing markedly to the rigidity of the roof as a whole. In Detail 4, it should be noted that, during long bouts of highly humid or abnormally severe weather, enough moisture to start timber rot may accumulate in the exposed boarding. For this reason the construction shown in Detail 5 is preferable.

Use of Feather-edged Close Boarding not recommended :

A modification of Detail 4, in which the battens are eliminated and the tiles hung direct on to horizontal runs of feather-edged close boarding, has been used in recent years in cheap construction. This expedient cannot, however, be recommended, since it has been found that not only do the joints open but also that moisture tends to collect in the troughs formed at the juncture of the boards, where it sets up timber rot.

Detail 6 : Counterbattens Lifting Battens Clear of Waterproofed Close Boarding :

This detail shows the form of sub-roof construction used in the best practice. Like Detail 5, it is thermally efficient, proof against all weather conditions, and the counterbattening, by ensuring copious underface ventilation, negatives frost action.

Issued by : Clay Products Technical Bureau of Great Britain

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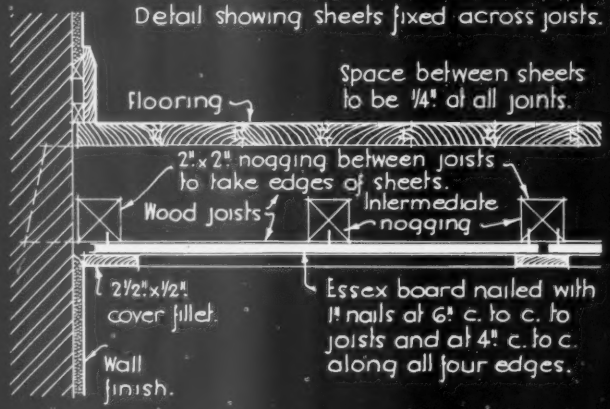
ESSEX LAMINATED BUILDING BOARD. (For internal or sheltered external work.)

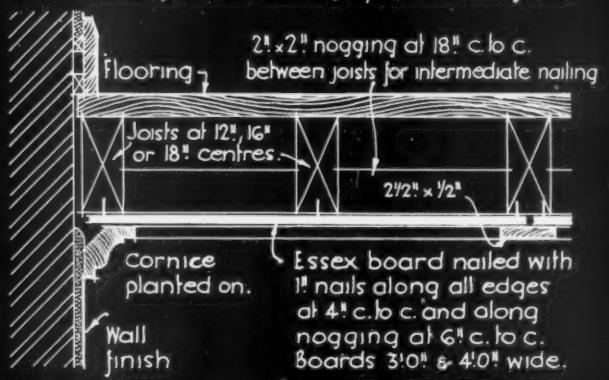
For sizes, weights, etc. and general fixing principles, see previous Information Sheet N°1. of this series.

FIXING TO WOODEN CEILINGS. (As an alternative fixing, joists may be counterbattened in either detail.)

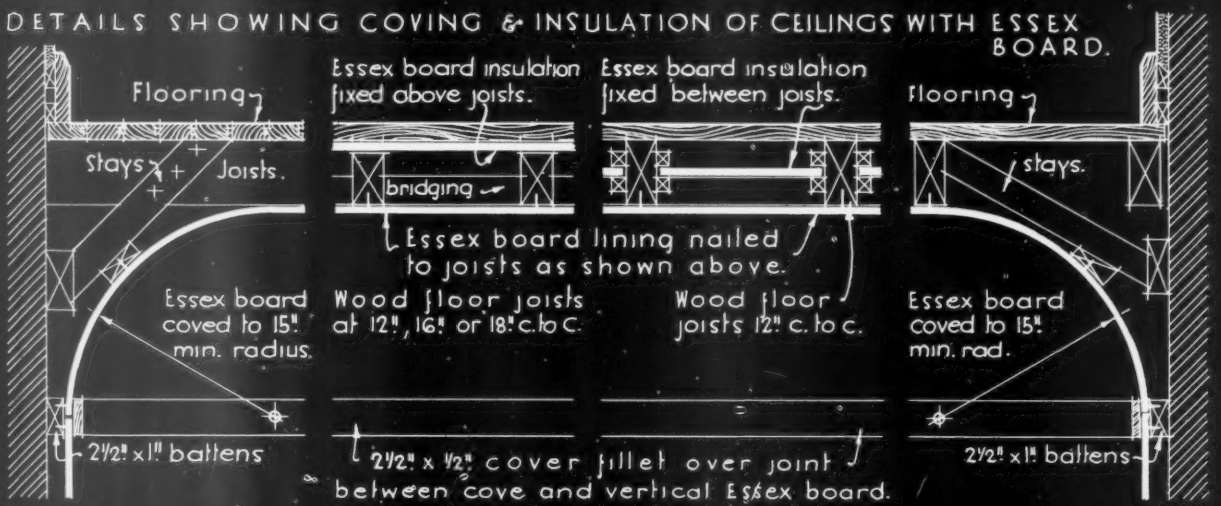
Detail showing sheets fixed across joists.



Detail showing sheets running parallel with joists.

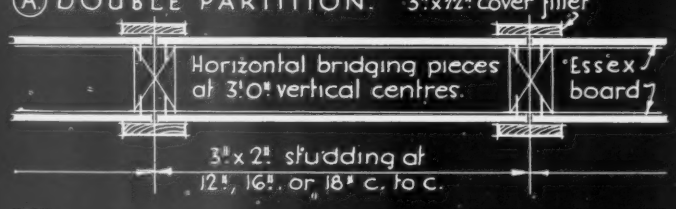


DETAILS SHOWING COVING & INSULATION OF CEILINGS WITH ESSEX BOARD.

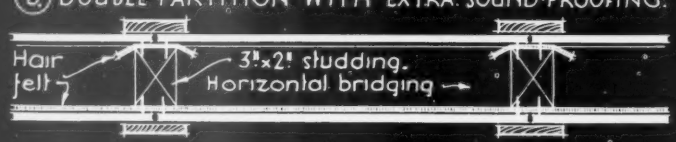


TYPICAL DETAILS OF ESSEX BOARD PARTITIONS.

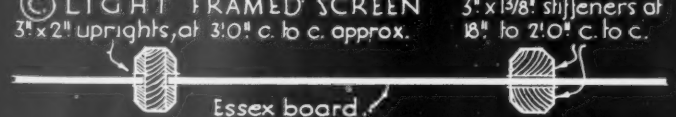
(A) DOUBLE PARTITION.



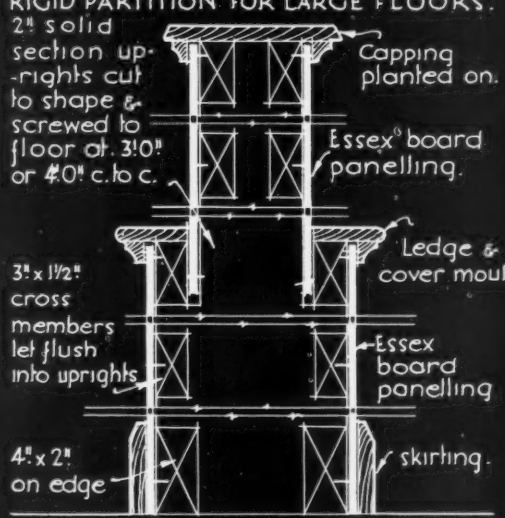
(B) DOUBLE PARTITION WITH EXTRA SOUND-PROOFING.



(C) LIGHT FRAMED SCREEN



RIGID PARTITION FOR LARGE FLOORS.



Information from Thames Board Mills Limited.

INFORMATION SHEET: LAMINATED WOOD-FIBRE BUILDING BOARD: N° 2.

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

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INFORMATION SHEET

• 443 •

WALLBOARDS

Subject : Essex Board

Nails and Nailing :

Suitable provision must be made for nailing the board on all four edges and for intermediate nailing at right angles to the length of the sheets. Nails must be 1 in. galvanized or other rust-resisting nails, small-headed for the centre of the sheets and large-headed for the edges. Panel pins may be used, if preferred, for centre of sheets only. They should be slightly staggered and carefully punched below the surface. The nails along the edges should never be less than half an inch from the edge of the sheet.

Fixing is simplified if the board is hung in position temporarily and two long nails driven partly in at the top of the board. Nailing should begin at the centre of the panel, working outwards, so that the sheet is kept flat. At the centre of the panels, nails should be at 6-in. centres along the intermediate grounds. At the edges the nails should be at 4-in. centres. Nailing should not be too near the edges, because, so nailed, a board may, under stress or movement, break away from the fixing.

To stop uncovered nail-heads, the finishing paint or distemper mixed to suitable consistency should be used, or a mixture of whitening and gold size.

Specification for Nails :

For edge of board, 1 in. by 14 s.w.g. galvanized wire nails with extra large heads. For centre, 1 in. by 14 s.w.g. galvanized wire nails with small heads, or panel pins.

The Fixing of Essex Board :

The boards should not be butt-jointed, but a space of ¼ in. left between adjacent edges, and allowance for this space must be made in determining the size of board required for any job.

Fixing to Walls—Concrete, Brick or Stone:

2½ in. by 1 in. rough deal grounds should be fixed to walls at 3 or 4 ft. centres vertically, and at suitable centres horizontally, to provide for nailing along four edges of all boards. Alternatively, for first-class results, an extra vertical ground of similar section should be fixed centrally to allow of better support of the middle of the board. Similar grounds should be fixed at all mouldings, skirtings, dadoes, and picture rails, cornices and fixtures (lighting brackets, bell-pushes, etc.).

For intermediate nailing, 1 in. by 1 in. rough deal grounds should be fixed at right angles to the boards, at 16 to 18 in. centres.

Wood-frame Structures :

The same principles apply when boards are fixed to wood-frame structures and stud partitions. In buildings designed for lining with wallboard the studding should, as far as possible, be arranged to carry out the foregoing principles. Studs for partitions of normal size should be at least 2½ ins. by 2½ ins. at 3 or 4 ft. centres vertically, and suitable centres horizontally, with 2½ ins. by 1 in., or larger, members for intermediate nailing at 16 in. to 18 in. centres. Alternatively, for first-class results, an extra vertical ground of similar section should be fixed centrally to allow of better support at the middle of the board.

Horizontal Fixing :

Horizontal fixing eliminates vertical cover strips and is the most straightforward and probably the most economical method of lining. The walls are divided by means of dado rail and picture rail into three horizontal sections. Essex board is obtainable in lengths up to 16 ft., and all but very large rooms can be lined in this way without vertical joints, cover strips being needed only at internal angles.

Fixing to Ceilings :

Generally, the same principles apply as for fixing to walls. The board should be fixed on all four edges, and suitable nogging or bridging pieces fixed between joists to allow adequate nailing. The nogging usually does away with the necessity for herring-bone strutting. The boards are best fixed across the joists, with nogging placed to take the edges of the sheets. In new work, joists at the extremities of the room should be fairly close to the wall, so that adequate nailing can be provided at the edges of the boards and for the cornice.

Alternatively, ceiling joists can be counter-battened.

This method is simpler and may be found cheaper, although it reduces height in the room by the thickness of the battens. Cover fillets are necessary at all joints and at the junction of wall and ceiling.

Cover fillets should be at least 2 ins., preferably 2½ ins., wide. Nailing should begin at the centre of the board. Small-headed nails, or panel pins, for exposed parts, should be punched and stopped.

In the case of new buildings where walls are to be plastered, plastering must be done before boards are fixed. The joint between walls and ceilings is eliminated if the frieze-board is coved. In this case joints at the angles of the room must be carefully made.

Fixing over old Plaster Ceilings :

The board is often fixed over, or in place of, old plaster. The most satisfactory job is obtained if the plaster can be removed and the board nailed direct to the joists. If this is impossible, plaster should be removed at points where cross battens or headers are to be fixed. Spaces or gaps where plaster has fallen should be made flush with board packing.

Long nails, or screws with extra large heads, spaced at close intervals, are used for fixing over old plaster, because the nails would have to support the weight of the plaster should hammering loosen it from the laths and throw its whole weight on the board.

Partitions :

The partition (*d*) given on this sheet is particularly suitable for dividing large areas, such as factory space, stores, public halls, offices, etc., where extreme rigidity of construction is desirable. Upright grounds of solid section and special shape are placed at intervals and cross members let in flush. Grounds are screwed or otherwise fixed to the floor. Essex board is fixed both sides and suitably finished with mouldings and skirting, etc.

Suitable use of hair felt as shown will aid soundproofing where this is required.

Cover Strips and Mouldings :

Paper, canvas or tape linings should not be used. A clear space of ¼ in. must be left between adjacent edges and covered by a wood fillet at least 2 ins., preferably 2½ ins., wide. The fixing of this cover strip should be delayed until the first coat of decoration, in the finishing colour, has been applied to the boards.

Cover strips are better painted or stained before application and nail holes stopped and retouched subsequently.

Decoration :

One coat of paint or distemper without any preliminary treatment is quite satisfactory in certain cases, but for a perfect finish two or three coats should be applied. Neither paint nor distemper will flake or peel from the matt surface of the board. No preliminary treatment is necessary.

It is essential, where the board is to be painted or distempered, that at least one coat be given before cover strips are applied, otherwise the least shrinkage in the cover strip or board will reveal a hair line of white untreated board alongside the cover strip.

Wallpaper must not be used with the object of eliminating cover strips, but as a decorative finish there is no objection to its use, provided papering is done before cover strips are applied.

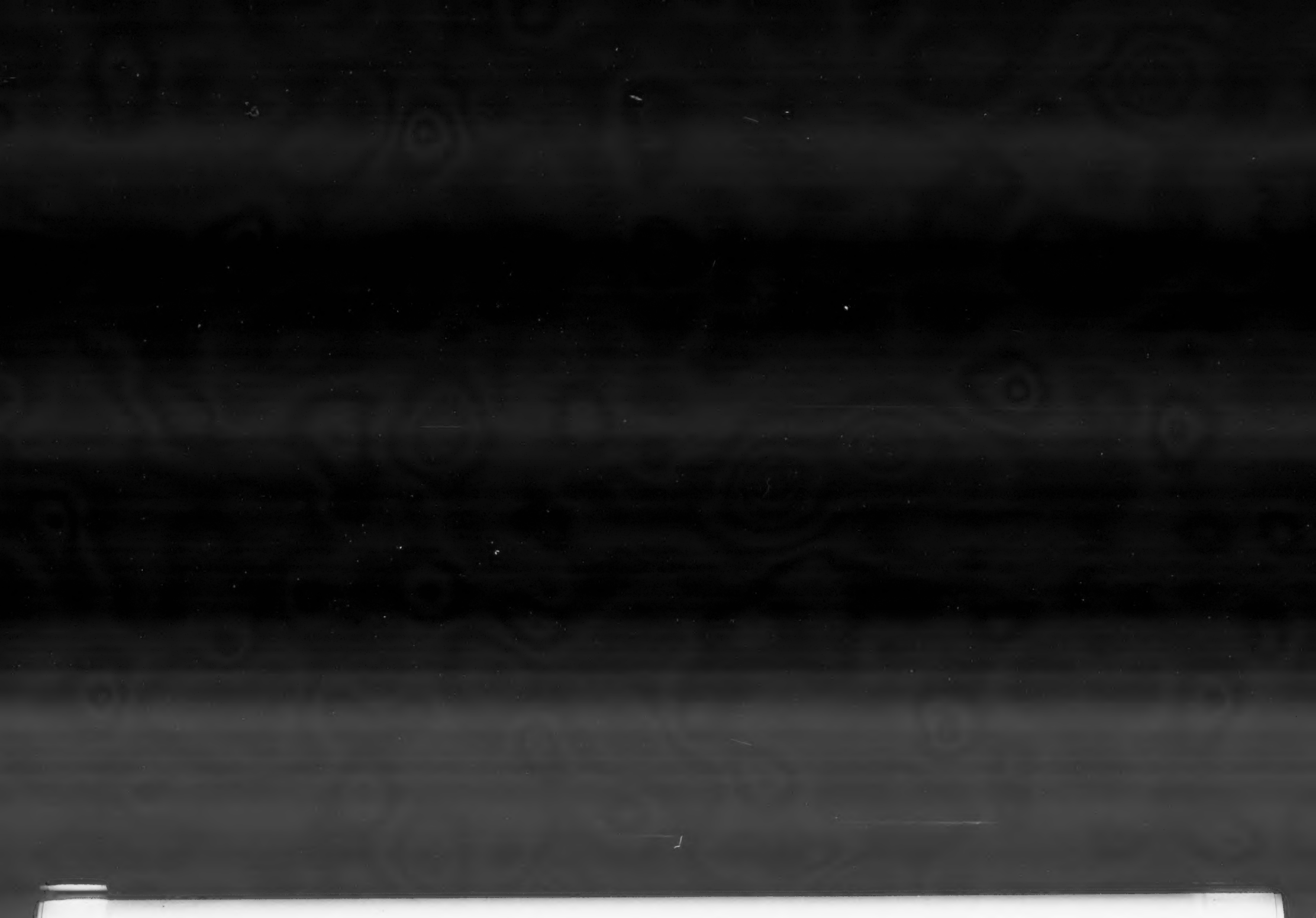
Previous Sheets :

For details of the material of Essex Board and the properties of the board see Sheet No. 438 already published.

Manufacturers : Thames Board Mills, Limited

Address (Head Office) : Purfleet, Essex

Telephone : Rainham 123 (13 lines)



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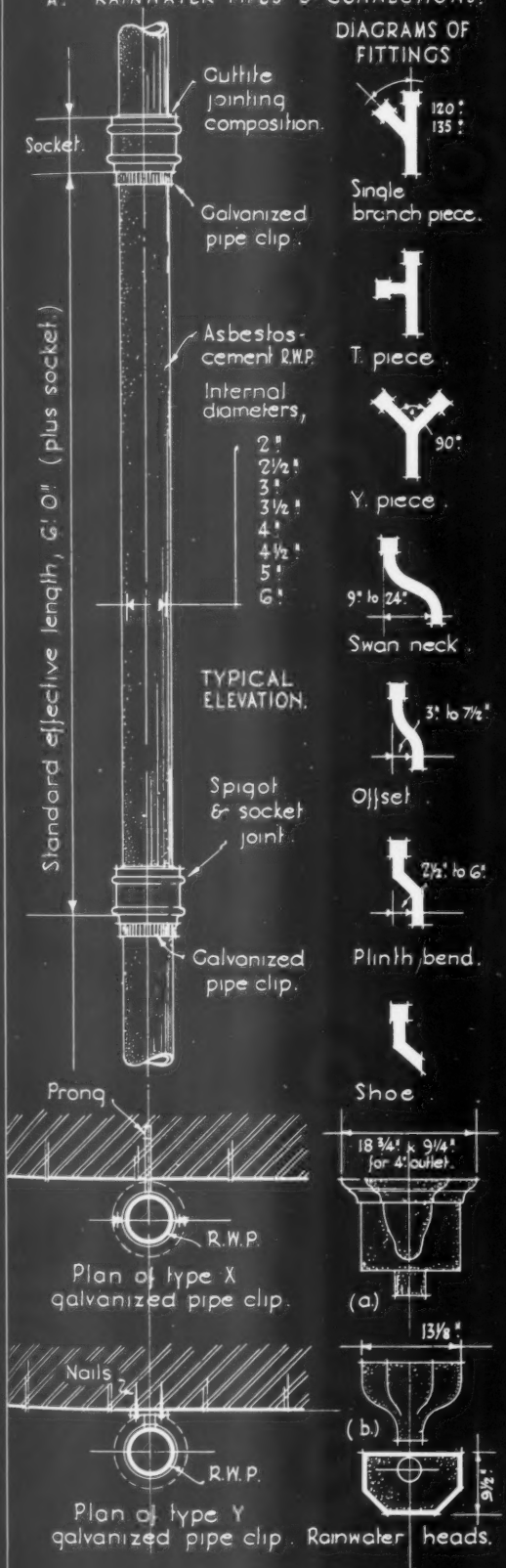
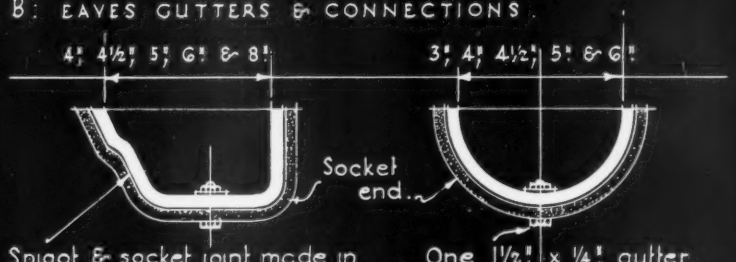
·EVERITE· ASBESTOS-CEMENT RAINWATER GOODS & FITTINGS :

A: RAINWATER PIPES & CONNECTIONS.



DIAGRAMS OF FITTINGS

B: EAVES GUTTERS & CONNECTIONS.



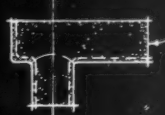
TYPICAL SECTION, O.G. GUTTER. Standard effective length, 6' 0" plus socket.

TYPICAL SECTION, HALF-ROUND GUTTER.

DIAGRAMS OF TYPICAL GUTTER FITTINGS : (in all sizes).

O.G. or H.R. nozzle piece, with socketed ends.

O.G. or H.R. internal & external angles, both ends socketed.



O.G. or H.R. drop end, made right or left hand.

OTHER FITTINGS :

(a.) Union clip, for joining 2 spigot ends.

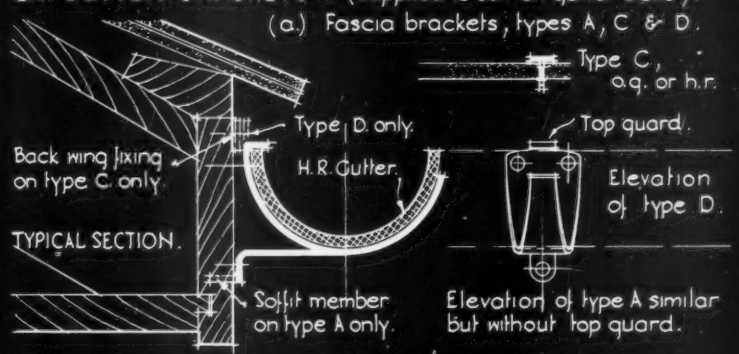
(b.) Right or left hand stop ends, for either socket or spigot application.

(Both fittings available in O.G. or H.R.)

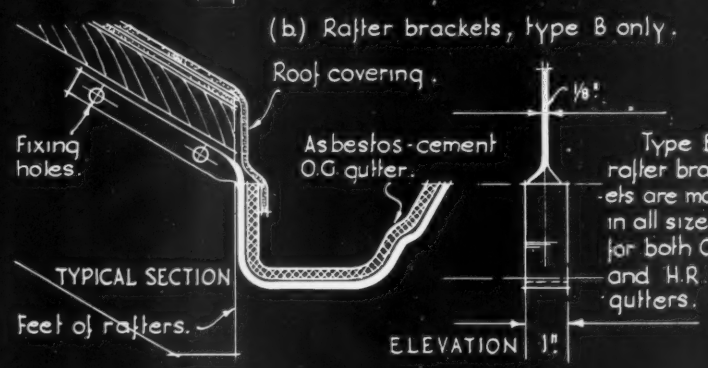
TEE PIECE : A 90° tee piece is made in the H.R. shape only.

G.I. GUTTER BRACKETS : (Supplied to suit all gutter sizes).

(a.) Fascia brackets, types A, C & D.



(b.) Rafter brackets, type B only.



Information from Turners Asbestos Cement Co. branch of Turner & Newall Ltd.

INFORMATION SHEET : ASBESTOS-CEMENT RAINWATER FITTINGS ·1·

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

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ASBESTOS CEMENT RAINWATER GOODS AND FITTINGS—I

General :

The asbestos cement of which these rainwater goods are composed is formed of built up layers of non-burning mineral rock fibre in conjunction with Portland cement, the whole forming an extremely tough, light and rigid structure. Any trimming required may be readily done by the use of an ordinary hand saw.

The goods are manufactured in accordance with British Standard Specification No. 569/1934.

Rainwater Pipes and Fittings :

Pipes are made in standard lengths of 6 feet plus the socket, and a list of the internal diameters available is given overleaf. The spigot and socket joints are made with Guttite bituminous jointing composition as a bedding medium, red lead or other compounds being liable to loss of nature and hardening. The Guttite retains ductility over a very considerable period of years, so keeping the joints in a sound condition even when subjected to slight movements due to contraction or expansion of the surrounding structure.

The range of fittings shown is jointed in the same manner, and is obtainable in sizes corresponding with the pipes.

Fixing :

All Everite pipes and fittings are supplied without ears, fixing being by means of the special types of wall clip illustrated. Both types are formed of galvanized hoops with galvanized or ungalvanized cast iron bases, and are suitable for masonry or timber walls.

Eaves Gutters and Fittings :

Sections of the O.G. and half-round gutterings are shown, together with sizes available. It should be noted that in the case of Everite asbestos cement gutters and fittings, the stated dimension is between the two inside top edges, and not the overall width, while the section of the inside of the half-round type is a full semi-circle. The carrying capacity of the gutters is, therefore, greater than that of the corresponding sizes in light metal castings.

Jointing :

All the domestic gutters and fittings shown are supplied ready for jointing with one $1\frac{1}{2}$ in. by $\frac{1}{4}$ in. bolt per joint. The socket is well buttered with the Guttite jointing compound, and the bolts inserted from the underside if possible. The spigot end of the next length is then placed in the socket, washers and nuts applied, lightly screwed up, and finally coated with a layer of Guttite.

Fixing :

The gutters should not be fixed direct to the fascia board, but should be hung on specially made galvanized iron brackets as shown, spaced at not more than 3 feet centres.

Handing :

When ordering asbestos cement gutters, it should be clearly stated which handing is required, both in the case of the guttering and the fittings. To determine the handing of a gutter or fitting, the moulded side (of the O.G. type) should be faced, and if the socket is then at the left hand end, it is known as a left hand gutter or fitting.

Maintenance :

None of the rainwater goods or fittings requires painting or any form of preservative treatment, either before or after erection. The material retains a clean, grey appearance indefinitely.

Information from : Turners Asbestos Cement Co. branch of Turner & Newall Ltd.

Address (Head Office and Works) : Trafford Park, Manchester, 17

Telephone : Trafford Park 2181 (8 lines)

London Office : Asbestos House, Southwark Street, S.E.1

Telephone : Waterloo 4041