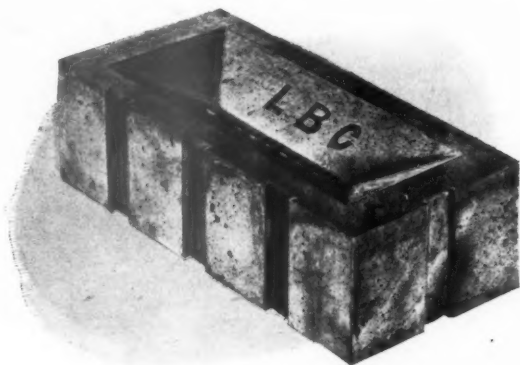


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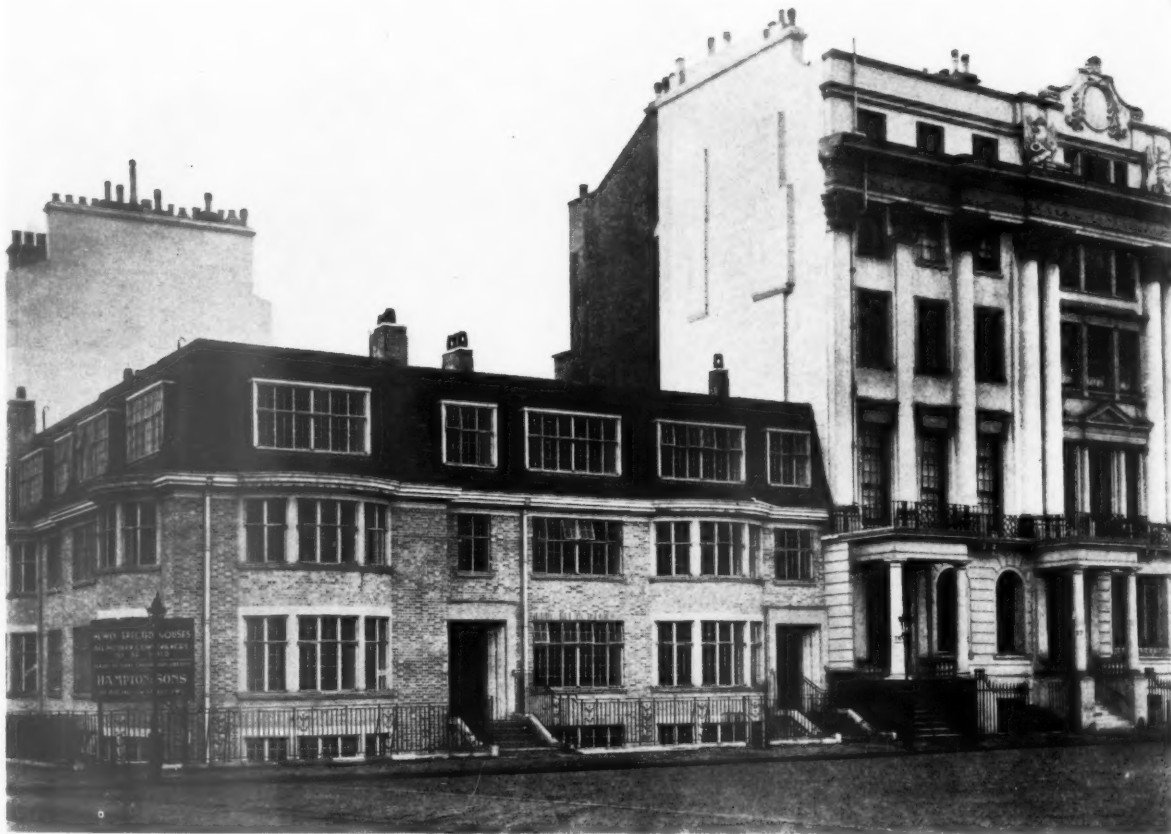
The Editor will be glad to receive MS. articles
and also illustrations of current architecture in this
country and abroad with a view to publication.
Though every care will be taken, the Editor cannot
hold himself responsible for material sent him.

THURSDAY, FEBRUARY 3, 1938.

NUMBER 2246 : VOLUME 87

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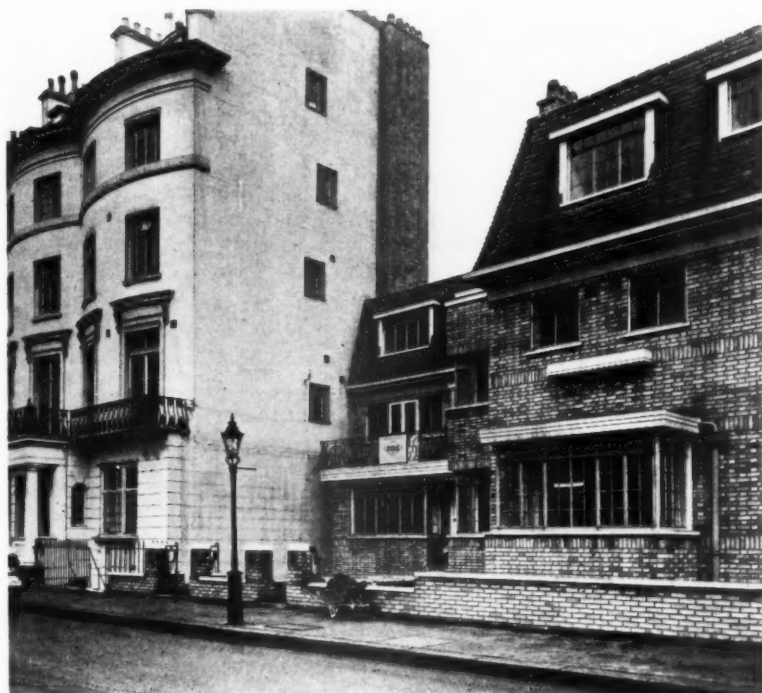
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POSSIBLE WORLDS

For ten or fifteen years it has generally been considered inevitable that the terrace houses of inner London should be gradually replaced by flat blocks. Rises in land values have been assumed to compel owners always to replace smaller by greater buildings; and for this reason the passing of most of Georgian London has been held to be unavoidable.

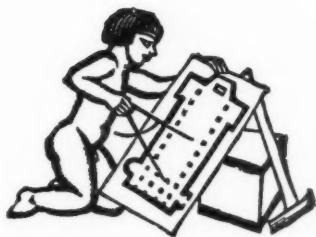
The new development off the Bayswater Road is of great interest by its exception to the rule. Here six floors are being reduced to four, and stucco Bayswater classic to a style equally local. The presumed economic success of this venture will perhaps lend force to the arguments of the Georgian Society as regards other districts.





ROOD SCREEN AT SHACKLEWELL

The screen in the Church of St. Barnabas, Shacklewell, to which a rood has been added by Mr. Herbert Tyson Smith. The church is in stock brick and concrete and was built in 1907 to the designs of Professor Reilly. The strong colours of the screen and the new rood contrast with the varied greys of the brickwork.



THE FORGOTTEN SELLING-POINT

THE "time-shift" is an ingenuity much used in fiction and drama. This week in a modified form the JOURNAL is forced to use it on its readers.

The plot does not open here with the deathbed scene of the hero and then switch back to his school-days and hectic youth. It opens hardly less vividly with Mr. Stanley Ramsey's talk at the Architectural Association on February 1.

"Publicity for Architects" was his subject. Feeling that such a discussion should receive the maximum of publicity, we have been faced with the necessity of making the publicity without the architect. In short, this page went to press before Mr. Ramsey spoke.

The JOURNAL could, in these circumstances, use its imagination about what Mr. Ramsey would say or it could think about publicity and the architect on its own account. It has preferred the latter, as causing the least potential ill-feeling.

"Publicity"—the word has an unpleasant sound. "Publicity for Architects" sounds even worse. Those sensitive individualists who have spent a hundred years convincing the public that they are artists just a little out of touch with the world of plain men and women have ended by finding that they had begun to believe it themselves and had better take steps to stop doing so.

Artists and high-souled men they were right up till 1914. Country houses, town halls, churches, a few other large buildings and a few odds and ends. These, so rarified had they become, were all they were asked to work on. Respected and a little despised, men of temperament and somewhat short of cash, they drifted more and more out of the main stream of events until—in Edwardian days—they were almost spectators (unpaid) on the bank.

Times have changed. In the 1920's architects looked at themselves, public opinion, the buildings of Great Britain and their bank balances and decided none were good enough.

The word "publicity" was whispered. Gingerly this unpleasant weapon was handed round and an expert was called in to say how it worked. His explanation was (or at least should have been) that publicity demands selling-points, of which architects possessed three in embryo.

The first was snob value—the remnants of learning, culture and respectability still clinging to the outcast horde. The second was business efficiency, which might be useful in gaining the approval of those contemplating isolated building ventures. The third and greatest was a feeling for orderly arrangement,

and even a rudimentary skill in bringing it about, which might come in very useful when a dense population was trying to improve its surroundings.

The architects looked at all three. It cannot be said that they liked any of them much; they were sensitive and retiring gentlemen. But, with hesitation, they accepted the first two. The third was altogether too much for them. Peer at it as they would, there seemed nothing in it save shadowy reflections of H. G. Wells, Socialism, and worse.

With a slight shudder, architects turned away and went ahead with selling-points numbers one and two. They did astonishingly well with them. Within ten years the architect became quite popular. Wireless and television and films told nearly everyone what an architect was. In things antiquarian, artistic and preservative the principal society gave its advice to the highest in the land. In a modest way architects were—by 1937—even prosperous.

Yet in 1938, "Publicity for Architects" is being discussed at the A.A. A thing like that needs explaining.

Mr. Ramsey may have suggested a new campaign with the old slogans, after paying tribute to their past services. He may—for all the JOURNAL yet knows—have gone so far as to suggest a taking-off of coats, followed by a twelve months' knockabout competition with milk, stout, fruit salt, and laxatives on the hoardings.

Or he may have been more subtle. He may have hinted that architects have by now almost managed to catch up with events; and that the next step, if we value our livelihoods, is to get just a little in front. This would mean—revolting the thought is—that selling point three must be got out, brightened up and pushed into action. It means that architects must say, despairingly, to some organization representing them: "We believe that the big things in building in the next twenty years are going to be bound up with land-utilization, with territorial planning, with town planning, with housing and schools, trunk roads and trading estates. Now, while we are fighting for what's going at the moment, we want you to pick some people and sneak ahead and get things ready. Then, when the time comes, you will increase our prestige by skilled advice to the Government, and we will find that somebody has thought about what we are going to do."

Mr. Ramsey may not have been coarse enough to put things like this. But the JOURNAL would have sympathized with him if he had.



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NOTES & TOPICS

QUADRIGA

MR. ADRIAN JONES has died at the age of ninety-two. Mr. Adrian Jones was the sculptor of the quadriga which surmounts the triumphal arch at Hyde Park Corner. This work alone should secure him enduring fame. He was also the sculptor of the Cavalry Memorial at Stanhope Gate, and he was, because of his equestrian knowledge, an Honorary Associate of the College of Veterinary Surgeons. This must have preserved him from becoming the centre of painful controversies. Realism is safe.

The quadriga, it seems, was erected at the suggestion of Edward VII and has been described by Mr. Jones as his tribute to Edward the Peacemaker. It is perhaps not generally known that the quadriga is itself a monument to peace, and if a careering chariot is hardly the most appropriate symbol of peace, it is at any rate a feature of London's skyline which is known the world over. Looking down as it does on that most realistic howitzer, it serves as an interesting commentary in bronze on the history of conflict.

Perhaps it will soon be matched by another prancing steed. The successful design for St. George's Hospital is to have its elevations approved by H.M. Office of Works "because," to quote the conditions, "of its proximity to Buckingham Palace." One imagines that there will be opportunities for sculpture with St. George as the theme.

JOIN THE ARMY AND SEE LIFE

An informative article in the *Evening Standard* (headed Aldershot, Tuesday) says that "work has begun on the first 'Soldiers' Hotel'." It will house the R.A.M.C. depot and the Army School of Hygiene "now quartered in antiquated wooden huts at Crookham on the other side of Aldershot."

I quote the following details:

"The new quarters will be barracks in name only, for as a Colonel of the Royal Engineers said today: 'Hotel will be a much more accurate description'."

"The 'hotel,' which is costing £250,000 to build, should be ready for occupation by 1940."

"All the floors will be in attractively coloured asphalt."

"Each man will have a steel locker."

"Married quarters will be built in circles, with a large enclosed lawn in the centre."

"One of the most pleasing features of the new barracks will be the fact that they will be surrounded by pine trees and acres and acres of heather."

This leaves the Senior Service no alternative but to advertise in similar terms but inserting "floating" before "hotel," the surroundings in this case being richly varied.

Even in his successful days at the Ministry of Transport, Mr. Hore-Belisha never thought of anything so revolutionary as attractively coloured asphalt.

RUSSELL OF BROADWAY

I understand that an appreciation of the late Mr. Russell of Broadway is appearing elsewhere in this issue, and I will only add therefore that I have very pleasant personal memories of him, extending back to the far-off days when he was proud to keep the village pub and little dreamt of where the sale of an antique table might lead him. I met him again in recent years on a preservation committee. No one had a greater respect than he for fine English building, but he was one of the few who was sufficiently broad-minded to realize that modernism, in the best sense of the word, had a place in this tradition.

THE 1938 HOUSE

One of Manchester's leading builders (operating in the Lostock Road district of Davyhulme) has been revising his plans of semi-detached houses.

Reproduced below is the plan for 1937, now discarded in favour of the plan for 1938, in which the large living room (or "sunshine design" as it has been termed) is divided into two small and separate rooms.

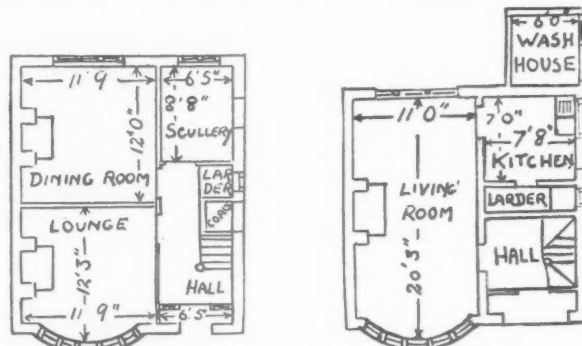
This interesting development is in striking contrast to the theory of open planning which is more popular with the younger architect. However, as the builder remarks, the personal preference of the public is the surest guide of the successful builder.

INVALIDS

Opening the *Daily Telegraph* last week, the first thing I saw was:

"ARCHITECT-GARDENER'S FALL"

"I hear that Sir Reginald Blomfield, the 81-year-old architect, is laid up at his home in Rye with a broken arm. A keen gardener, he was nailing creepers to the top of a garden wall when he lost his balance and fell."



A Manchester builder's plans of semi-detached houses for 1937 (right) and 1938. See note above.



From the A.A. Exhibition of photographs by members, now being held at 36, Bedford Square, W.C.: "Trees," by Norman Westwood.

"Sir Reginald has an unlucky record in the matter of injuries. As a young man he was good at games. While he was at Oxford he set his heart on getting a double Blue, for Rugby and cricket.

"But at both games he was kept out of the team at critical periods by injuries, and the Blues eluded him. A first in Greats was only a minor consolation.

"Until recently Sir Reginald continued to wield a punishing racket at lawn tennis. His court is set in the pleasant gardens of his Rye home, on a hill outside the town."

*

I am very sorry indeed about Sir Reginald's mishap, and hope he will be back at work in the Temple in next to no time.

MY DEAR—HOW MDIVINE

Some months ago the old St. Dunstan's villa in Regent's Park was demolished. The bamboo columns from the Chinese ballroom now grace the "Syrien" salons of Mayfair.

*

The vast new mansion built to replace it by Count and Countess Haugwitz-Reventlow is now completed. The staring red brick and white stone dressings of the facade were apparently insisted on by the Crown Commissioners—a curious choice in view of the fact that the traditional facing material of the neighbourhood is painted stucco.

*

Among many unusual features in the house are limed-oak furniture in the servants' quarters and a nursery which is not only inhabited by, but also upholstered in pink kid.

DECIBELS

The Anti-Noise League must have made it plain by now, if no one else has, that noise is one of the evils of our day. Gears, Klaxons, typewriters, lift gates; the amount of nervous energy expended in hourly resistance to these things must be vast. It would form a useful, if insufficiently

spectacular, part of the "Keep Fit" campaign if official action could be taken against offenders. This is just one of those things in which this country so habitually acts last.

*

I was therefore interested to see that the authorities in Amsterdam had set up microphones to trap the nuisance. The first thing they caught was their own tramway system—90 decibels instead of the permitted 60. Amsterdam must have been glad of this novelty in so far as it has provided material for the otherwise empty news sheets of the last week.

GUESS WHO IT'S FOR

Mrs. Darcy Braddell and Mr. Dennis (*Murder off Miami*) Wheatley "are preparing a series of mystery rooms which will set intriguing problems—with substantial cash prizes—for observant visitors" to the Ideal Home Exhibition. All you have to do, I gather, is to guess which celebrity the room is for, the necessary clues being Mr. Wheatley's job. So think up all you know about glass eyes (Nelson or the one-eyed Kaffir) and wooden legs (Long John Silver, or almost anybody) and remember that a drawing-board may mean anyone from C. Wren to H. Einstein.

*

Astragal will be found in the retreat called "Down the Garden Path with Various Authors." Guess who Number 1 is and you're sure to be right.

ASTRAGAL

PRICES

★ *THE demand for the issue containing the first section of Prices has been so large that it is doubtful whether it can be supplied in full. In this case applicants for Sections 1-4 inclusive will be supplied with Sections 2-5 inclusive, which, since the Supplement is repeated every 4 weeks, will be equally complete.*

★ On page 227 begins the second section of the JOURNAL'S PRICES SUPPLEMENT. Four sections, one published each week, make up the complete cycle, which is then brought up to date by fresh quotations from all firms and repeated.

★ The Supplement has been prepared for the JOURNAL by a firm of London quantity surveyors (Messrs. Davis and Belfield, F.P.A.S.I.), and will be conducted by them.

★ The Supplement is divided into four sections:—

1. Current Prices of Materials, Part 1 (published last week).

2. Current Prices of Materials, Part 2.

3. Measured Rates, Part 1.

4A. Measured Rates, Part 2.

B. Approximate Estimating.

★ Approximate Estimating is a variation of the series started in Information Sheets of pricing complete structural units and finishes per yard super, or in some other way equally easy for estimating purposes.

★ Messrs. Davis and Belfield will answer questions about prices, labour rates, etc., which should be addressed to the Editor. Questions will be answered direct to the enquirer, and any published answers will not contain the name or address of the enquirer.

NEWS

POINTS FROM
THIS ISSUE

- One of the first examples where a greater building volume has been replaced by a smaller in the re-development of inner London* .. 193
- "The new soldiers' hotels will have floors of attractively coloured asphalt"* 196
- G.B.S. on MARS* 198
- The eight points of a "Charter" for official architects' departments* 200

THE MARS EXHIBITION

Approximately 7,000 people visited the exhibition organized by the MARS Group at the New Burlington Galleries, which closed on January 29, after a run of nearly three weeks.

The foreword to the exhibition catalogue was contributed by Mr. George Bernard Shaw and is printed below:—

"If you would see how extravagantly architecture has been valued, go to Baalbek. It was there that the Romans set to work to impose their God Jupiter Ammon on the world as the god of gods. They did it quite successfully (as such efforts go) by building a stupendous temple, the remains of which still impress even American engineers as the handiwork of a super-human force. For how these colossal monoliths could have been hoisted to the tops of those gigantic columns, or even how they were transported from the quarries in which some of them lie hewn out and still awaiting that transport, is beyond all speculation. Experts tell you calmly that they were lifted by inclined planes. I prefer the explanation that angels carried them up Jacob's ladder as being much more plausible.

"There are a few of these columns left with their incredible entablatures; but in the great acreage of the temple as the Romans left it there were scores of them. People came from all parts of what was known of the world at the time; and when they saw that humanly impossible temple they knew that Jupiter was indeed verigod. As long as the temple stood there was no resisting him. That was why, when the Arabs came, bearing the standard of Allah (save in Whom is no majesty and no might) they saw at a glance that the great temple must come down, and not one stone of it be left on another, before Jupiter could be dethroned.

"Amazing as the building of the temple

THE ARCHITECTS' DIARY

Thursday, February 3
 BRITISH CONSTRUCTIONAL STEELWORK ASSOCIATION. Dinner. *At the Savoy Hotel, W.C.*
 SOUTH WALES INSTITUTE OF ARCHITECTS. [Central (Cardiff) Branch.] *At the Technical College, Cardiff.* "Planning a Trading Estate." By Professor W. G. Holford. 7.15 p.m.
 AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C. "A Commentary on the Reports of the Rent Acts Committee." By Captain Montagu Evans. 7 p.m.
 ARCHITECTURAL ASSOCIATION, 36 Bedford Square, W.C. Exhibition of photographs by members. 10 to 1.

Friday, February 4
 R.I.B.A., 66 Portland Place, W.1. Dance. 8 p.m. Also, Photographic Exhibition arranged by the Camera Club. Until February 11.

Monday, February 7
 R.I.B.A., 66 Portland Place, W.1. Social Evening.
 CHARTERED SURVEYORS' INSTITUTION, 61 George Street, S.W.1. "Redevelopment Schemes under the Housing Act, 1936." By L. H. Keay. 6.30 p.m.
 ARCHITECTURAL ASSOCIATION. Debate with the London Junior Members' Section of the Institution of Structural Engineers at 10 Upper Belgrave Street, S.W.1.

Tuesday, February 8
 ILLUMINATING ENGINEERING SOCIETY. *At the Institution of Mechanical Engineers, S.W.1.* Discussion on the Final Report of the M.O.T. Committee on Street Lighting; to be opened by Dr. J. W. T. Walsh. 7 p.m.
 ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "Ministry of Health New Model Building Byelaws." By E. H. Ford. 6.30 p.m.
 INSTITUTION OF CIVIL ENGINEERS, 61 George Street, S.W.1. "An Experimental Investigation of the Effect of Bridge Piers and other Obstructions on the Tidal Levels in an Estuary." By Professor A. H. Gibson. 6 p.m.
 INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, Midland Branch. *At the Queen's Hotel, Birmingham.* "Modern Palestine." By Arnold Butler. 7 p.m.

Wednesday, February 9
 LIGHTING SERVICE BUREAU, Savoy Hill, W.C.2. "Lighting Properties of Materials." By J. K. Winsor. "Lighting for Decoration." By R. O. Sutherland. 7 p.m.
 INSTITUTION OF HEATING AND VENTILATING ENGINEERS, 12 Russell Square, W.C.1. "Engineering Equipment of Earl's Court Exhibition." By Dr. Oscar Faber and J. R. Kell. 2.30 p.m.
 At the Park Lane Hotel. Annual Dinner. 7 p.m.

was, its demolition and desecration must have been at least equally laborious and dangerous. Even Arab fanaticism could not go quite through with it. Or it may be that the destroyers deliberately calculated that a visible wreck and ruin of Jupiter's famous temple would shew how Allah had dealt with him better than an annihilation that could shew nothing. Anyhow there is the wreck for all the world to see. It is easier to get to than the Shetland Isles; and I advise you not to miss it when you visit the Holy Land, as everyone with money enough ought to nowadays.

"Yet as pure architecture Baalbek is not, and never was, worth two-pence. Its builders relied on magnitude and apparent impossibility for the effect of their work. The æsthetic part of it was conventionally Roman. To anyone who has seen Ely Cathedral, or Chartres, or St. Sophia, or even the Parthenon, it is null and dull. But it illustrates, as no other existing ruin within my reach does, the fact that you cannot destroy a religion until you have destroyed or assimilated what it has built.

"Architecture of this kind may be called impressive architecture. It persists from Baalbek to the country seats of our landed gentry, to the terraces, gardens, and squares

of Bayswater and Bloomsbury, South Kensington and Regent's Park, and to the newest fanes of Christian Science. I lived for thirty years in Adelphi Terrace, which was built to reproduce in London the splendours of the palace of Diocletian in Split (çi-devant Spalato), and for nearly twenty in Fitzroy Square, where you may still see what the impressive architects called façades. As to the Terrace, it has just been razed to the ground and even deeper. I speak with the authority of personal experience when I say that in neither of these residences was there a bathroom, and in both the sanitary arrangements had had no place in the original plans. In impressive architecture it is the outside that matters most; and the servants do not matter at all.

"The Mars group represents a violent reaction against impressive architecture. It has no religion to impose; and however it may operate incidentally as an advertisement of wealth and respectability, this is not its object. It considers the health and convenience not only of the inmates but of their neighbours and of the whole town, as far as it is allowed to have its own way, though, of course, it is often baffled on this point just as Christopher Wren was. To the classical Baalbekian list of building materials, stone and bricks and mortar, it adds concrete with a steel skeleton, glass, and steel without any concrete. I must not say that in using these materials for utilitarian ends it is indifferent to the aspect of the result. Indeed, artistic instinct is at the very root of the matter even if the more fanatical Martians do produce buildings that are staggeringly unlike Adelphi Terrace and Fitzroy Square.

"No matter: we shall have to get used to them, even if the only way to escape from their unusualness is to get inside them. At all events they do not keep out the light; and when one considers that the curse of London is the three months of all but Arctic darkness which descends on it every winter, this alone is an overwhelming recommendation.

"Martian architecture is part of a new artistic movement. Its unprejudiced search for new beauties of form is in its favour: for the seekers after what Dickens's blacksmith happily called the architectoaloral always find themselves back again at Lancaster Gate or the Tate Gallery. And we have had enough of that. At least I have.

"I think I have now put the Mars case intelligibly before you, though I need hardly say that no individual member of the group is in any way responsible for my view of it."

HAMMERSMITH TOWN HALL

Work has commenced on the erection of the new Hammersmith Town Hall in King Street. The building is estimated to cost £240,000.

MODERN ARCHITECTURE IN
GLASGOW

The exterior design of the buildings in the Empire Exhibition will help to break down the prejudice in Scotland against modern forms of architecture. This view was expressed by Mr. T. Warnett Kennedy, a Glasgow architect, last week, in a lecture on "The Modern Movement in Architecture," given under the auspices of Glasgow Institute of Architects. New ideas in architecture took a long time to reach Glasgow, he said, but there were definite signs that such ideas were coming to the city.

If the Empire Exhibition did nothing else it would break down the prejudice which had existed too long in the city and in Scotland towards the modern movement in architecture. It was not expected that the exhibition architecture would contribute towards the modern movement in regard to new forms of structure, but a contribution to that movement was expected from the exterior design.

WATERLOO BRIDGE PROGRESS

At Tuesday's meeting of the L.C.C., the Highways Committee, reporting on the progress made with the preparatory works for the construction of the new Waterloo Bridge, stated that works at the approaches have been practically completed and that protective works in the river and the erection of the gantry from which large travelling cranes will operate are well advanced. The construction of the cofferdam for the pier nearest the south bank is in hand and piles are being driven in the river bed for carrying the centering for the two southern spans of the bridge. Granite stones from the old bridge will be used in facing the river piers of the new bridge and a start has been made with the preparation of the stones selected for this purpose.

At the same meeting the Housing and Public Health Committee reported that, during the Christmas recess, it had accepted tenders for the construction of nearly 600 flats in various parts of London, at a cost of approximately £330,000. The new flats will provide accommodation for about 3,000 persons.

OBITUARY

SYDNEY BOLTON RUSSELL, who died last week at the age of 71, was one of those unforgettable characters whose gifts enrich the fabric of English life. He was that rare and splendid thing—a practical idealist, and he built up a business that revived old and honourable traditions and set new standards, for he was an innkeeper of genius. He was courageous in experiment, far-sighted and informed with the spirit of leadership; and another and totally different kind of business from innkeeping came alive under his care, and, directed by his eldest son, Gordon Russell, has been instrumental in elevating taste in the furniture-manufacturing industry.

Those who knew Sydney Russell as the proprietor of the Lygon Arms at Broadway, Worcestershire, saw only one side of his activities; but it was impossible not to recognize those activities as exceptional. Like many people, Sydney Russell had all his life wanted to do something very different from the job that produced his livelihood; but unlike most people he was prepared to work and to save and to plan so that while he was still in his prime he retired to turn a simple, country inn and a large, rambling old house into a famous hotel—no, hotel is the wrong word: the Lygon remained an inn, but it regained everything an inn used to have when innkeeping in England was an art as well as a business. This was not done without work—hard, physical work, in which his family took part. Bit by bit the big house in Broadway was restored; its rooms regained their original features, and the Lygon began to acquire its reputation for excellent cooking and an interesting cellar. It was during the task of restoration that the workshops were founded which after the war became the factory for new furniture,

designed by Gordon Russell, and which later developed into the manufacturing and retailing business of Gordon Russell, Ltd., of which Sydney Russell was the first chairman.

Some of us who knew him, not only in business, but as the best kind of host in his own home up at Snowhill above Broadway, delighted in his company; for he was a man with many interests, and some engaging eccentricities. There was an infectious quality in his enthusiasms. He was an amateur water diviner. The diversity of his experiments in food was sometimes bewildering: in his vegetarian period he invented some remarkably luscious salads and discoursed upon their nutritive attributes with unshakable authority. He used to write very beautifully with a reed pen, and inscribe cards and notices. Any striking passage in a book would be noted and copied out in flowing script. He did everything well and with a craftsman's personal thoroughness, and it is difficult to think of any life so fully occupied with satisfying activities. He had a profound

love for English things and for the English countryside. He understood people and could always touch some responsive chord. Among his friends he numbered many architects and designers, artists, authors, business men and great industrialists like Henry Ford.

It was difficult for him to face the prospect of retirement; but leaving his sons to carry on the two branches of the business he had founded, he devoted the last few years to working for the Gloucester Discharged Prisoners' Aid Society, and a good many men have to thank his untiring energy and generous interest for a new start in life after a false one. All his days he demonstrated his belief in "the well-doing of what needs doing." The Cotswolds can never be quite the same again for those who enjoyed the hospitality of "Father" Russell. For somehow we adopted that patriarchal title for him, though we shall remember his sincerity, his kindly humour and the rich vitality of his conversation. To know him was an experience: to forget him, an impossibility. J. G.

LETTERS FROM READERS

DOUGLAS SMITH

ARCHITECT AND R.E.

(SUPPLEMENTARY RESERVE)

C. T. PENN. R. C. FISHER, AND
R. D. MANNING

SIR JOHN BURNET. TAIT AND LORNE

Architecture and the Next Slump

SIR,—Small wonder that Astragal enquired why there was not more steam blown off at the last R.I.B.A. Junior Informal Meeting, in view of the ideal conditions!

Have the younger members taken to heart the President's recent suggestion that architects should not interest themselves much in economics and politics? When I read some time ago, in a contemporary of the JOURNAL, a review by an architect of some work on "Air-Raid Precautions," I felt that Mr. Goodhart-Rendel might have only too little to fear in that direction! The author of the review placed the Capitalist States in one category and the Totalitarian States in the other!

Now, everyone ought at least to know that there is only one State which is not "capitalist."

It so happens, also, that this is the only State which was entirely unaffected by the great slump a few years ago, and is still the only one where prices are decreasing while wages are increasing, incidentally. Surely, investigation of this point is very pertinent to the recent discussion at the R.I.B.A.? Many of the enthusiastic younger members must have realized that many of their schemes will for ever remain on paper, however socially necessary they may be, if things go on as they are doing at present.

This is largely due to our trade-cycle. In a "boom" when prices are high, those who at present hold the purse strings are often inclined to say that

building is too costly (unless, of course, it has to do with armaments); during a slump, on the other hand, prices may be low, but they prefer to "economise."

Again, in regard to town-planning, without which architecture is as nought, every architect should read Sir E. Simon's address to the Town and Country Planning Summer School last autumn, under the title of "Planning in Moscow and Manchester Compared."

The writer fully realizes that release of resources for a large building programme does not by any means necessarily ensure that the resulting architecture will be fine; that is the responsibility of architects themselves. But without those resources the finest architects can do little.

I do not wish to incriminate the JOURNAL at all in this expression of entirely personal views, but I do feel that the subject calls for some pretty clear thinking, above all on the part of our profession.

DOUGLAS SMITH

Air Raid Precautions

SIR,—In connection with correspondence appearing in your columns last week, may I be allowed to trespass further upon valuable space. Surely, "Another Architect" is too sweeping when he suggests that anyone devoting time or energy to Air Raid Precaution Work or Defence Training "is aiding and abetting wholesale slaughter."

Personally, I feel that it is by thus spending our time, we are doing the only practical thing to stave off "whole-

sale slaughter." Can it be "leading to barbarism" if one works for the defence, note that word, of one's own country and people? The first paragraph of Mr. Eric Gill's letter is fortunately not to be taken literally. Most people know that there are precautions which can and will be taken, and everyone will be given the opportunity to do something which at least will ensure that they are not "destroyed like vermin" as Mr. Gill puts it.

My previous letter was written to point out the value of trained professional men such as architects, surveyors and engineers in assisting local Air Raid Precaution Committees, by their expert knowledge connected with their particular sphere of life.

We are all agreed that the ideal state of things would be a world wherein all nations are disarmed and living peacefully; unfortunately, here in England we have to face the facts as they exist to-day. The idealist's vision of a world wherein armies are forgotten, which ignores the conditions existing, can no longer be counted as an ideal for practical purposes.

Messrs. D. E. Morrison and Thomas Richards suggest that "a war psychology is being fostered." I contend that it is, on the other hand, a logical commonsense policy for our self-preservation, against the worst contingency. Furthermore, I don't think many of us really imagine that it would be feasible to say, "I will have nothing to do with war." That depends upon an enemy's respect for one's ability to defend oneself. Splendid isolation is no longer existent.

We all hear too much from various stricken parts of the world, and any Government knowing and seeing the terrible effects of raiding aeroplanes which does not do its utmost to guard against its own subjects being caught unprepared, would be betraying its most solemn trust.

ARCHITECT AND R.E. OFFICER
(SUPPLEMENTARY RESERVE)

[The JOURNAL reminds correspondents that it is an architectural paper, and questions of political principle are therefore not suitable subjects for debate in these columns. This limitation, though artificial, has the advantage of allowing each aspect of national problems to receive detailed attention in a periodical specially concerned with it.—Ed., A.J.]

Official Architects

SIR,—Now that the first heat of resentment about Professor Goodhart-Rendel's address has cooled, and while the R.I.B.A. Committee is considering the matter, the time is surely opportune for official architects and for assistants to consider what they want and why they want it.

A charter, so to speak, for public offices is needed, and we suggest that the following points are worth the serious attention and discussion of your readers.

1: Vindication of the status of architects, who should be responsible, in name and in fact, for all architectural work, and should be paid in accordance with that responsibility.

2: Assistants who prepare designs and working drawings should obtain the credit due to their work when illustrations or reports of the buildings appear in the press and at exhibitions.

3: Assistants who are responsible for work should attend committees with their chiefs when these jobs are under discussion. This is common practice in most private offices, where senior assistants frequently discuss work with clients, either with or without their principals, and such a system can only add to the efficiency of the work, and to the zeal of the assistants.

4: Post-entry training in the general policy of their authority in all questions affecting architectural work should be organized for all assistants desirous of studying such matters.

5: The system of large "temporary" staffs should be ended. Engagement should carry with it an undertaking of entry into the establishment within a definite period, and regular increments of salary should be guaranteed after a definite and limited time, say six months. At present, it is common for assistants to serve up to two years before receiving their first increment, and for subsequent increments to be granted at purely arbitrary intervals, often lasting several years.

6: Architectural departments should be run as such, and should not be dominated in staff matters by clerical departments, which have neither knowledge nor understanding of architectural working conditions.

7: The tacit arrangement between certain London official departments obstructing the transfer of temporary assistants from one office to another at higher salaries must be stopped. This is merely a means of depressing salaries generally and of avoiding improvement of working conditions.

8: Assistants on leaving public offices should be given testimonials as they would be if they were leaving a private employer. The system of answering enquiries only is open to serious abuse, and in certain offices is used in the same way as the "tacit arrangement" mentioned above, to obstruct the transfer of temporary assistants.

We hope that at a later date it will be possible to call a conference in London of representatives from all official offices which care to co-operate, to discuss these points and any others which might be added, with a view to formulating a programme to be put before the offices concerned. In the meantime we should welcome ideas

and suggestions from your readers on the subject.

On behalf of the Public Relations Committee, the A.A.S.T.A.,

C. T. PENN, Hon. Sec.,

R. C. FISHER,

L.C.C. Architects' Dept.,

R. D. MANNING,

Middlesex Architects' Dept.

New Year Issue

SIR,—With reference to your criticism of "The Year's Work" in your issue for January 13, you mention Steel House, Tothill Street. We would point out that Professor Reilly is in error in suggesting that the sixth floor (not the top floor) must be seriously darkened by the projecting cornice. In point of fact, this is not so. Special care was taken to prevent loss of light to the sixth floor by inserting continuous roof lights in the ceiling, there being a setback to the seventh floor which enables this to be done. The seventh floor is not visible in the photographic reproduction.

BURNET, TAIT AND LORNE

EXHIBITIONS

[By D. COSENS]

GOOD art is self-explanatory. Nevertheless Mr. Gabo is fortunate in being able to explain his work from time to time, and in having given a considered account of his theory of the constructive idea in so widely read a book as "Circle." For to many people abstract art, devoid of all emotional significance, is not readily comprehensible. They find it easy to see beauty in carvings of Pheidias or Donatello; possible sometimes to find it in fortuitous arrangements of machine shapes; but difficult to integrate a calculated synthesis of solids and planes. Yet the sculptor's problem is always the same, whether he uses natural or abstract forms as the basis of his idea. As Mr. Herbert Read reminds us, Plato, writing in the fourth century B.C., said "I do not intend by beauty of shapes what most people would expect, such as that of living creatures or pictures, but, for the purpose of my argument, I mean straight lines and curves and the surfaces or solid forms produced out of these by lathes and rulers and squares. For I mean that these things are not beautiful relatively, like other things, but always and naturally and absolutely."

Mr. Gabo is an important figure in a movement that is perhaps the only contribution of this age to the history of art, and he was one of its pioneers. The integrity and cold classical logic of his constructions at the London Gallery will inevitably prove entrancing to the converted, but they are also particularly to be recommended to those to whom formal structure does not usually appeal, for here are solutions to problems parallel to those of contemporary architectural design—the eternal problem of the exact relation of solid shapes in space, and the modifications in design made possible by the use of transparent or opaque, light or dark, materials.

With one or two exceptions, such as the famous "Jane Avril leaving the Moulin Rouge" in the Courtauld collection, the work of Toulouse-Lautrec is perhaps not

very well known in this country, and most of the paintings at the exhibition, which is being held at Knoedler's in aid of the Musée d'Albi, are from private collections or museums in France, and probably unfamiliar. Though technically much of his work is very fine, Toulouse-Lautrec is not and, had he lived, probably never would have been, a painter of major importance amongst the impressionists with whom he lived and worked.

He spent his life painting in the bars and brothels of Montmartre, and died at the age of 37. That the stories that his pictures tell may not always be very pretty is of the least importance, the trouble is that he makes certain, by an over-emphasis that at times amounts almost to caricature, that you see the point. While such a painter as Sickert can record similar subjects (his "Camden Town Murder," for instance) with the detachment that he would use if he were painting a still life of a plate of apples, Toulouse-Lautrec's vision was distorted by his insistence on an extreme realism. Yet he could paint magnificently at times, and if he were not as great as is sometimes thought he missed it by a very small margin. This exhibition gives a unique opportunity of seeing a collection of his work.

The exhibition of Chinese art at the old headquarters of the R.I.B.A. is also loaned from private collections, to raise funds for medical aid in China. It is small, and makes no claim to be a comprehensive survey, but the exhibits are of a very high standard, and exceptionally well arranged. The only possible criticism is that, as the average visitor is probably uncertain of the exact sequence of dynasties, dates would be more helpful than a reference table of dates and dynasties at the end of the catalogue. But that is a small point and with or without dates the exhibition shows the great superiority of work of the Han and Sung periods to anything that came later. Of the paintings 34, 383, 397 and the small hand-roll, 213, are specially notable, and surely no china has ever been produced to equal the beautiful Sung monochromes. The stone Buddhist figure, 177, with its contemplative detachment and simplified lines is outstandingly fine. This exhibition has been such a success that it has been extended until the end of the week.

Constructions by Gabo. London Gallery, 28 Cork Street. Until February 5.

Loan Exhibition of Paintings and Drawings by Toulouse-Lautrec. Knoedler's Gallery, 15 Old Bond Street. Until February 10.

Loan Exhibition of Chinese Art (for Chinese Medical Aid). 9 Conduit Street. Until February 5.



R. I. B. A.

NEWS BULLETIN

The Annual Dinner.—The following are among those who have accepted the Council's invitation to the Annual Dinner on Friday,



From the A.A. Exhibition of Photographs by Members: "Yarmouth Quay," by Patrick Cutbush.

February 11: The Archbishop of Canterbury, the Dean of Westminster, Sir Philip Sassoon, the Earl of Bessborough, Lord Balfour of Burleigh, Lord Snell, the High Commissioner for the Dominion of Canada, the High Commissioner for Eire, Sir Robert H. Pickard, Sir John Forsdyke, Sir Eric MacLagan, Sir Patrick Duff, Sir William Llewellyn, Sir Thomas Moore, Mr. George Hicks, Mr. J. A. Lovat-Fraser, Mr. A. C. Bossom, Mr. C. G. Ammon, Mr. Godfrey Nicholson, Mr. A. Beverley Baxter, Colonel Sir John Shute and the Presidents of the principal architectural and building industry societies.

The R.I.B.A. "Party."—The programme of events for the Social Committee's "Party" (for which all tickets are now sold) on Monday next, February 7, includes the following items: an exhibition by the Camera Club entitled "Mixed Bag, 1937"; two performances by the Dramatic Society of "Lucrezia Borgia's Little Party," Dancing 10 p.m. to 1 a.m.; Spanish dances by Senorita Emma Marqués at 11 p.m.

The "Tite" and "Victory."—The last day for sending in applications for the Tite Prize and the Victory Scholarship is Thursday, February 10.

General Meeting.—The title of the paper which Mr. J. H. Forshaw, M.C., F.R.I.B.A., will deliver at the General Meeting on February 21 has been altered to "The Architectural Work of the Miners' Welfare Committee."

Touring Exhibitions.—"Airports and Airways" is at the Museum and Art Gallery, Leicester, until February 13.

"Civic Centres" will be at the Public Library, Museum and Art Gallery, Folkestone from February 15 to March 13.

"Modern Schools" will be at the Gallery of the Society of Arts, Birmingham, from February 9, until February 19.

ELECTION OF MEMBERS

At a recent meeting of the Council of the Institute, the following members were elected: *As Fellows* (8): Messrs. A. C. Cowtan (London); S. J. Stanton (London); F. J. Taylor

(Plymouth); A. S. Ash (London); J. R. Hi (London); H. F. Hurcombe (Oxford); P. A. Roffey (London); and M. Rosenauer (London).

As Associates (35): Messrs. S. F. Ashby (London); S. Blank (Manchester); N. E. Block (London); S. W. Bradshaw (Orpington, Kent); V. Bulbulian (London); A. B. Bunch (Leamington Spa); (Mrs.) H. Cowell (Birmingham); E. H. Crosbee (Edinburgh); R. N. Dixon (Birmingham); R. P. Eve (Cheam, Surrey); D. C. Gill (Stanford-le-Hope, Essex); G. Gneditch (London); R. W. Gray (London); D. A. Green (Leamington Spa); J. Innes (Edinburgh); P. H. Laurence (Wrecclesham, Surrey); (Miss) M. J. Love (Glasgow); D. M. Madge (Enfield, Middlesex); J. S. Neish (London); R. H. Pastakia (London); W. A. Robertson (Edinburgh); J. S. Scott (Barnt Green, Worcestershire); (Miss) E. F. Sides (London); D. S. Soutar (Dundee); F. R. Stevenson (Edinburgh); J. Y. Stoneham (London); C. V. Tillet (London); (Miss) D. P. Tranmer (Harrogate, Yorks.); A. J. Truscott (London); W. T. Walker (Rome); K. Warman (Bradford); P. Whiston (Edinburgh); A. H. Williams (Northallerton); (Miss) A. C. Woodrow (Glasgow); and W. J. Wynn (Banstead, Surrey).

As Licentiates (4): Messrs. T. Burd (London); A. F. Gott (London); H. MacPherson (Glasgow); and V. Simmonds (Birmingham).

THE R.I.B.A. INTERMEDIATE EXAMINATION

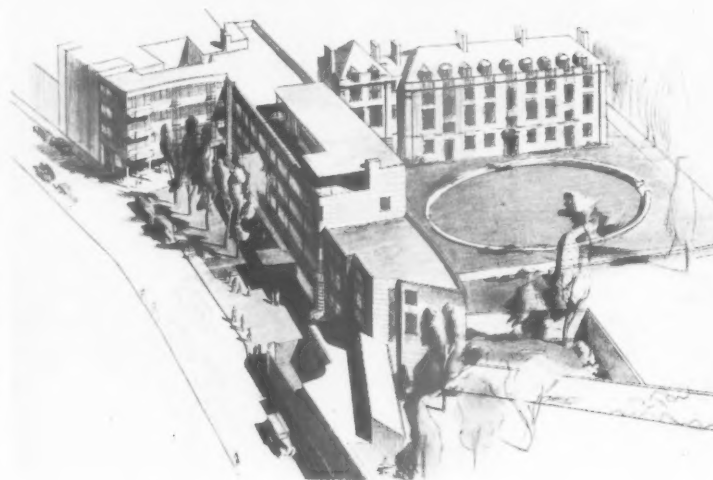
The R.I.B.A. Intermediate Examination was held in London, Belfast, Edinburgh, Hull, Manchester, Newcastle and Plymouth, from November 12 to 18, 1937.

Of the 169 candidates examined, 68 passed and 101 were relegated. The successful candidates are as follows:

Almott, Andrew Frederick; Armstrong, James Robson; Armstrong, Thomas (Jnr.); Barber, Edward Viccars; Bingham, Frederick Ernest; Brett, Hon. Lionel Gordon Baliol; Brown, James (Jnr.); Brudenell, Frederick Alfred; Bryant, William Sandy; Chandler, Edwin George; Chappelle, Reginald Thomas; Christie, Robert James Bayne; Cook, Arthur

Bernard ; Cox, James Harry ; Dodds, Kenneth ; Edwards, Ernest John ; Edwards, Percy Charles ; Empsall, Raymond ; Evers, Charles Ronald ; Firth, James Ronald ; Hames, Jack Cecil Marshall ; Hannaford, Avro Frederick John ; Harper, Leslie Kenneth ; Hartley, Paul Hey ; Heywood, Leslie Albert John ; Hill, Eric Percy ; Hitchon, Edward ; Holden, George Francis ; Hooker, Arthur Joseph ; Howarth, Leonard ; Jacob, Charles Edward ; Janes, Eric Ralph ; Johnson, Frank Percival ; Jones, Herbert ; Kidall, Joseph Monson ; Lawton, Kenneth William ; Longbottom, Lionel ; Lovell, George Ronald ; Macdonald, Donald Andrew ; Mackereth, Donald Walker ; Mayer, William Edgar ; Mills, Douglas George ; Mustapha, Ahmed Salama ; Otterburn, Rowland ; Page, Robert ; Parsons, Anthony Leslie ; Pegrum, William Aubrey ; Price, Geoffrey Rowland ; Routh, John ; Ruddick, Lawrence Hope ; Sartain, George Leslie ; Scholes, James Dennis ; Scott, Charles Frederick ; Scott, Peter ; Stark, Ivan Alexander ; Thomas, Edward Trevor ; Thompson, Eric Hamilton ; Thompson (Miss) Mabel ; Thornton, Walter Reavell ; Turner, Newman George Effingham ; Vere, Stanley ; Wallis, William ; Warner, Robert Watkin ; Wells, Samuel ; Willars, Frederick Leslie ; Wood, Charles Altham ; Wright, Edward Stephen ; Young, Kenneth Mathison.

PROPOSED NEW BUILDING



TITE PRIZE AND THE VICTORY SCHOLARSHIP,
1938

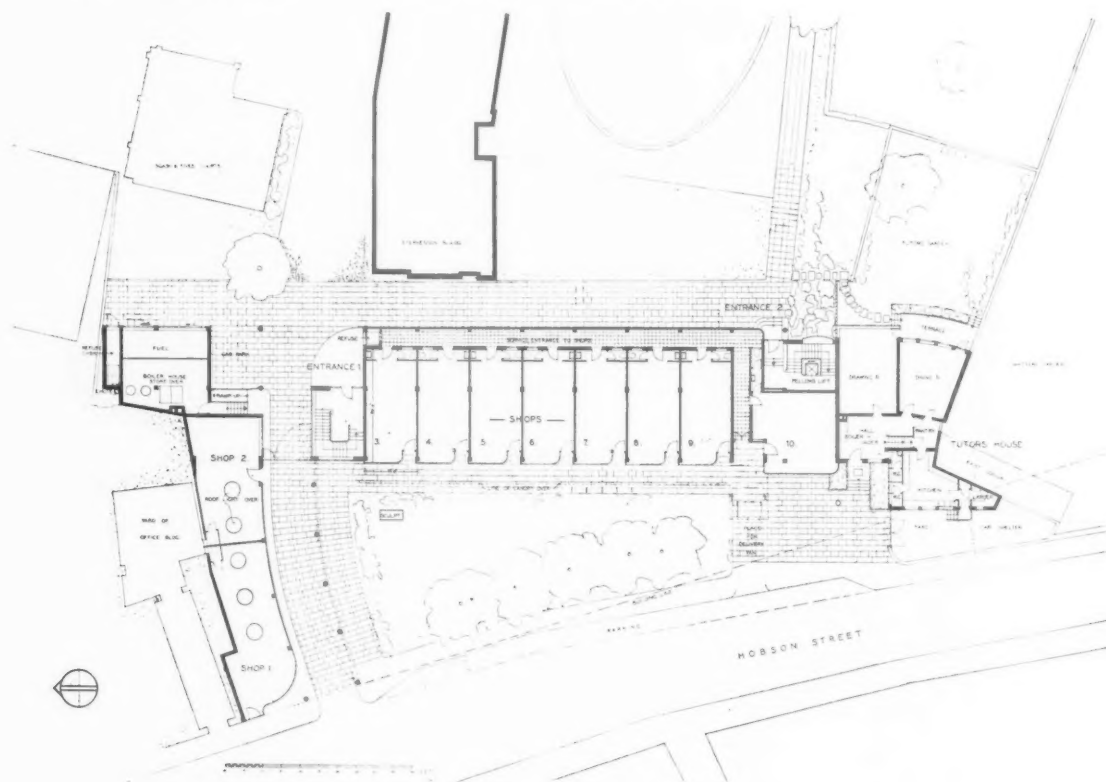
The preliminary competitions for the Tite Prize and the Victory Scholarship will be held in London and at centres in the provinces on Thursday, March 10, and Friday, March 11, 1938, respectively.

Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 66 Portland Place, London, W.1. The closing date for the submission of forms of application is Thursday, February 10.

The scheme comprises 10 shops on the ground floor, sets of undergraduate rooms on the next three floors, and two Fellows' sets on the top floor served by a lift. At the southern end of the block is a Tutor's House.

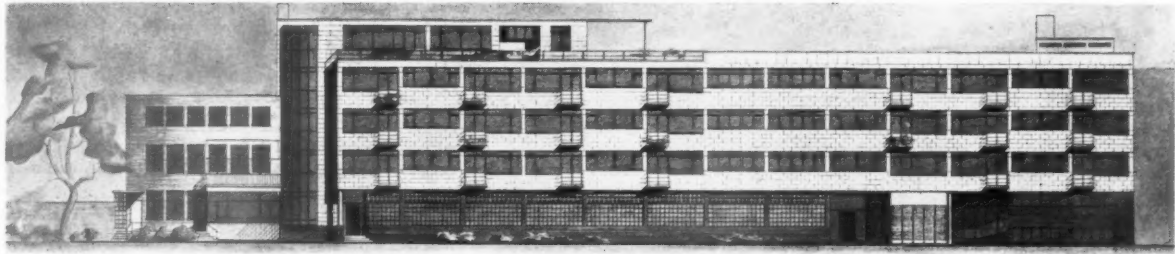
The site is in Hobson Street, opposite the Central Cinema and by setting the block back a row of trees is saved, and a circulating space provided for shoppers.

Above is a perspective from the south.

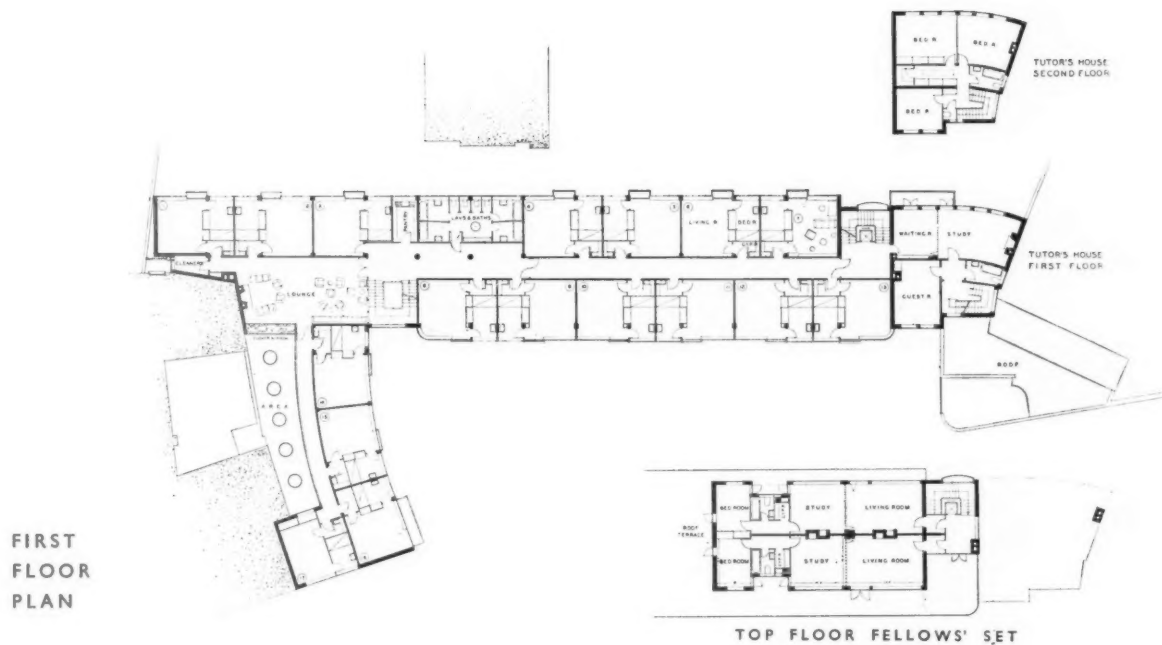


GROUND FLOOR PLAN

FOR CHRIST'S COLLEGE, CAMBRIDGE



EAST ELEVATION

FIRST
FLOOR
PLAN

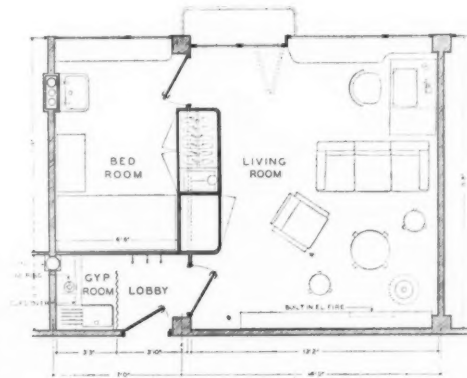
TOP FLOOR FELLOWS' SET

B Y E . M A X W E L L F R Y

The college approach will be from the east, the glass-concrete screen to the service corridor of the shops being obscured.

The undergraduate sets have a common room and bathrooms on each floor and each have lavatory basins and built-in furniture. The beds are pivoted to tilt for easy bedmaking. Gyp-rooms have gas-rings, ladders and crockery cupboards. Living rooms are central-heated with electric fires in addition.

Construction is steel frame with hollow-tile floors and roofs. Panel walls brick, faced with Ketton stone. Partitions are pumice block and windows steel. Floor finish is wood block with cork carpet in corridors.



UNDERGRADUATE SET

EXTENSION TO A BLOCK OF FLATS IN

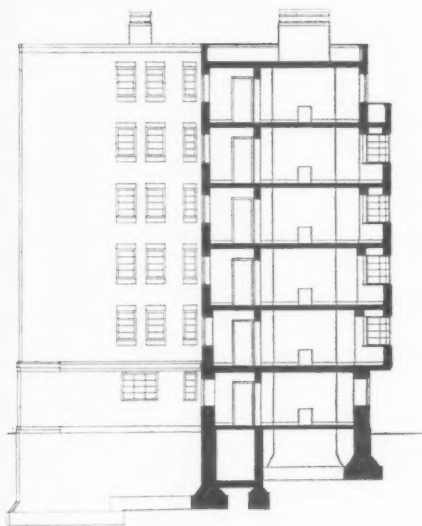


GENERAL—North Gate is a large range of flats built some 30 years ago on a site overlooking Regent's Park, with a frontage to it of some 600 ft. The company owning the flats also owned the return frontage, which was a terrace of old Georgian houses; these houses were demolished and the extension here illustrated was built on the site.

The building was executed at the time the Town Planning Act came into force, and there was a considerable delay over negotiations regarding height. 80 ft. high was allowed facing the park, but this had to be cut down to 60 ft. high on the return front.

CONSTRUCTION—Solid brick construction with reinforced hollow tile floors. Because of the nature of the sub-soil, 7 ft. deep foundations were required. The use of piers and beams were considered, but it was finally decided to use mass concrete walls below ground, basements being waterproofed internally with a patent rendering.

On the left is a detail of the main entrance.



SECTION

REGENT'S PARK: BY MITCHELL AND BRIDGWATER

EXTERNAL FINISHES—Because of the different storey heights it was impossible for the extension to repeat the detail of the existing building. A somewhat more modern treatment was employed, which it was thought would harmonize with the existing building. The brick used, a soft red brick, was chosen by the owners of the building.

PLAN—The building consists of 12 large and six small flats. There are two main staircases and lifts with one staircase and lift for servants, serving all flats. The large curved bays were introduced to give best rooms on the return frontage a view over the park. The flats are planned so that they are divided into three units. There is an entrance foyer some 24 ft. by 7 ft. with a large window, out of which the drawing room and dining room are approached. At one end of the corridor is a door leading into the owner's bedroom suite, which consists of three bedrooms and two bathrooms. At the outer end is a pantry which has a service door into the dining room. This cuts off the lobby to the servants' quarters. Beyond it is the kitchen, out of which opens a lobby giving access to two maids' bedrooms and maids' bathroom.

INTERNAL FINISHES AND EQUIPMENT—

The flats internally were decorated to tenants' choice, walls and ceilings being mainly painted; floors, throughout owners' quarters, are of compressed cork tiles. The main staircase has cork treads and risers. Public entrance halls are paved with black and white marble. There are coal fires in all drawing rooms and best bedrooms, and electric fires in dining rooms, the building being centrally heated. Tiled dados in bathrooms.

On the right is a general view.

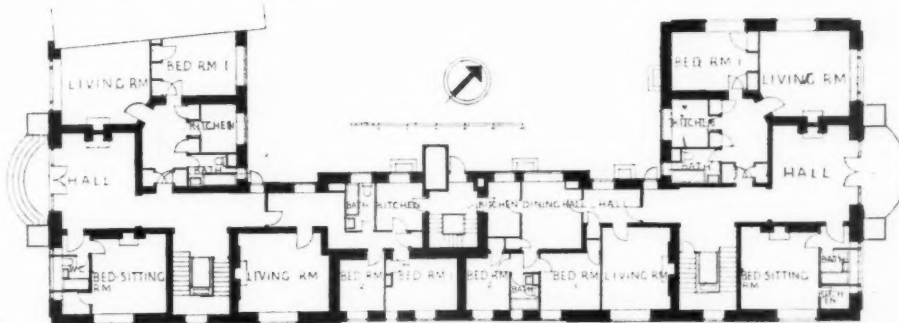
For list of general and sub-contractors, see page 226.



TYPICAL FLOOR PLAN



GROUND FLOOR PLAN



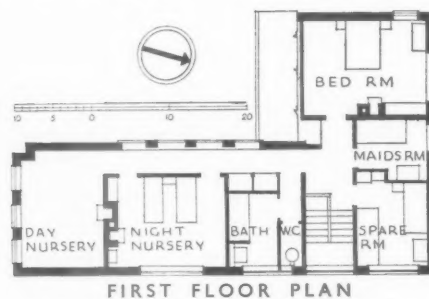
HOUSE AT BEACONSFIELD, BUCKS



GENERAL—It was requested by the clients that the kitchen and nursery should be isolated from the living-room as far as possible, and that the garage should be built into the house with direct access into it, and be large enough for storage of prams, etc.

PLAN—The clients required their bedroom to face the view to the north. The other bedrooms are planned to face east to obtain the morning sun as far as possible. The space in the dining-room can be increased by opening the folding doors. The "cloaks" on ground floor, and bathroom and w.c. on the first floor are planned to be isolated from the rest of the house as far as possible and yet convenient for access.

CONSTRUCTION—External walls are of 11 in. brick cavity construction with timber floors and roofs. The roof is covered with feather-edged boarding and tiled. Partition walls are of fibre board.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

ELEVATIONAL TREATMENT—Facing bricks are grey-brown stocks; tiles are rust-red hand-made sand-faced; standard metal windows are painted ivory. The pitched roof was required by the estate on which the house was built. Eaves, soffit and fascia are painted cream; and the garage doors and back door painted Japanese blue.

COST—£1,722 (direct labour). Price per foot cube, 1s. 2d. Above is a view from the south-west.

For list of general and sub-contractors, see page 226.

D E S I G N E D B Y C O L I N C R I C K M A Y

SOCIETIES AND INSTITUTIONS

INCORPORATION OF ARCHITECTS IN SCOTLAND

At the annual general meeting of Aberdeen Society of Advocates, which is the Aberdeen Chapter of the Royal Incorporation of Architects in Scotland, Mr. A. B. Gardner was reappointed president of the Society for the ensuing year, and as such will be a vice-president of the Royal Incorporation. Mr. R. L. Rollo was appointed representative of the Society on the Council of the Royal Incorporation of Architects in Scotland.

NOTTS, DERBY AND LINCOLNSHIRE
ARCHITECTURAL SOCIETY

Professor H. S. Goodhart-Rendel, F.R.I.B.A., speaking at the annual dinner of the above Society, held at Nottingham, said: "Our responsibility is widening greatly; as the years pass, more and more comes to the Institute to be done. We in London are looking forward to the time when the School of Architecture in Nottingham will be one of the great centres of the land. Our proper pride is to stand for freedom." He also stated that no other professional body was more successful in protecting the public from malpractitioners. There were still people, builders, who believed that architectural assistance was

unnecessary. These people did grievous harm to town and country. They would continue to do so until they were made conscious that they were wrong. There were some architects who needed educating, too.

Mr. W. G. Watkins, President of the Society, said: "May we not hope that the School of Architecture at Nottingham College of Art, which is now only partially recognized by the Royal Institute of British Architects, will become a fully recognized school, with an exemption from the final examination?"

NORFOLK AND NORWICH ASSOCIATION OF
ARCHITECTS

The annual meeting of the Norfolk and Norwich Association of Architects was held recently at Norwich. The president, Mr. F. H. Swindells, presided.

The following were elected as officers for the ensuing session: President, Mr. G. Cotman; ex-president, Mr. F. H. Swindells; vice-president, city, Mr. T. G. Scott; vice-president, county, Mr. H. C. W. Blyth; members of council, Messrs. C. H. Dann, J. G. Davies, and C. Upcher; associate member of council, Mr. R. D. Purcell; hon. editor, Mr. H. J. T. Gowen; hon. secretary, Mr. E. H. Skipper; hon. librarian, Mr. E. W. B. Scott; hon. auditor, Mr. H. C. Boardman.

The prize for students' measured drawings was awarded to Mr. K. G. Pert, and

Mr. E. H. Buckingham gave a criticism of the work submitted and offered a prize of one guinea for the best set of six sketches to be submitted by associate or student members next December.

Mr. E. H. Skipper, hon. secretary, read the council's annual report and presented the statement of accounts and balance sheet, all of which were adopted.

The annual report stated the membership at December 31 was: Honorary members 8, full members 53, retired members 4, associate members 45, making a total of 110, against 102 for last year.

SOUTH WALES INSTITUTE OF ARCHITECTS

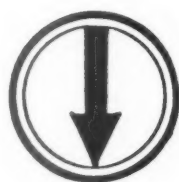
A tea and discussion meeting of the South Wales Institute of Architects (Central Branch), was held on January 25, when a representative gathering met under the chairmanship of Mr. Gordon H. Griffiths, the subject being "Is a traditional training essential for a modern architect?"

The discussion was opened by two of the students of the Welsh School of Architecture, Mr. H. O. Williams, who suggested that the training should be on more modern lines, and Mr. N. J. Auckland, who considered that the traditional method was still essential.

The discussion was continued by both practising architects and students, including Messrs. S. Knight Thomas, Lewis John, T. Alwyn Lloyd, John Bishop, C. F. Bates, C. Walker and W. S. Purchon.

The Architects' Journal Library of Planned Information

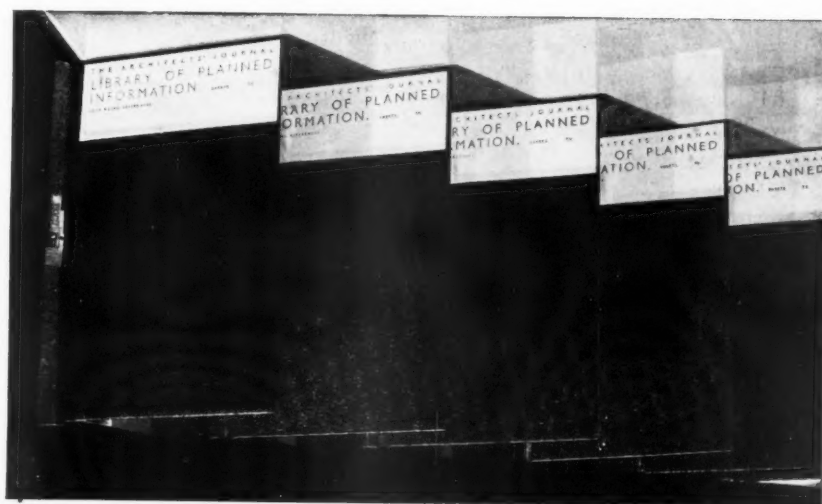
INFORMATION SHEET SUPPLEMENT



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597 Sanitary Castings

598 Heating Equipment



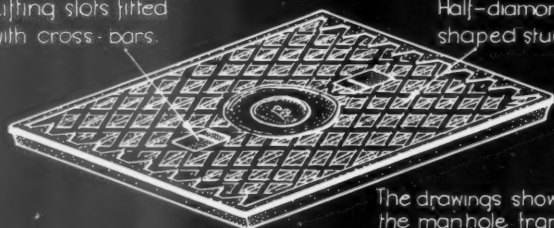
In order that readers may preserve their Information Sheets, specially designed loose-leaf binders are available similar to those here illustrated. The covers are of stiff board bound in "Rexine" with patent binding clip. Price 2s. 6d. each post free.

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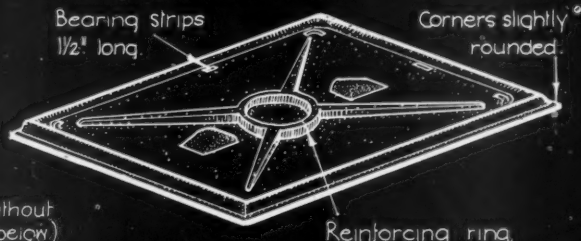
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- 502 : Fixing Blocks
- 503 : Approximate Estimating—XII
- 504 : Aluminium
- 505 : Aluminium
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- 555 : A.B.M. Draining Boards
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THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

A.B.M. CAST IRON INTERCHANGEABLE MANHOLE COVERS AND FRAMES:

Lifting slots fitted
with cross-bars.Half-diamond
shaped studs.The drawings shown are without
the manhole frame. (See below)

ISOMETRIC SKETCH OF TOP OF MANHOLE COVER.

Bearing strips
1 1/2" long.Corners slightly
rounded.

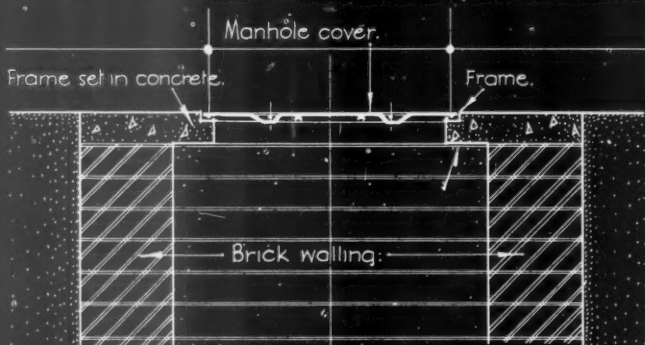
Reinforcing ring.

ISOMETRIC SKETCH OF UNDERSIDE OF COVER.

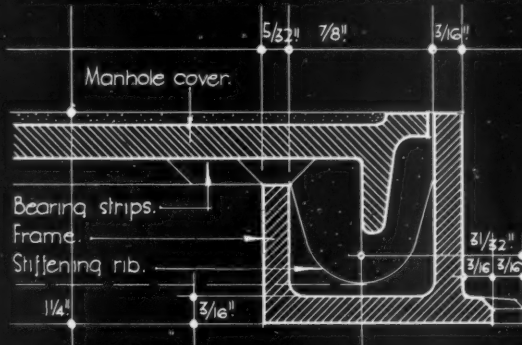
TABLE OF STANDARD WEIGHTS AND SIZES OF MANHOLE COVER WITH FRAME.

SIZES.	12" x 12"	15" x 15"	18" x 18"	24" x 18"	24" x 18"	24" x 18"	24" x 24"
WEIGHTS.	Ocwt. 24 lbs.	Ocwt. 14 lbs.	Ocwt. 14 lbs.	Ocwt. 24 lbs.	Ocwt. 24 lbs.	Ocwt. 24 lbs.	Ocwt. 24 lbs.

SECTION OF MANHOLE SHOWING POSITION FOR COVER.

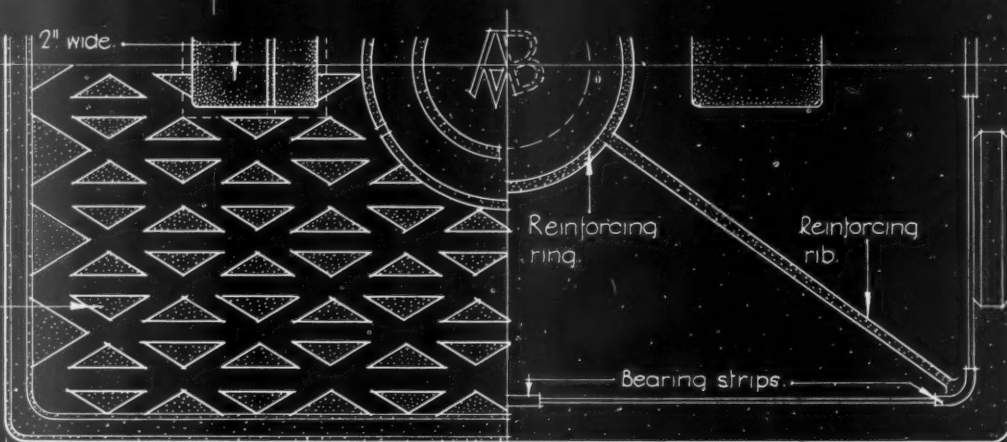


FULL SIZE DETAIL OF FRAME & COVER FITTING.



Lifting slots

2" wide.

Raised half
diamond
shaped
studs.

PART ELEVATION OF TOP OF COVER.

PART ELEVATION OF UNDERSIDE OF COVER.

Lifting slot.

Top

Cross bar.

Bearing strip.



LONGITUDINAL SECTION TAKEN THROUGH CENTRE LINE OF COVER : Scale : 1/4 Full Size.

Information from the Associated Builders' Merchants Limited.

INFORMATION SHEET : CAST IRON MANHOLE COVERS AND FRAMES:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WCI • *Drawn by A. Bayne*

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 597 •

SANITARY CASTINGS

Products : Manhole Covers and Frames

This Sheet deals with the standard interchangeable A.B.M. cast iron manhole covers and frames.

These covers are so designed that they are interchangeable with any existing frame of this make of the same stated size and may be easily and quickly fixed. Considerable care has been taken properly to distribute all the metal in the frame and in this direction a relative saving in weight has been achieved.

Cover :

Before the design was decided upon, manhole covers and frames were sent through to Testing stations in a number of different designs which were tested to destruction so as to get the most valuable placing for the reinforcement. An increase in strength without addition to the total weight was thus obtained.

The cover has its top surface cast with a series of raised half diamond shaped studs which give a firm foothold.

The underside of the cover is strengthened with a reinforcing ring and diagonal ribs ; the outside edges being cast with a $\frac{1}{2}$ -in. lip which, when fitted into the frame makes a waterproof joint.

Each cover, whose thickness varies from

$\frac{1}{8}$ in. to $\frac{1}{4}$ in. according to size and weight, has eight bearing strips approximately $1\frac{1}{2}$ ins. long which form a proper and even seating.

Frame :

The frames are cast in the form of a channel, the outer wall being higher than the inner. The walls are slightly tapered, the outer wall having a small projecting lip at its base which acts as a fixing key for the frame when set in concrete.

Handholes :

The cover is provided with two lifting slots each 3 ins. long by 2 ins. wide, having circular steel cross bars securely fixed to the cover. The slots are so designed as to necessitate the insertion of two pieces of wood to lift the cover and so obviates the danger of interference by children.


Previous Sheets :

Sheets already published dealing with A.B.M. products are Nos. 540, 555, 558, 562, 566, 570, 574, 579 and 591.

Standardized Design :

The Associated Builders' Merchants is a non-trading organization devoted to the standardization of the design of building materials and equipment.

Materials and equipment made by a number of manufacturers are stamped with the following symbol indicating that they conform

to the  standard of design and quality laid down.

Information from : The Associated Builders' Merchants, Ltd.

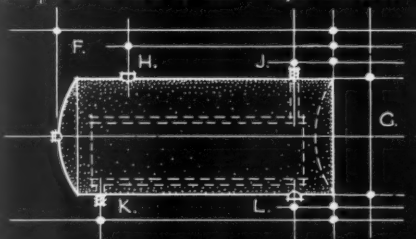
Address : Peters Hill, Upper Thames Street,
E.C.4

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

(A) INDIRECT CYLINDERS OF GALVANIZED STEEL FOR HORIZONTAL OR VERTICAL FIXING: (fixed ends.)

Note: Sizes may be varied to suit requirements.

The nominal nett capacity given below is also the approx. hourly capacity raised through 100° temperature.



Section.

Cylinders are for water to water heating. Steam to water also available.

A loose bolted-on end is fitted to these cylinders when of a capacity of 50 gallons or over.

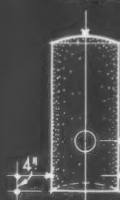
EXTRAS AVAILABLE:

Bolted head, coil or other form of heater, cylinders of greater hourly capacity, extra heating surface.

NOMINAL CAPACITY, GALLONS.		17.	20.	24.	27½.	30.	35.	40.	50.	60.	80.	100.	125.	150.	175.	200.	250.
DIMENSIONS IN INCHES. (See typical side elevation above)	F.	30.	36.	30.	35.	39.	43.	48.	51.	58.	54.	69.	64.	66.	66.	77.	77.
	G.	15.	15.	18.	18.	18.	18.	18.	20.	20.	24.	24.	27.	30.	32.	32.	36.
	H.	24.	27.	22.	27.	30.	32.	37.	39.	45.	42.	54.	50.	50.	52.	60.	60.
	J.	5½.	5½.	5½.	5½.	5½.	6.	6.	5.	5.	5.	5.	6.	6.	6.	6.	6.
	K.	22.	22.	25.	29.	33.	36.	40.	39.	45.	44.	57.	55.	54.	56.	54.	68.
	L.	5½.	5½.	5½.	5½.	5½.	6.	6.	5.	5.	5.	5.	6.	6.	6.	6.	6.
SIZE OF SCREWED CONNECTIONS. INS.		1.	1.	1.	1.	1.	1¼.	1¼.	1½.	1½.	2.	2.	2½.	2½.	2½.	3.	3.

(B) ALL-WELDED GALVANIZED STEEL DIRECT HOT WATER CYLINDERS (circulators) WITHOUT HANDHOLE:

Extras available: set-pinned oval or round handholes, bridged lids, bolted ends, extra flanges or bosses, thicker bottoms.



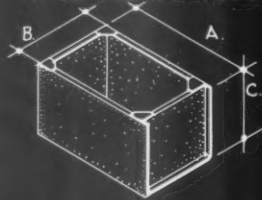
The 4 connections are standard, but more may be fitted. The boiler flow should enter cylinder near top if possible.

APPROX. CAPACITY Gallons.	20.	23.	25.	28.	31.	34.	37.	40.	42.	45.	48.	56.	60.	65.	75.	85.	100.
INSIDE DIAMETER. Inches.	15.	18.	15.	18.	15.	18.	20.	18.	18.	18.	18.	20.	20.	20.	22.	24.	24.
OVERALL HEIGHT. Inches.	30.	24.	36.	27.	39.	30.	27.	33.	36.	39.	42.	45.	48.	42.	48.	51.	48.

Standard gauges: 16, tested 5 lbs. pressure = 10' head. 14G, tested 15 lbs. = 30' head. 12G, tested 20 lbs. = 40' head. 1/8", 25 lbs. = 50' head.

(C) ALL-WELDED GALVANIZED STEEL OPEN TOP COLD WATER SUPPLY CISTERNS:

All cisterns are made with corner plates and either bent over or internal angle iron top edges.



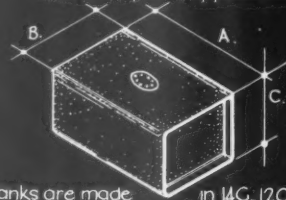
Cisterns are made in various thicknesses, 20 gauge to 3/16".

NOM. CAPACITY Gallons	20.		25		30.		40		50.		60.		80		100.		125	150	200.	
LENGTH - A - Ins.	24.	24.	24.	24.	24.	24.	27.	22.	24.	29.	30.	36.	36.	36.	48.	38.	38.	43.	48.	46.
DEPTH - B - Ins.	12.	16.	17.	12.	18.	15.	20.	22.	24.	22.	23.	24.	26.	30.	24.	27.	30.	34.	36.	35.
HEIGHT - C - Ins.	20.	15.	17.	24.	19.	24.	20.	22.	24.	22.	24.	20.	24.	26.	24.	27.	31.	29.	32.	35.

All size cisterns may be provided with partitions, loose covers, or screwed flanges or bosses in place of plain holes. Capacities up to 1000 gallons are also available.

(D) ALL-WELDED GALVANIZED STEEL CLOSED HOT WATER TANKS: (with set-pinned handhole covers & I.R. rings)

Tanks may be supplied with larger handholes, screwed flanges or bosses in place of plain holes, bridged lids, etc.



Tanks are made in 14G, 12G, 1/8", 3/16" or 1/4" material according to size.

NOM. CAPACITY Gallons.	20.		25.		30.		40.		50.		60.		80.		100.	
LENGTH - A - Ins.	24.	24.	24.	24.	24.	24.	27.	22.	29.	24.	30.	26.	36.	28.	38.	30.
DEPTH - B - Ins.	16.	24.	17.	24.	18.	15.	20.	22.	22.	24.	23.	26.	26.	28.	27.	30.
HEIGHT - C - Ins.	15.	10.	17.	12.	19.	24.	20.	22.	22.	24.	24.	26.	24.	28.	27.	30.

Information from Robert Jenkins & Co. Ltd.

INFORMATION SHEET: ELECTRICALLY WELDED GALVANIZED STEEL CYLINDERS, CISTERNS & TANKS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Oscar A. Bayne

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 598 •

HEATING EQUIPMENT

Product : Electrically Welded Cylinders,
Cisterns and Tanks

General :

This Sheet sets out the more general sizes and capacities of all-welded galvanized steel tanks, cylinders and cisterns for use with normal domestic hot-water supply. It should be noted that all Water Boards, Municipal Authorities and Government Departments accept the use of welded tanks and cylinders for this work.

Welding :

The chief advantages claimed for welded tanks as against riveting are as follows :—

(a) As there are no rivet holes the plate is not weakened at the joints, and strength efficiencies of 100 per cent. and more can be developed.

(b) A welded tank is positively and permanently watertight in the black, and does not depend upon the galvanizing process to seal up any leakages. In consequence, welded tanks can be subjected to considerably more rough treatment in transit and handling, without risk of leaks developing.

(c) Due to the fact that the plates of riveted tanks are not in absolute contact at the joint, a certain amount of acid percolates between the two surfaces during the pickling process preceding the galvanizing, and after completion this may result in ultimate eating through of the plates at these points. Welded joints, on the other hand, are tight before galvanizing takes place, so that durability in this respect is ensured.

Guarantee :

The Company places a twelve months' guarantee against defective seams occurring from their welded joint process, replacement of any article during that period being free of charge.

British Standard Specifications :

Note : The details given below of the British Standard Specification and the Joint Committee on Standard Water Regulations cover all the requirements of most local Authorities, but in some instances it may be necessary to ascertain whether any special conditions are in force. In rare cases, for instance, galvanized cold water tanks are not permitted for domestic supply.

B.S.S. for Galvanized Tanks and Cylinders

Cisterns	Grade A	Grade B
Up to 40 galls. ...	16 gauge	18 gauge
50/100 galls. ...	14 "	16 "
125/400 galls. ...	12 "	14 "
500/700 galls. ...	$\frac{1}{8}$ " plate	12 "
800/1,000 galls. ...	$\frac{3}{16}$ " "	$\frac{1}{8}$ " plate

Hot Water Tanks	Grade A. Tested 20 lbs. hyd. for 30 ft. max. working head	Grade B. Tested 10 lbs. hyd. for 15 ft. max. working head	Grade C. Tested 7 $\frac{1}{2}$ lbs. hyd. for 10 ft. max. working head
Up to 50 galls.	$\frac{3}{16}$ " plate	$\frac{1}{8}$ " plate	12 gauge
60/100 galls.	$\frac{1}{4}$ " plate	$\frac{3}{16}$ " plate	$\frac{1}{8}$ " plate

Hot Water Cylinders. Vertical. Top dished outwards and bottom dished inwards	Grade A. Tested 70 lbs. hyd. for 100 ft. max. working head	Grade B. Tested 40 lbs. hyd. for 60 ft. max. working head	Grade C. Tested 20 lbs. hyd. for 30 ft. max. working head
Up to 48 galls.	$\frac{1}{8}$ " plate body and top, $\frac{3}{16}$ " plate bot- tom.	12 gauge body and top, $\frac{1}{8}$ " plate bot- tom.	14 gauge body and top, 12 gauge bot- tom.
56/100 galls.	$\frac{3}{16}$ " plate body and top, $\frac{1}{4}$ " plate bot- tom.	$\frac{1}{8}$ " plate body and top, $\frac{3}{16}$ " plate bot- tom.	12 gauge body and top, $\frac{1}{8}$ " plate bot- tom.

Horizontal : Both ends dished outwards made same thickness throughout.

Hot-water tanks and cylinders of over 30 gallons capacity must have a handhole fitted.

Joint Committee on Standard Water Regulations

Cisterns not exceeding 40 gallons, 16 gauge.

Cisterns 40/80 gallons (inclusive), 14 gauge.

Cisterns 80/100 gallons, 10 gauge.

Hot-water tanks and cylinders not exceeding 40 gallons, 14 gauge.

Hot-water tanks and cylinders 40/80 gallons, 12 gauge.

Hot-water tanks and cylinders 80/100 gallons, 10 gauge.

Hot-water tanks and cylinders 100/200 gallons, $\frac{3}{16}$ " in. plate.

Prices :

Prices of the various tanks and cylinders shown on this Sheet vary according to size, gauge, equipment, etc., and are identical with the great majority of manufacturers of this type of product.

Issued by : Robert Jenkins & Co., Ltd.

Registered Office and Works : Ivanhoe Works,
Rotherham

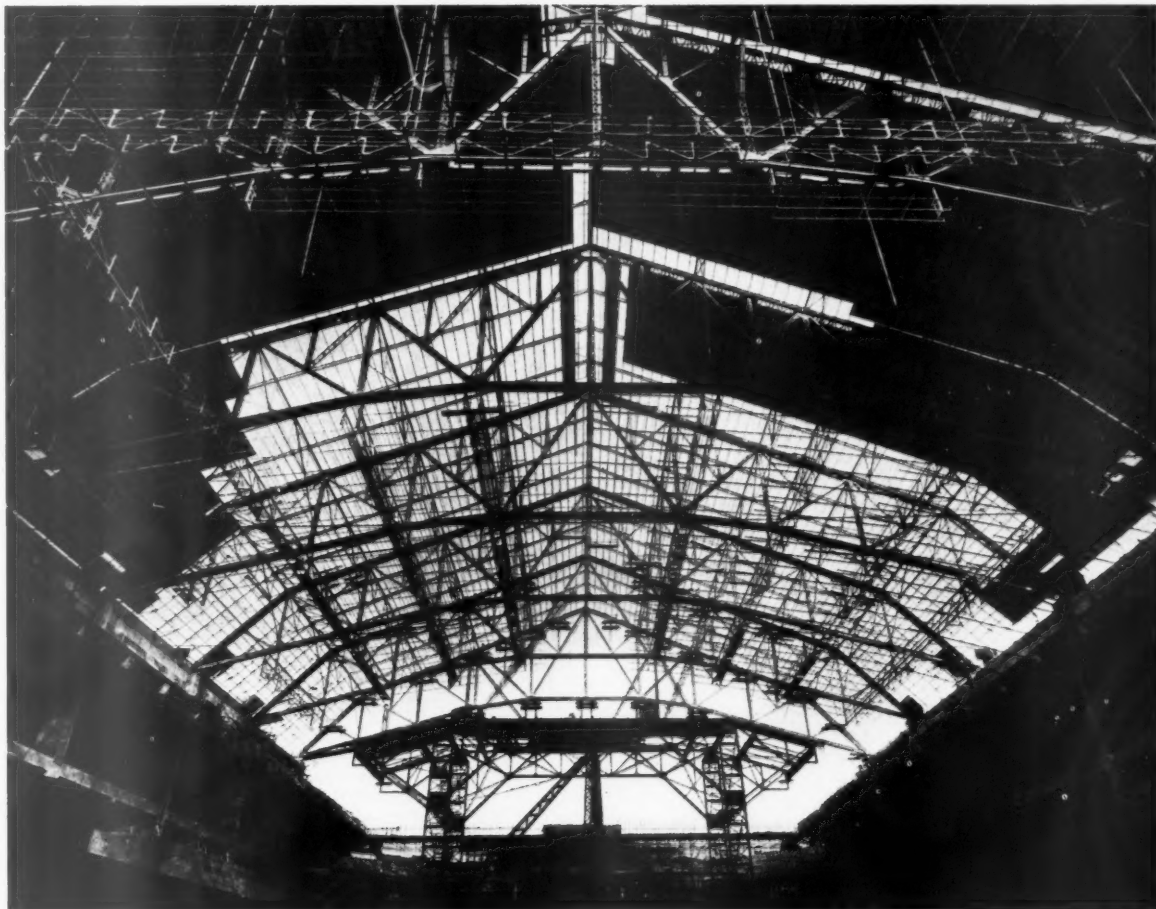
Telephone : Rotherham 584 (3 lines)

London Office : 149 Abbey House, Victoria
Street, W.1

Telephone : Abbey 6327

WORKING DETAILS : 625

ROOF TRUSS • EARLS COURT EXHIBITION • C. HOWARD CRANE (M. I. ADDAMS, CONSULTANT)



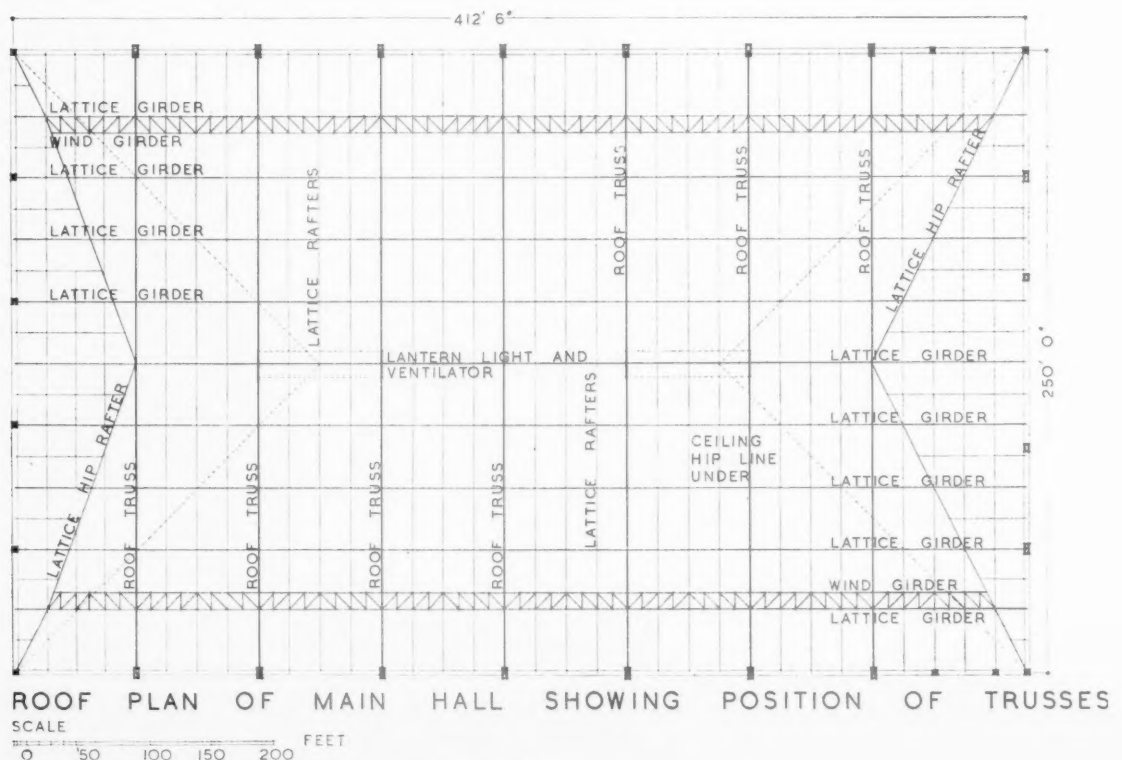
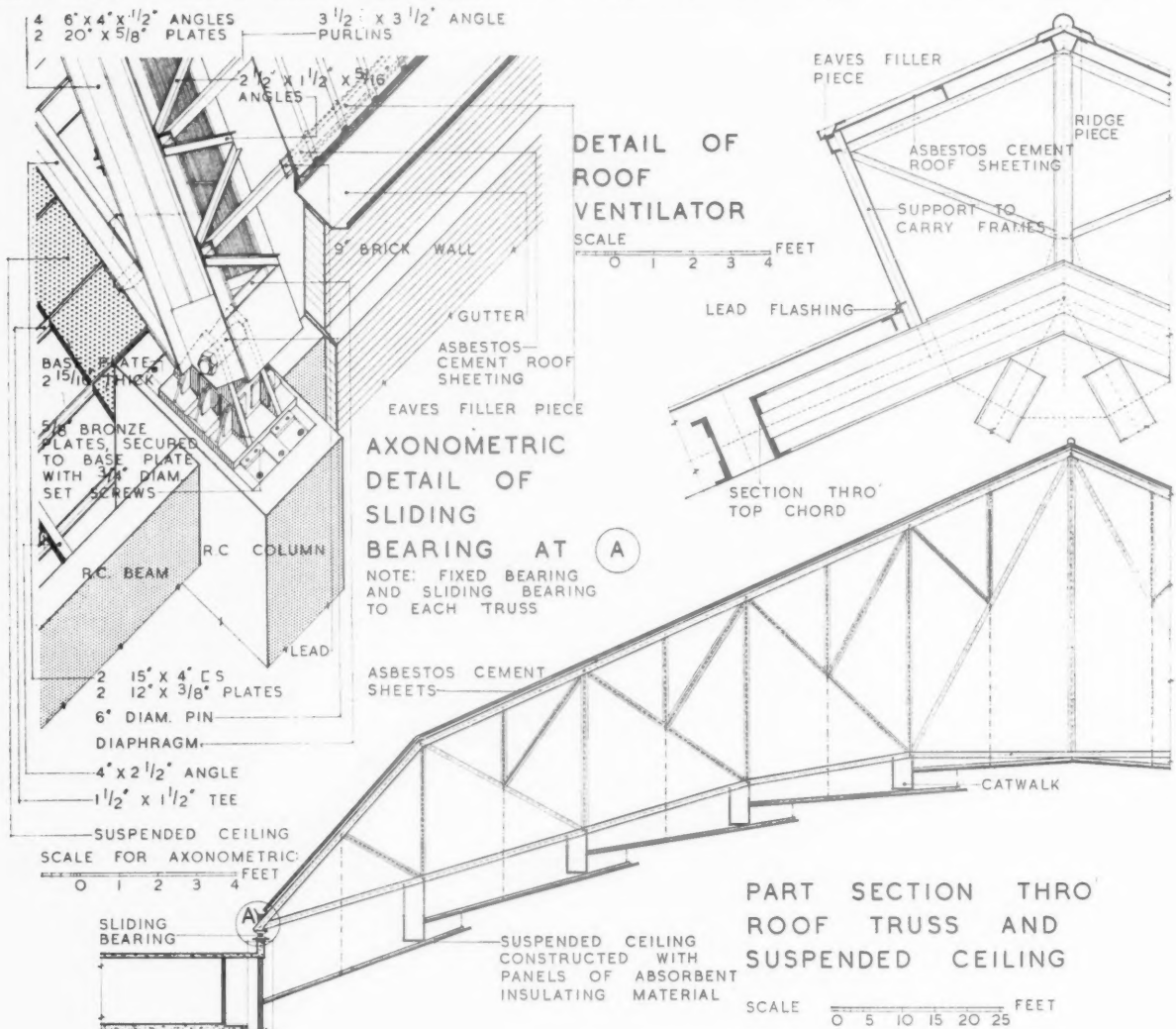
The steel roof trusses illustrated span the main hall. They are fixed at one end, but have a sliding bearing at the other end, as shown in the detail drawing overleaf.

The outside of the roof is covered with asbestos-cement sheeting ; beneath it is suspended a ceiling constructed of acoustic slabs.

The lighting is indirect and originates behind triangular reflecting boxes placed in the angles of the ceiling beams. The light will be thrown through the layers of the suspended ceiling, and will be capable of a variety of changes in colour.

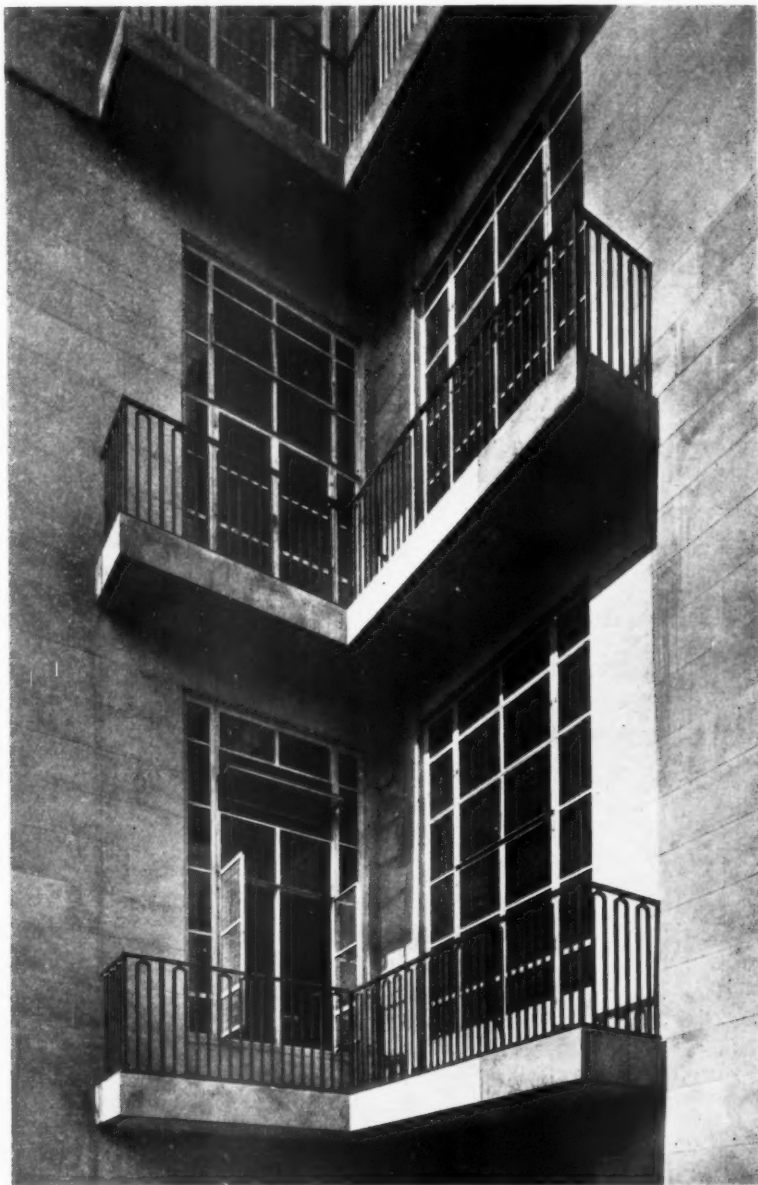
WORKING DETAILS : 626

ROOF TRUSS • EARLS COURT EXHIBITION • C. HOWARD CRANE (M. I. ADDAMS, CONSULTANT)



WORKING DETAILS : 627

BALCONY AND RAINWATER HEAD • SENATE HOUSE, UNIVERSITY OF LONDON • CHARLES HOLDEN

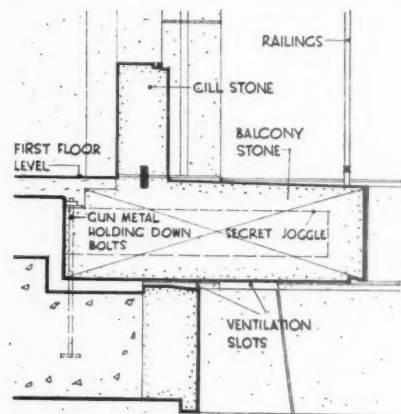


The corner balconies illustrated occur on each floor in both central courts of the Senate House. They are constructed of Portland stone, and the detail overleaf shows how they are tied into the main structure with gun-metal holding down bolts. Ventilation slots occur underneath the balconies. The rainwater heads and pipes throughout the building are constructed in cast lead. There are several types of rainwater heads, one of which is illustrated, with details shown overleaf.



WORKING DETAILS : 628

BALCONY AND RAINWATER HEAD • SENATE HOUSE, UNIVERSITY OF LONDON • CHARLES HOLDEN



AXONOMETRIC OF STONEMASONRY TO FIRST FLOOR BALCONY

SECTION THROUGH BALCONY

SLOTS FOR GUNMETAL HOLDING DOWN BOLTS

WATER BAR

3 BATTS PER INCH ON FACE

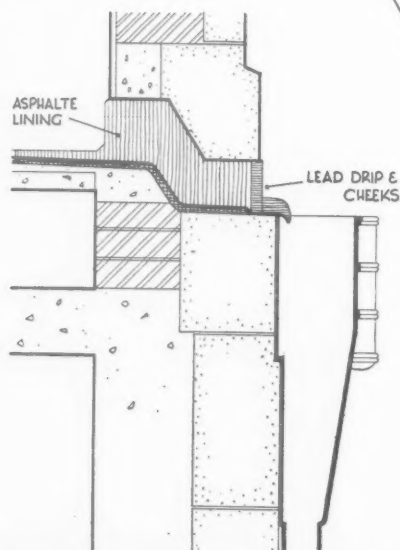
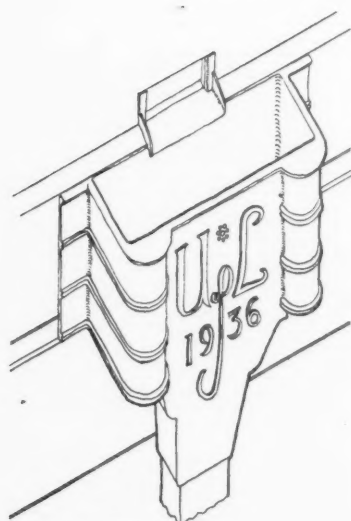
CORNER PIER

FIRST FLOOR LEVEL

POSITION OF HOLDING DOWN BOLTS

SECRET JOGGLE

METAL CILL



1 FEET

SCALE OF AXONOMETRIC

FEET

Axonometric and details of the corner balcony and rainwater head illustrated overleaf.

SCHOOLS

Senior Schools

PLAN UNITS : ASSEMBLY HALLS

THE Assembly Hall is a vital element in the Senior School plan. Its purpose is to train children to a sense of corporate life, social responsibilities and pleasures. The Hadow Report emphasizes the importance of musical training and dramatic art, and for these a large hall is essential. Except in small 1-stream schools it should not be used for physical training, for which a separate gymnasium should be provided.

It has already been said that the use of the Senior School as educational nucleus of the whole community is to be encouraged, and with this idea in mind special care should be taken in planning the hall and its approaches. It need not necessarily be placed centrally in relation to other teaching elements. The once popular symmetrical plan, with the hall in the middle of a resonant quadrangle, can be considered obsolete—regardless of site or circumstances. There are many advantages in placing it at one end of the plan, so that it may easily be made independent of the main building and arranged with separate access and parking space. This arrangement has the added advantage of isolation when the hall is being used for music or noisy group activities.

Size.—The minimum floor area should be 1,800 feet for 2- and 3-stream schools. For 1-stream schools it may be as small as 1,500 feet. When possible, there should be comfortable seating capacity for the whole school. In addition, seating capacity for a reasonable number of parents on speech days and on other occasions is an asset. Additional seating space may be provided in a gallery, provided it has direct vertical connection with the entrance hall.

To avoid excessive reverberation, height should not normally exceed 20 feet.

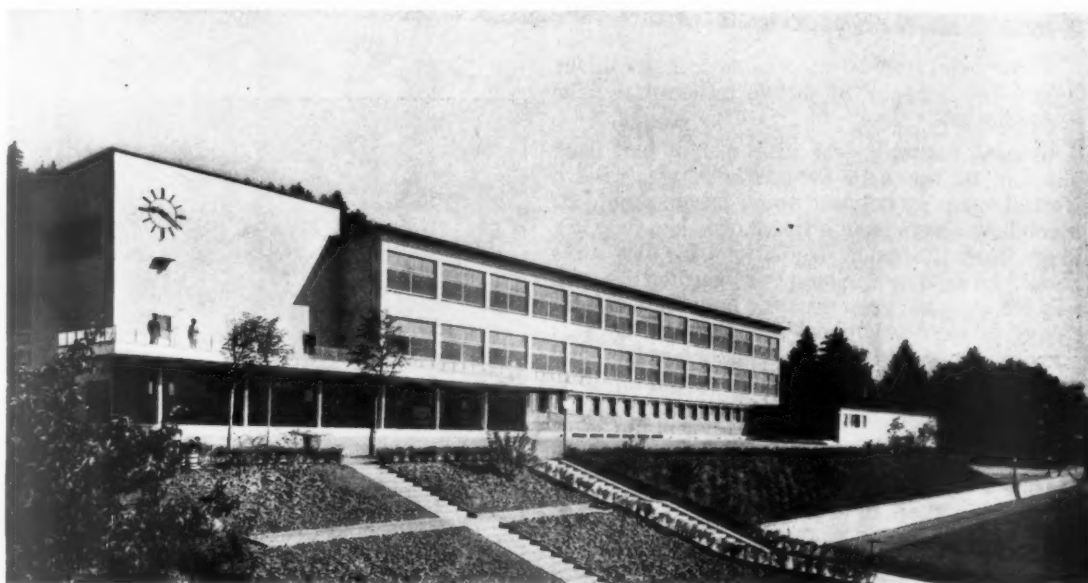
Non-co-educational practice has made common the *double* assembly hall, with folding doors in the middle and sometimes a stage at each end. This is usually undesirable in practice, and it will not be found that it is demanded by many educational authorities today. A hall which, when thrown open, is excessively long for its width is the almost inevitable result, and it is practically impossible to get effective noise insulation in the folding partition.

Storage.—The underneath of the stage can be made useful for storage, especially if the floor is sunk sufficiently low to give headroom. If chairs are of the nesting or folding type, little storage space will be required for them. There should be a small property store, about 80 square feet, adjacent to the stage, and additional storage for lantern, movie projector and other small equipment.

Natural Lighting.—Low windows one side, possibly down to the ground, avoid a sense of confinement. High windows on the other side give cross ventilation. Low windows should be provided with sun blinds if facing west; all windows should have blinds to darken. No windows should face the stage, and stage lighting should be by windows high up at the sides or by roof lighting with vents.

Artificial Lighting.—Evenly dispersed, made adjustable from 3-10 foot candles 3 feet above the floor. Partial lighting should be provided for. Control from entrance hall and back stage is advisable. Dust-gathering pendants should be

Swiss school at Oberwinterthur, designed by H. Hohloch. The garden layout is formal but the general treatment has a very attractive gaiety.



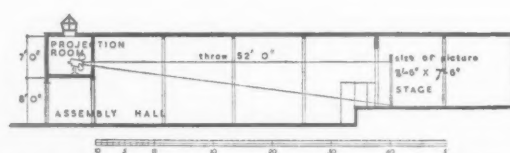
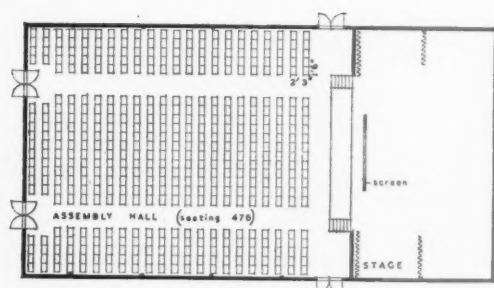


Diagram plan and section of a hall for 3-stream Senior School (480 children) showing minimum desirable seat spacing. The projection room can with advantage be outside the hall. The height of hall shown is also minimum—the height from stage floor to flat ceiling ought to be 15 feet. Gross area of hall, 3,280 ft. super. ; area without stage and apron, 2,200.

avoided unless the ceiling is very high. Built-in diffusing reflector types are eminently suitable.

Ventilation.—Natural cross ventilation and two efficient adjustable roof extract ventilators are advisable.

Heating.—If usual hot-water radiators are used they should be built into recesses. Low temperature floor heating is good when additional installation cost can be afforded. Wall and ceiling panel heating is more suited to smaller rooms, but can be useful as an auxiliary source of heat in the assembly hall.

Floor.—Hardwood blocks or strips are usually found most suitable. They may be laid direct on concrete but are better on joists for resilience. Cork tiles, though more expensive, are excellent for wear and quietness, and cork-wood composition has also been found effective though not quite so easy to clean as polished cork.

Wall and ceiling finishes.—Should be kept reasonably light in colour. Hard reflecting surfaces are best for proscenium and back wall of stage. Hygienic absorbent fibre boards or acoustic tiles are good for wall opposite stage, also for front of gallery and side walls if large areas of glass are used. Walls need not be dark within finger range, but should be washable.

Furniture.—Nesting chairs, or folding chairs in groups of four or six. Normally it will be necessary to have chairs battened together in some form. Two sizes are necessary, 1 ft. 4 ins. and 1 ft. 5 ins. high. Spacing of seats and gangways is shown diagrammatically.

Special Uses

The special uses of the assembly hall will be briefly discussed side by side with their particular requirements.

General Assembly.—Access is usually best from the end of the hall, facing the stage, with a central gangway between seats. There should be secondary access from at least one side, near the stage, and the usual regulations for fire exits should be followed. Some local authorities will ask for separate entrances for boys and girls in non-co-educational mixed schools, but as this provision usually involves island planning (hall surrounded by communicating corridors) it is best to avoid entrances on opposite sides of the hall when possible.

Plan sizes should be based on an economical seating arrangement. The acoustical advantage of planning the hall as a fan shape is not great for areas under 2,000 feet, though there is a psychological advantage in the effect of focusing

on the stage, and when a separate gymnasium is provided the special functions of the hall are emphasized. With this plan-form there is difficulty in the tidy and economical arrangement of movable seating.

Acoustic notes are included in the paragraph dealing with music.

Physical training.—When it is essential for the hall to serve for physical training as well as for other purposes, full requirements for gymnasiums will have to be followed as to spacing of bays, height, floor finish, etc. It is particularly important for hanging apparatus to be designed so that it can be hauled out of reach, and for ample

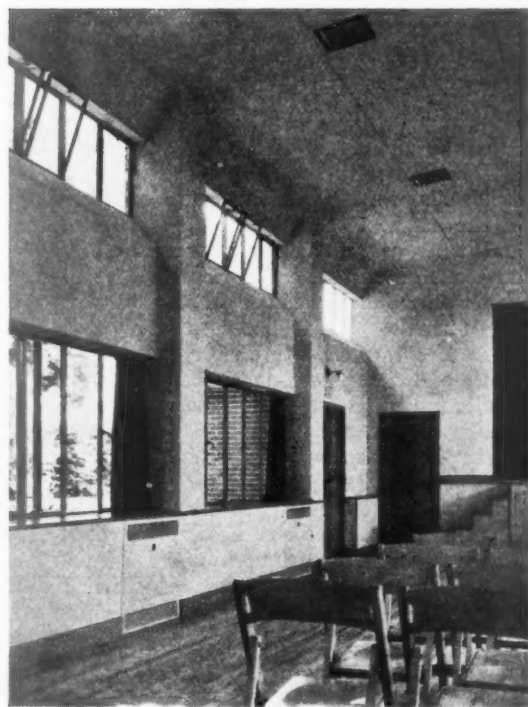
Nesting metal chairs and coupled wooden chairs folding flat in four's. Both types have advantages; the metal being best as seats and the wooden being more convenient where rapid clearing is necessary.



SCHOOLS



Part of the schools centre at Zlin, Czechoslovakia. This huge concentration of Senior, Secondary and Technical Schools makes for economy and high standards of equipment. For children under 16, however, it is a most questionable method.



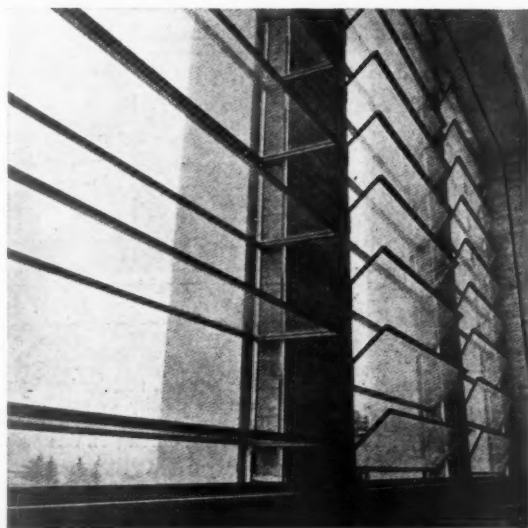
storage to be provided for all movable apparatus. Full requirements for gymnasiums will be given later.

Drama.—Equipment for play production is not a luxury but an important part of the educational provision.

There should be a stage the full width of the hall and at least 20 feet deep from proscenium to back wall, giving an acting area at least 20 by 17 feet with good side spaces for wings. The Board of Education does not demand a proscenium wall, but to have one is an advantage. An apron stage projecting 4 to 5 feet forward of the proscenium wall should be provided. It can be in the form of collapsible sections if space is short. There might also be additional movable platforms for forming a stepped stage. These and surplus chairs can be stored in the space under the stage. The stage should be raised 3 ft. 3 ins. to 3 ft. 6 ins., and there should be at least 15 feet between stage floor and ceiling, which should be flat.

Provision for scenery need not be elaborate, but battens or rods for fixing curtains which can form backdrop and wings provide the necessary elements for play production. A ceiling batten 3 feet from the back wall will simplify the fixing of wood and canvas backdrops which may sometimes be made through the enterprise of the boys' workshop. Normally, however, acting without elaborate naturalistic scenery, properties and effects will be encouraged.

Lighting arrangements will depend largely on funds, but plugs should be provided at intervals near the floor of the stage and high up at the



Above: An efficient assembly hall. Projecting stanchions are absent, heating units are recessed and clerestory hoppers prevent down draughts. Bulkhead lighting does not distract attention from stage. The hall would be unsuitable for use as a gymnasium. Designed by R. Gardner-Medwin.
Left: French type of mechanically-operated window for school halls.

sides of the proscenium opening. General stage lighting should be from the auditorium ceiling, in recesses if possible, rather than from footlights which tend to obstruct the view of the stage when seats are not raked. Switchboard control should be to one side of the proscenium opening or in a special switchboard closet within view of the stage.

Two small rooms giving on to the stage, normally used for music practice or some other purpose, will serve as *changing rooms*. Each should be fitted with a lavatory basin. Alternatively, a stage door can be arranged to give reasonably good access to changing rooms or coat rooms, which can be used for the purpose. Separate changing rooms cannot be considered essential.

Windows in the back wall of the stage should be avoided. High windows at the sides are possible, but top lighting is most suitable. Curtains or blinds are necessary for shutting out daylight from stage and auditorium.

An independent *stage exit* must be provided.

Music.—Three or more classes are generally grouped together for singing, and school concerts are given now and then. In addition to making sure of adequate noise separation from the rest of the school, the correct acoustical quality within the hall should be carefully considered. Efficient transmission from stage to back of auditorium is not enough: reflecting and absorbing surfaces must be balanced to give good tonal quality. The usual fault in a school auditorium is excessive reverberation, but in the attempt to correct this it must be remembered that it is easy to go to the other extreme and produce a "dead" effect, unsatisfactory for musical quality and intelligibility of speech. The general principle is to have hard reflecting surfaces back stage and on the front face of the proscenium wall, absorbent surfaces on the back wall and on part of the side walls. In a hall not more than 18 feet high, if insulation board or acoustic plaster is used for the ceiling and on part of the back wall, there should be no need for absorbents on side walls. An adjustable absorbent in the form of curtains on the back wall is excellent when the hall is to be used

sometimes for very small, sometimes for very large numbers of children.

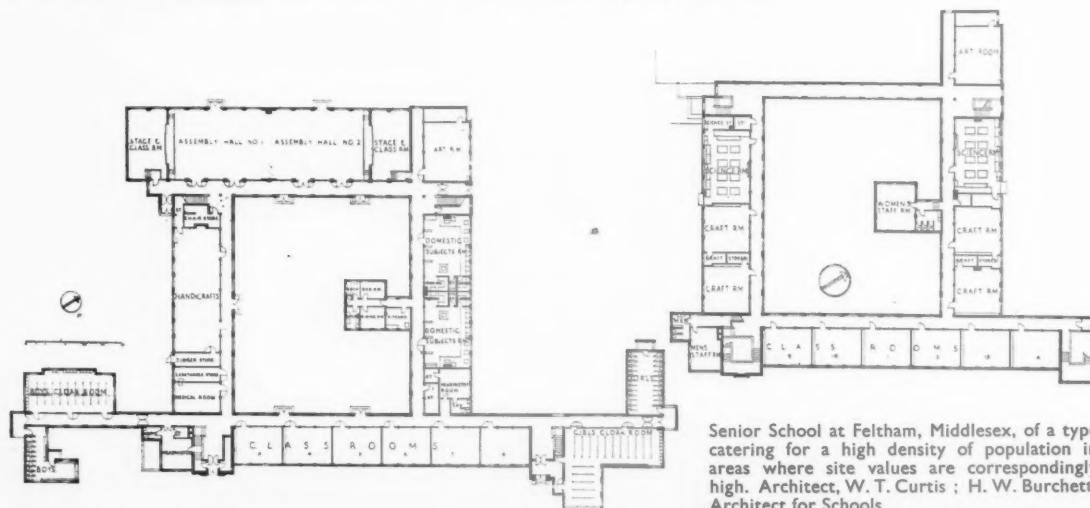
Acoustic considerations, in the hall and throughout the school, should not be treated casually. They are of immense importance, and it is recommended that an acoustic expert should be consulted.

Cinema.—Educational films, silent and sound, are being used more and more in the schools. Film is found to be a good medium for realistic training in geography and nature study, and for general sense discrimination. If only 16 mm. films are shown, no special provision, apart from a good screen and a power plug, need be made. But if professional films are shown, an *operator's box* about 7 feet square, preferably connected with a *re-winding room* of about the same size, will be necessary. There must be an independent fire exit from the operator's box.

Radio and Television.—Radio school programmes are already organised and it will not be long before television plays an important part in education. The assembly hall, and possibly other rooms in the school, such as the geography room, should therefore be wired for this purpose.

Efficient darkening of windows is particularly important when cinema and television are contemplated.

Exhibitions.—Speech days and exhibitions of children's work are among the secondary uses of the assembly hall. It is on these occasions, and when public concerts are held, that the adjacent crush hall or "promenade," suggested under *Circulation*, is such an asset. It can take the form of a widened corridor or gallery, 12-18 feet wide. Folding or movable screens along one side can convert it into an excellent exhibition room, or it may be used for refreshments on parents' days and for promenading during intervals. It can also have the advantage as already mentioned, of freeing circulation at a concentration point. Continuous doors along the dividing wall of the hall, possibly of wired glass, will increase the spaciousness of the whole unit. The opening up of one wall of either hall or "promenade" onto an open terrace might be considered, particularly where efficient floor heating is provided.



Senior School at Feltham, Middlesex, of a type catering for a high density of population in areas where site values are correspondingly high. Architect, W. T. Curtis; H. W. Burchett, Architect for Schools.

L I T E R A T U R E

HOLLAND HOUSE

[By PROFESSOR A. E. RICHARDSON]

The Home of the Hollands, 1605-1820. By the Rt. Hon. The Earl of Ilchester. John Murray. Price 18s.

TO do justice to a serious book requires time which most editors are not prepared to allow. At the risk of displeasure I have read and re-read the three hundred and seventy-one pages which make the contents, and have enjoyed the pen portraits and illustrations at my leisure. Hence the excuse for a review which although tardy is at least a sincere appreciation of a fine piece of research.

In these days when those responsible for the well-being of London exhibit symptoms of downright madness, it is pleasant to think that at least one noble house resists the destruction of beauty. Holland House with its country scenery stands in the midst of an inner suburb of London, now surrounded, as Macaulay prophesied, by new streets, squares, and railway stations. Nothing but a deep sense of duty has inspired its owners to preserve its glories. Nothing but utter stupidity would sanction interference with its historical nonchalance. In the national interest, threats of increased taxation, and of that more virulent evil, municipal town planning, should be removed for ever from the famous mansion and the groves once sacred to poets.

Lord Ilchester describes the architectural features of the House in a concise appendix. There are references to the book of "Thorpe's Drawings" at the Soane Museum, and mention of the "perfection" of the earlier building by this architect. The name of the designer of the earliest building, however, is not known with certainty. But John Thorpe's hand in the design of the house as it stands is proved by a ground plan with this legend:—

"Sr Walter Coap at Kensington
perfected me. J.T."

The additions made between 1638-40 are set forth in the Temple Newsam accounts, including the names of the London craftsmen. Next must be considered the topographical views of the house in 1795 as well as drawings of the principal apartments by J. Nash and C. J. Richardson. Thus the whole development from the time when the house was first constructed down to the end of the Regency is dealt with. Much light is thrown upon the association of John Thorpe and others with

the building. The two gate piers attributed by Horace Walpole to Inigo Jones are proved to be the work of Nicholas Stone, and a visit from the ubiquitous James Wyatt in 1802 to report upon the condition of the walls is noted. From the professional point of view, therefore, the description of the house is adequate and will prove to be of great service to architectural students.

But the scope of the book is far wider and calls for a full understanding of the social life of the centuries with which it deals. Thus, while the book is one of great character and authority the more the reader brings to its pages the more fascinating the intimate details will be found. This is by no means a derogatory statement, but is intended as a compliment to the distinguished author. Chapter one deals with the fortunes of the Cope and Rich families, the rise of Henry Earl of Holland, and his execution at the hands of the Parliament. There is the account of the revival of stage plays during the Commonwealth and of the residence there for short periods of William Penn and Sir John Chardin who explored Persia in the late seventeenth century. After 1716, Joseph Addison was living at Holland House as the spouse of the Countess Dowager of Warwick, and is said to have acquired the habit of frequenting the White Horse Inn at the bottom of Holland Lane. The Foxes came into possession of the house after 1748, and Henry Fox, first Lord Holland, reigned there till 1774. The narrative continues with accounts of the Richmond family, of the impression made on the heart of the Prince of Wales (afterwards King George III) by the charms of Lady Sarah Lennox, of the plays at Holland House which amused Horace Walpole, of letters from Voltaire, and of the lives of the sons of Henry Fox at Eton and abroad. It is at this juncture that the book becomes intrinsically fascinating. We are introduced to that alluring world of gossip and the flicker of wax candles described by Horace Walpole. The "New Generations" are to frequent Brooks's Club and to own racing stables at Newmarket. There are accounts of the Earl of Upper Ossory and of the nymphs of Amphilhill, and of Sir Joshua Reynolds. The figurants now include Jeremy Bentham, Camden, Mirabeau, Gavin Hamilton and Romilly. We read of the meticulous Sir William Chambers and recall his additions to the mansion at Amphilhill Park.

The foreign interlude treats of visits of Henry Richard, third Lord Holland, and his meeting with Lady Webster,

his future wife. There are account of meetings with Pitt, Gibbon and Burke. "I think Pitt is improved in his manners since I left his society," wrote Thomas Pelham to Lady Webster, "but he still retains the same unpleasant continued laugh at almost anything he says in the way of observation." There is an account of the disposal of Gibbon's library and of its purchase by William Beckford.

The human interest is increased by the portrait of Lady Webster after Louis Gauffier, an artist of great merit comparatively unknown, and of a pen portrait of the celebrated Lady Hamilton. The dinner parties at Holland House brought many visitors, such as the Prince of Wales, Grey, Tierney, Jockey of Norfolk, the Duke of Leinster and Lord John Russell. Here the wits of fastidious tastes foregathered: Richard Brinsley Sheridan and Monk Lewis, to charm and to distract a multitude of friends.

The next chapter deals with meetings at Paris with Napoleon and Talleyrand; we step into the glamour of La Malmaison and the Tuileries and obtain a vivid impression of the Court of the First Empire. And so the account continues with a list of Whig celebrities, recollections and studies of books and politics. References to the Slave Trade and to Catholic Emancipation recall the masterly writings of Sydney Smith and the labours of Wilberforce and of Cartwright. We read of Byron, of Madam De Stael, of the Fox Club and the furtherance of Whig doctrines.

It is now the heyday of the Regency, with the Emperor Alexander hobnobbing with other royalties at Carlton House. Within a short space of a year Napoleon is to return from Elba, Waterloo is to be fought and the Emperor to be sent to St. Helena. While Nash is busy with his stuccoed scenery in London.

Lord Ilchester rounds off the account with the End of a Long Reign, and, as Lord Holland wrote to his son in February, 1820, "A King's death, a Queen's character, a French Prince's murder, and an assassination plot to sweep away a whole cabinet at once, seem such grand subjects, that it appears preposterous to say one has nothing to write about."

This is a book written to record the fortunes of a great house. It belongs to the order of authoritative book-making. It is not a compilation such as an architect would write, giving dimensions of apartments, of the number of windows. Neither does it describe the character of the garden walks and ornaments. On the contrary it opens up a view of a world long vanished and treats of the manners of a coterie to whom the nineteenth century owed much.

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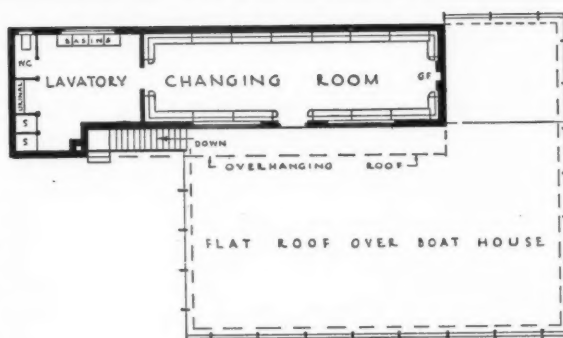


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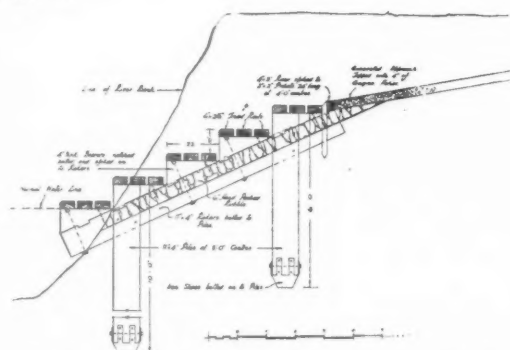
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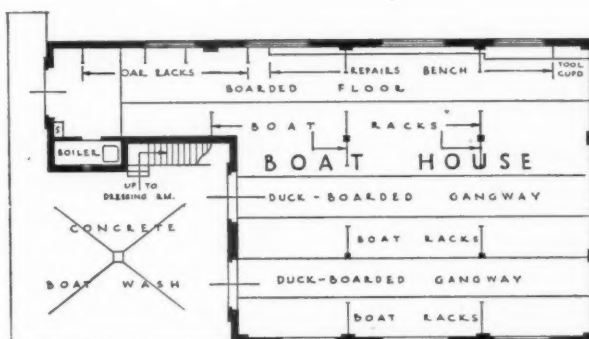
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UPPER FLOOR PLAN



SECTION THROUGH LANDING STAGE



GROUND FLOOR PLAN

IN THAT CONTINGENCY

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

QIN the two last issues of this series of Notes the problem of dampness in buildings has been discussed. In the notes issued in December, general damp penetration through walls was under consideration, and it was stated that the remedies usually adopted to prevent such penetration are:—

- (1) Repointing.
- (2) Treatment by waterproofers or paints.
- (3) Rendering.
- (4) The provision of a "watershed" such as tile hanging.
- (5) Internal treatments.

Nos. (1) and (2) have already been discussed, and the remaining points are dealt with below:—

(3) Rendering

The term "rendering" is taken as covering all the forms of treatment involving the application of a coat or coats of mortar to the external face of a wall. It includes not only smooth trowelled finishes, but also "roughcasting," "pebble-dashing," "wet-dashing," "whip-dashing," "harling," "scudding," "stucco," etc.

Rendering is one of the commonest precautionary measures against damp penetration, and it often performs this function satisfactorily. It is, however, an expensive treatment, and if it fails for any reason the difficulties and cost involved in making good may be very considerable; it is therefore well to consider carefully how failures may be avoided.

The major troubles connected with renderings are, of course, cracking and loss of adhesion, and the two are frequently associated. For instance, cracking may permit the entry of moisture to the backing, leading to the migration of soluble salts to the interface between backing and rendering where crystallization may in turn cause loss of adhesion. Also loosening of a rendering over an area, particularly if accompanied by bulging, may and frequently does lead to cracking.

The formation of cracks may make a rendering quite useless as a protection against rain. Indeed, extensive cracking of a dense rendering may be worse than complete absence of rendering, since moisture entering the wall is prevented from drying out and may accumulate in the body of the wall. It appears, therefore, that in order to possess good waterproofing qualities a rendering must be protected against both cracking and loss of adhesion to its backing.

Certain types of cracking in renderings are the result of forces or movements outside the rendering itself (e.g. settlement or movement of the wall) and it is obviously necessary to avoid these. In addition to such external influences, however, all renderings of lime or cement have a tendency to shrink as they dry out initially, and most commonly cracks in renderings are due to this cause.

It appears from experiment and observation that the manner in which these shrinkage stresses are relieved varies considerably according to the nature of the rendering mix and its adhesion to the backing. High strength in the rendering and poor adhesion produce wide

cracks widely spaced, while in a weaker rendering adhering strongly to a stable backing the cracks will be finer and more closely spaced or may be prevented from forming at all. For this reason a "weak" rendering may afford better protection than a strong, non-absorptive rendering owing to its lesser liability to cracking.

The Building Research Station is frequently asked whether the addition of a "waterproofing liquid" to a rendering is advantageous from the point of view of weather protection, but it will be realized that penetration through cracks cannot be reduced by any material integrally mixed with the rendering.

Trials have been made at the Building Research Station with weaker renderings of cement mixed with lime. Mixes in proportions of about 1 volume of Portland cement : 3 lime : 10-12 clean well-graded sand have shown a marked freedom from shrinkage cracking and seem to be sufficiently hard and waterproof for normal use. It is of interest to note that the use of mixes of this kind is general practice in certain parts of the Continent, where the standard of rendering is very high. The Continental renderings are usually applied in two coats, and the finishing coat is scraped or otherwise textured, leaving a rough or slightly open surface. A report on the methods used in Germany, Austria, Switzerland and Czechoslovakia is now being prepared and will be issued later this year. The practice of scraping renderings has been introduced into this country and is growing. This seems to be a very useful development, for there is no doubt that the scraping reduces the risk of hair cracking, and produces a surface which is not only more attractive when new, but also preserves a good appearance for a much longer time than the finishing methods to which we have been accustomed.

The adhesion of a rendering is largely dependent on the nature of the backing to which it is applied. Granite and hard-burnt bricks or tiles are usually less favourable to good adhesion than porous stones or bricks, when used as backings for renderings. It is, however, necessary to adjust the "suction" of most porous backings by wetting in order to suit the consistence of the rendering and obtain the most favourable conditions for adhesion.

In considering adhesion it may be useful to point out the distinction between "key" and "adhesion." A rendering may be successfully applied to a material to which it would not naturally adhere, if a positive mechanical key is provided by the shape of the backing material: examples are grooved bricks and expanded metal lathing. The practice of raking out joints in brickwork before applying a rendering is useful in providing mechanical key, but often not so good as a natural adhesion due to suction.

The question of loss of adhesion due to the formation of efflorescence between the rendering and its backing is one of considerable importance in relation to the use of rendering as a method of waterproofing. Space does not permit, however, of more than a brief reference to the danger which exists when rendered brickwork containing appreciable quantities of sulphates becomes abnormally wet. Several serious troubles with renderings due to this cause have been investigated at the Building Research Station, and this matter was discussed at some length in an article published in the *Journal of the Royal Institute of British Architects* for May 9, 1936.

(4) The provision of a "watershed" such as tile hanging

Methods such as tile or slate hanging, weatherboarding, etc., provide a sure protection against damp penetration. In addition they permit the wall to "breathe," and if applied to a wall already wet a certain amount of drying can take place outwards. These methods also add to the thermal resistance or "warmth" of a wall, but on the other hand they are expensive and their application to an existing building involves a radical change in appearance. They are therefore not generally acceptable unless the conditions are very severe.

It does not appear to be necessary to discuss the various methods in detail, but it may be interesting to note that shingles, weatherboarding, and battens of Western Red Cedar are immune from attack by wood-destroying fungi, even though not treated with wood preservatives, and are therefore eminently suitable for use in this way. Where battens and plugs of deal or other timbers are used they should be creosoted under pressure or otherwise suitably protected against fungal attack. Nails should be protected by galvanizing or be composed of a non-corroding metal.

(5) Internal treatments

It is a general rule in building that undesirable influences should be stopped as near the source as possible, and the practice of applying a damp-proofing treatment on the internal surface of a wall, leaving the main body of the wall in a state of saturation, is obviously inconsistent with this rule.

Cases arise, however, in which internal treatment constitutes the only possible compromise with the difficulties involved and it is necessary that some reference should be made to the matter. The best method is "strapping" or battening walls and then lathing before plastering; this is the normal practice in Scotland, where weather conditions are generally more severe than in England. The provision of an air-space also improves the heat-insulating properties of the wall as well as forming a break in the capillary path through the wall.

As in the case of tile hanging it is essential when the method of battening-out is applied to a damp wall to take suitable precautions against fungal attack of the wood plugs and battens either by treatment of the wood with a preservative or by use of a timber resistant to dry rot. It is also an advantage to provide for ventilation of the air-space. As an alternative to lathing, plaster-board can be nailed to the battens and then finished with a skim coat of plaster according to the instructions of the manufacturers of the board.

Other forms of internal treatment are sometimes put forward, notably renderings and paints. Internal renderings, if plain or waterproofed and mixed fairly rich, may be quite effective and are less expensive than most methods, but there are several objections, one of which is the risk of condensation. Furthermore, timber in contact with the damp wall remains subject to unfavourable conditions if only the inside of the wall is waterproofed.

It should be emphasized that the foregoing discussion on general damp penetration through walls relates to solid walls only. Cavity walls, if properly constructed, are not subject to penetration of this kind. It may be said that a hollow cavity forms the safest and most economical vertical damp-proof course.

Common defects in this form of construction will be discussed in a later section of this note.

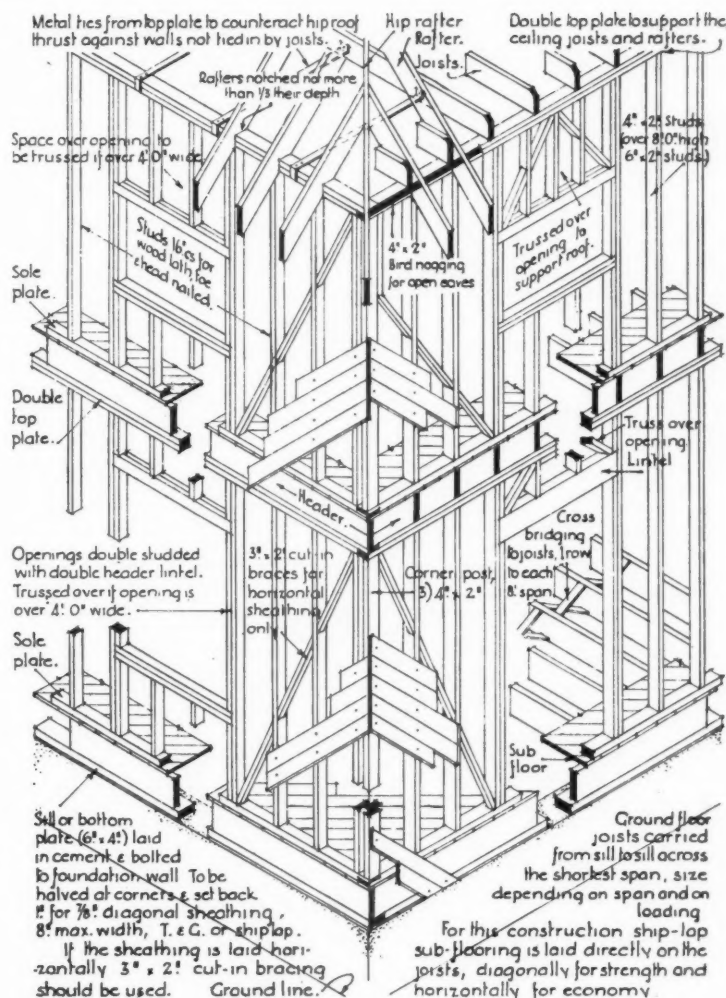
Dry Rot in Oak Panelling

QUORNAMENTAL carved oak panelling had been erected at the top of the nave in a small church, in a position adjoining some existing deal panelling. About two years later signs of decay became evident in the deal panelling, and when the work was opened up it was found that the

fixing battens at the back, several of which passed behind a portion of the oak panelling, were decayed. A block of completely decayed oak was also found in the wall behind the battens of one of the panels. This had evidently been many years in position and the fungus had spread from this source through the battens and attacked the new oak panelling. The wall forming the backing of the panelling was found to have no damp-proof course. Suggestions for remedial treatment were asked for, and the following reply was furnished by the Forest Products Research Laboratory, Princes Risborough, Aylesbury, Bucks. :—

The fungus causing the decay has been identified as *merulius lacrymans*, one of the commoner types of dry-rot.

The primary cause of the dry rot outbreak appears to have been the damp arising from the wall. In the absence of a damp-proof course, provision should have been made for ventilating the back of the panelling which, together with the fixing battens, should have received preservative treatment. From the evidence of the old, decayed fixing block which was found, it is concluded that all traces of infection from a previous outbreak had not been removed at the time the new oak panelling was erected. Such a course is now imperative. It is recommended that the oak panels should be removed, as also should every piece of decayed fixing batten and all wall plugs, etc. The infected portions of the wall should be cleaned with a blow-lamp flame and then painted with a liquid capable of destroying any dry rot infection present. All new fixing grounds should also be thoroughly treated with a wood preservative after having been cut to size. Wherever there was any fungus mycelium attached to the oak panelling this should be planed off, the wood then being treated with a wood preservative, preferably an aqueous preservative not likely to stain any decoration which will come into contact with the panels. Preservatives of the creosote type would be unsuitable for this reason, but there are proprietary preservatives which would be free from any tendency to stain. After the preservative has dried, the back of the panel should receive two coats of paint, preferably aluminium paint. It would be a great advantage if some means of ventilating the space between the panels and the wall could be devised.



TRADE NOTES

[BY PHILIP SCHOLBERG]

Announcements

Mr. A. Y. Mayell, J.P., F.R.I.B.A., of St. James' House, 173 Holland Park Avenue, W.11, has taken into partnership Mr. E. H. Lockton, A.R.I.B.A., A.A.D.I.P.L., in succession to the late Mr. L. E. Cole, A.R.I.B.A. The practice will be carried on at the above address (telephone Park 5010), and also at 4 Rosehill Road, Wandsworth, S.W.18 (telephone Battersea 7817).

The partnership under the name of "Campbell Jones, Sons and Smithers," came to an end on December 31. In future, Mr. Campbell Jones will continue practice with his two sons, under the name of "Campbell Jones and Sons," at Skinners Hall, 9 Dowgate Hill, E.C.4, and Mr. Smithers will practice at 27 Bunhill Row, E.C.1.

Mr. Henry C. Smart, F.R.I.B.A., has taken into partnership his two senior assistants, Messrs. Frank Ferry and R. Collyer Clark, L.L.R.I.B.A., who have been in his office for over thirty years. The practice will be continued as Henry C. Smart and Partners at 73a Queen Victoria Street, E.C.4. Telephone: Central 2127.

Timber Houses

A SMALL booklet from the T.D.A. gives quite a lot of information about timber houses and presents it in a simple way with several good clear drawings to show what it all means. The isometric at the head of these notes is one of them, and it shows a typical example of platform or box framing, a method also sometimes known as western frame. Each storey is constructed separately, the ground floor joists being carried across the shortest span of the building from wall-plate to wall-plate, intermediate beams and posts or partition walls being provided where necessary to reduce the spans. It should also be noticed that, by providing a wide bottom plate, there is enough bearing for the ground floor joists to allow a continuous header at this level, as opposed to the cut in headers necessary at the first floor bearing plate.

The booklet contains further notes on maintenance, durability, fire risks and heat

losses, but no figures, except for roof trusses, are given for first costs. Though these would have been useful it is perhaps just as well that they were omitted, for figures of this kind are always suspect and practically every firm in the industry will produce elaborate cost sheets proving conclusively that their own method or product will show a saving of at least 20 per cent. over anything else. Pick out the plums and forget about the snags and all materials are perfect.—(The Timber Development Association, 69 Cannon Street, London, E.C.4.)

Sense for the "Coal Industry"

I have just been sent a copy of a paper read at a conference of sales and publicity managers organized by the Combustion Appliance Makers' Association; the author is Mr. W. T. Wren, a director of Allied Ironfounders, who are responsible for the Aga cooker and the recently introduced Otto stove, and although the bulk of his remarks, which were about the need for

the proper co-ordination of advertising among the manufacturers of coal-burning appliances, are not of very great importance to architects, I was glad to find that he seems to believe in the value of good design. True, he uses the word "styling," a debased piece of Americanese which has now been wholeheartedly incorporated in contemporary business English, and which to me always implies that type of ever so safe design which carefully avoids being more than three months ahead of the lowest level of public opinion. But this criticism cannot be levelled against the designs of Mr. Wren's firm and is merely a personal prejudice of my own. But I have no doubt that the mention of design as a paying proposition will be good for the coal appliance makers, many of whose products are very badly designed. And Mr. Wren didn't stop there, for he cried bogey, bogey, Mr. Therm's got twenty years lead, and then went on to say that the coal interests didn't know what they were doing, or why, and anyway they weren't doing it; a diverting and thorough piece of scalp collecting, and one which, since it comes from inside the industry, will cut a lot more ice than if it had been said by one of these tiresome designers or architects who are always assumed to know naught of anything but Art.

Stage Equipment

Though not very many architects get a theatre to do nowadays there is always a fascination in reading the jargon of another profession and discovering new and expressive names for things of which one has only vaguely heard, and if anyone is thinking of going in for the National Theatre competition (if there should ever be such a thing), I would recommend them to write for a new catalogue which has just been issued by Fitups of Manchester. This firm supplies everything for the stage, from a 1/4-in. screw to a cyclorama, and their catalogue is very fully illustrated, so that you can get some idea of what things are for even if you have never heard of them before. Not to mention a whole lot of disjointed information; did you know, for example, that each dancer prefers his own special size of tap mat for step dancing, or that you can get a piece of scenery, 12 ft. by 10 ft., in first-class cloth, for £1 7s. 3d., and with your own design painted on it for another 26s.? What have our fashionable mural decorators got to say to this?

While it is easy to pick out the more flippant bits of information, nearly all the fittings illustrated are of about equal importance, and therefore it seems hardly worth while to choose any special item for illustration, but the whole thing is a very sound handbook of stage equipment. I see, too, that this firm is prepared to arrange for interested amateurs to have practical experience and tuition in the working of a professional stage during actual performances under the supervision of the permanent stage staff. Again, rather more than the average architect will want, but it sounds as though it would be fun to do, and very useful if you are concerned with the R.I.B.A. dramatic club or the A.A. pantomime.—(*Fitups, Ltd., 399-401 Oldham Road, Manchester, 10.*)

Flat Roofs

While catalogues of decorative finishes obviously need plenty of pretty pictures there is much to be said for the habit of describing constructional materials mainly

by suggested specifications and then giving any other necessary information in the form of drawings. This, at any rate, is the technique adopted by Briggs and Sons for describing their Challenge composite roofings, and it seems to give all the essential data in an easily understood way. The drawings are particularly sensible, for they deal mainly with flashings and general detailing at all the likely forms of junction between the flat roof and parapets (hollow or solid), skylights, doors and window cills, and the methods adopted to ensure proper weathertightness are exceptionally thorough. There are also some notes on the use of Lavacrete insulation.—(*William Briggs and Sons, Ltd., Dundee.*)

Glass Doors for Stoves

Some weeks ago I suggested that heat-resisting glass was a better material than mica for the doors of heating stoves, the main reason being that it should be easier to clean and that the fire is also easier to see. It is encouraging, therefore, to find that Portways use this glass in the doors of their Tortoisette stoves, and do so for the reasons I suggested. Owing to the design of these stoves the doors probably do not get as hot as they do in the more usual types like the Esse or the Otto, but the difference cannot be very great, and other manufacturers will probably follow suit before very long.—(*Charles Portways and Son, Halstead, Essex.*)

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

DEPTFORD. *Cinema.* The Deptford B.C. has now passed plans by Mr. G. Coles, for the erection of a cinema (Odeon Theatre) on the sites of Nos. 23-27 Deptford Broadway and Nos. 17-19 Deptford Church Street.

EALING. *Telephone Exchange.* H.M. Office of Works is to erect a new telephone exchange at Ealing Green.

EALING. *Flats.* Mr. F. H. Shearley is to erect 46 flats in Oldfield Lane, Ealing.

HAMPTON. *School Premises.* The Middlesex Education Committee has obtained sanction to borrow £68,843 for the erection of new premises for the Hampton Grammar School.

LEWISHAM. *Flats, etc.* Plans passed by the Lewisham B.C.: Three-storey building, Rushey Green, Catford, Montague Burton, Ltd.; post office, High Street, Bow Lane Building Contractors, Ltd.; 16 houses, Oldstead Road, Mr. G. H. Fletcher; eight houses, Queenswood Road, Bretts, Ltd.; six houses, Belmont Grove, Mr. G. T. Harman; block of 15 flats, Bromley Road, Wates, Ltd.; 32 maisonettes, Hither Green Lane, Mr. C. W. Palmer; block of four lock-up shops, Honor Oak Park, Brine and Armitage; flats, Ladywell Road, Brockley, L. E. Tompkins & Co.; block of flats, Church Terrace, Blackheath, Mr. V. W. Hindwood; three-storey block of flats, Lawrie Park Road, Sydenham, Fox and Champion, Ltd.; houses, Somertrees Avenue, Grove Park, Mr. W. C. Casse; flats, Gillian Street, G. T. and E. J. Harman; buildings, Southend Lane, Sydenham, T. Spencer Bright & Co.; block of flats, St. Peter's College, Loampit Hill, Mr. C. A. Jones; flats, Perry Vale, Forest Hill, Mr. E. W. Wallis; flats, West Hill, Lawrie Park Road, Sydenham, Culross & Co.; flats, Addington Grove, Sydenham, Mr. G. H. Dabin; houses, Southend Lane, Catford, Vigers & Co.; flats, Sydenham Park, Mr. H. St. John Harrison; 10 two-storey flats, Russell Street, Sydenham, L. A. Culliford and Partners; cinema and shops, Bromley Road, Catford, Mr. A. Mather.

PROVINCES

GOSPORT. *School.* The Gosport Education Committee is to erect an elementary school in Privett Road at a cost of £30,922.

HASTINGS. *Houses.* The Hastings Corporation

has approved the lay out of the new housing estate at Red Lake and Rook Lane, which provides for 270 houses.

HESWALL. *Court House, etc.* The Cheshire C.C. is to erect a court house and police station at Heswall at a cost of £13,980.

IPSWICH. *School.* The Ipswich Education Committee has obtained sanction for a loan of £33,355 for the erection of the Western senior boys' school.

KING'S LYNN. *School.* The King's Lynn Education Committee is to erect a senior school on the Gaywood Park estate at a cost of £49,343.

LEIGHTON BUZZARD. *Courthouse.* The Bedfordshire C.C. is to erect a courthouse and police station at Leighton Buzzard at a cost of £15,703.

LOWESTOFT. *School Enlargements.* The Lowestoft Education Committee is to enlarge Dell Road School, at a cost of £15,000.

MILFORD. *School.* The Church of England authorities are to erect a central school for 360 at Milford, Surrey.

THE BUILDINGS ILLUSTRATED

NORTH GATE, REGENTS PARK (pages 204-205). Architects: Messrs. Mitchell and Bridgwater. The general contractors were H. T. Oliver and Sons, who were also responsible for the excavations, foundations, damp-courses and plaster. The sub-contractors and suppliers included: London Demolition Co., demolition; Lawford Asphalte Co., asphalt; F. Bradford & Co., reinforced concrete, artificial stone, fireproof construction and ducts; British Cavity Brick and Tile Works, Ltd., facing bricks; Flettons, Ltd., common bricks; Moler Products Ltd., "Fosalsil" flue bricks and "Fosalsil" insulating partition blocks; Cork Insulation Co., Ltd., stairtreads and compressed cork flooring; Inlaid Ruboleum Tile Co., linoleum flooring; Structures Waterproofing, waterproof rendering to basements; A. E. Rasey, central heating; Gas, Light and Coke Co., gas fitting; A. H. Cornwall, Ltd., electric wiring and bells; Troughton and Young, electric light fixtures; Bratt Colbran, mantels, electric heating and grates; Ellis (Kensington), Ltd., plumbing; B. Finch & Co., sanitary fittings; Wing and Webb, Ltd., door furniture; Crittall Manufacturing Co., metal casements and window furniture; J. Lenanton and Son, joinery; J. Whitehead and Son, paving marble; J. Bolding and Son, tiling; Heal and Son, rugs and furniture; Easiwork, kitchen fittings; J. and E. Hall, lifts; Birmingham Guild, lettering.

HOUSE AT SANDLESWOOD END, BEACONSFIELD (page 206). Architect: C. R. Crickmay (Crickmay and Sons). The general contractors were G. H. Buckland. The sub-contractors and suppliers included T. Bristow and Bros., bricks; Maidenhead Brick and Tile Co., tiles; Honeywill & Stein, Ltd., "Heraklith," partitions; G. Lake, central heating and plumbing; Cozystove Co., Ltd., stoves; Devon Well Fires, grates; Ideal Boilers and Radiators, Ltd., boilers; Buckeldee and Taylor, electric wiring; George Jennings, sanitary fittings; J. D. Beardmore & Co., Ltd., door furniture; Crittall Manufacturing Co., casements; D. Burkle and Son, Ltd., hatch shutters; A. J. Scotton, plaster; Hill and Spink, Ltd., joinery; Carter & Co., tiling; The Amersham Water Co., water supply.

BOATHOUSE, LEEDS (pages 222-223). Architect: John C. Procter. The general contractors were G. B. Marshall and Son, and the sub-contractors and suppliers included: Ruberoid Co., Ltd., flat roof covering; Henry Hope and Sons, Ltd., metal windows; Wallis and Watson, electric lighting; Dixon, Powner and Sons, iron staircase, balustrades and boat-racks; Leonard Cooper, Ltd., steelwork.

The name of Drytone Joinery Ltd. was inadvertently omitted from the contractors' list for Cottesmore Court, published in our last issue. They were responsible for the whole of the lift doors. The name of the Adamite Company Ltd. was also omitted from the list. They supplied 20,000 "Bull Dog" floor clips.

The following Supplement is the product of many months of work on the part of this JOURNAL and its collaborators, Messrs. Davis and Belfield, PP.A.S.I., Chartered Quantity Surveyors, who have been asked to undertake the difficult task of creating a new PRICES section. It represents, within obvious limitations and so far as the advice of a number of experts can make it, the most precise and detailed statement of current prices obtainable. We are particularly asked by its compilers to invite readers who use it to forward their reactions (criticism, we hope) to the Editor at 9 Queen Anne's Gate, London, S.W.1, so that adjustments may be made where necessary. The whole of the information is copyright.

PRICES

FOREWORD

BY THE EDITOR

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

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

THE supplement to the JOURNAL of which the second section is published this week is concerned with Prices. These, besides their commonest fluctuations upwards when an extra is claimed and downwards when an omission is in question, have also other movements. The ambition of this new series is to form a complete and reliable guide.

Accuracy will be maintained by obtaining actual quotations for every price for every issue. Comprehensiveness is a much more difficult matter. A complete list of materials and labours obviously cannot be published. And the effort to make the list reasonably full and representative has compelled the division of the list into four weekly sections which, taken together, make up the complete supplement.

The main requirements of such a supplement are : Labour Rates, Prices of Materials, Prices for Measured Work and Approximate Estimating. The first two are needed for checking daywork accounts, the third for costing work which would normally be measured in a Bill of Quantities, and the fourth will, it is hoped, be found extremely useful in preparing estimates for a client or in rough checks of a builder's account.

Labour Rates change only at long intervals, and it would be a waste of space to publish them frequently. The JOURNAL intends to publish them when they change, and subsequently only when other changes take place. The JOURNAL will keep a stock of London Rates and supply copies to those whose filing system breaks down.

Current Prices of Materials are usually definite prices which cannot be generalized like Measured Rates. Since the prices often vary with quantity needed, indications such as "for 4 tons and over" are included as often as space will allow. This section cannot, it is felt, be simplified beyond a certain point, and if architects are inclined to find it heavy going, it is believed that quantity surveyors and builders will think otherwise.

Current Rates for Measured Work have been based on the method of measurement advocated by the Chartered Surveyors' Institution. Although builders pricing from a specification alone often vary from this method, there is no other standardized procedure, and for this reason it will be adhered to. In consequence,

it is hoped that it will be definite and obvious what has been included.

As it is impossible to publish prices for different types or standards of job, these prices—unlike Materials prices—must be taken as average and not fixed.

Finally, the JOURNAL feels that architects are generally more interested in Approximate Estimating than in detailed pricing, and it is therefore starting a section on this subject somewhat similar to that which has already appeared in Information Sheets. It is believed that Approximate Estimating will be found very valuable for work where the cubing system is difficult to apply.

- Prices vary according to quality and the quantity ordered.
- Those given below are average prices and include delivery in the London area, except where otherwise stated.
- Owing to the unsettled state of the market most prices are liable to fluctuate, and those for metals in particular should be confirmed by actual quotation whenever possible.

PART 2

CURRENT MARKET PRICES OF MATERIALS

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

JOINER

Joinery Timber			Per standard £ s. d.			Per foot cube £ s. d.		
3" × 9"	Scantling 2nd Archangel	..	41	10	0	5	0½	
3" × 9"	" 3rd	..	31	0	0	3	9½	
2" × 9"	" 2nd	..	47	10	0	5	9½	
2" × 9"	" 3rd	..	29	0	0	3	6½	
3" × 8"	" 2nd	..	34	0	0	4	1½	
3" × 8"	" 3rd	..	26	10	0	3	2½	
2" × 8"	" 2nd	..	40	0	0	4	10½	
2" × 8"	" 3rd	..	26	10	0	3	2½	
3" × 7"	" 2nd	..	32	0	0	3	10½	
3" × 7"	" 3rd	..	25	10	0	3	1	
2" × 7"	" 2nd	..	40	0	0	4	10½	
2" × 7"	" 3rd	..	25	10	0	3	1	
2" × 6"	" u/s	..	24	10	0	2	11½	
1½" × 11"	" 3rd	..	38	10	0	4	8	
1½" × 9"	" u/s	..	35	10	0	4	3½	
1" × 9"	" 2nd	..	46	10	0	5	7½	
1" × 9"	" 3rd	..	36	10	0	4	5½	
1" × 11"	" 2nd	..	52	10	0	6	4½	
1" × 11"	" 3rd	..	40	0	0	4	10½	
1½" × 9"	" 2nd	..	46	10	0	5	7½	
1½" × 9"	" 3rd	..	36	10	0	4	5½	
1½" × 11"	" 2nd	..	49	10	0	6	0	
1½" × 11"	" 3rd	..	41	0	0	4	11½	



ANSWERS TO QUESTIONS

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

JOINER—(continued)

Flooring		¾"	1"	1½"
Yellow deal, plain edge in batten widths	per square	20/9	23/6	31/-
Ditto, T. & G.	" "	21/3	24/-	31/6
T. & G. rift sawn B.C. pine in 4" widths	" "		33/-	
T. & G. random grain, in 4" widths	" "		22/-	
Wall Linings				
Deal Match Boarding :—				
1" × 6" T.G.B.	per square			24/-
1" × 4½" T.G.V.	" "			23/6
¾" × 6" T.G.B.	" "			19/-
¾" × 4½" T.G.V.	" "			18/6
¾" × 6" T.G.B.	" "			16/3
¾" × 4½" T.G.V.	" "			15/9
½" × 4½" T.G.V.	" "			12/9
Asbestos-Cement :—				
¾" Semi-compressed flat building sheets, grey	per yard super			1/4½
¾" Ditto	" "			1/5½
½" Ditto	" "			2/1
½" Metal reinforced flat building sheets	" "			3/2½

Prices are for orders of less than 1 ton.

CURRENT PRICES

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

JOINER AND STEEL AND IRONWORKER

JOINER—(continued)

Wall Boards :—

Asbestos-cement wall board (in sheets 8' 0" x 4' 0" only)	per foot super	-2 3/4
Asbestos-cement stipple glazed sheets (in sheets 8' 0" x 4' 0" only)	per yard super	7/6
Ditto, plain white glazed sheets (in sheets 8' 0" x 4' 0" only)	"	8/6
Marble glazed sheets (in sheets 8' 0" x 4' 0" and 4' 0" x 4' 0")	"	7/6
1/2" Fibre board	"	2/1
	25-75 yards	150-300 yards
	2/1	1/7
Fireproof plaster board	per yard super	1/10
Ditto	"	1/5
Joint tape (approx. 250 feet run)	per roll	1/6
Joint filler	per lb.	-4

Plywoods :—

	4 m/m	5 m/m	6 m/m	9 m/m	12 1/2 m/m
Birch (A) per square	22/-	26/6	30/-	42/6	45/-
" (B) " "	18/-	19/-	—	—	—
Japanese figured oak (A.A.) per square	33/6	37/-	38/6	65/-	—
Austrian oak, figured one side (A.A.) per square	—	71/6	77/6	99/6	117/6
Australian walnut, finely figured one side (boards 72" x 36") per square	—	—	4" 67/6	3" 85/-	—
Sycamore, figured one side (ditto) per square	—	—	75/-	85/-	—
Honduras mahogany, figured one side (ditto) per square	—	—	75/-	—	—
Honduras Mahogany, finely figured (boards 84" x 36") per square	—	—	125/-	—	—

Prices are for complete bundles.

Blockboards :—

Alder :—

Thickness	Boards 60" x 183"	Boards 72" x 183"
1" per square	67/-	73/6
" " "	76/-	83/6
" " "	83/3	91/3
" " "	87/3	96/3
1" " "	100/6	110/6
1 1/2" " "	122/-	134/-
1 3/4" " "	128/-	140/-
1 1/2" " "	160/9	169/9

Birch :—

Thickness	Boards 54" x 72"	Boards 60" x 140"
1" per square	50/3	52/9
" " "	57/3	60/3
" " "	63/3	67/-
" " "	68/-	71/3
1 1/2" " "	75/-	77/9

Prices are for complete bundles.

Hardwoods

Joinery Quality.

	per foot cube
English oak	15/-
American oak (plain)	10/-
" " (quartered)	12/-
Australian Silky Oak (plain)	11/-
" " (quartered)	12/6
Walnut, European	18/-
Teak, Rangoon	15/-
" African	13/-

JOINER—(continued)

Mahogany, Honduras	per foot cube	14/-
American whitewood	"	10/-
Birch	"	8/-
Cedar (aromatic)	"	16/-
Japanese oak (plain)	"	11/-
" " (quartered)	"	13/-
Austrian oak (plain)	"	12/-
" " (quartered)	"	16/-

Sundries

Slaters or sarking felt	per yard run	-6
Roofing felt	"	-8
Bituminous hair felt	per roll	33/-
All rolls 25 yards long by 32" wide.		
Cork slabs, 1" thick (3' 0" x 1' 0")	per foot super	-4 1/4
" " 2" thick (3' 0" x 1' 0")	"	-7 1/2
Slagwool	per cwt. (approx.)	12/-
Building paper in rolls of 100 yards, 1-ply, 60" wide		
(B.I.80 and L.G.I.80)	per roll	67/6
Ditto, 2-ply, 60" wide (B.I.80)	per roll	135/-
Ditto, 2-ply, 60" wide (B.I.20)	per roll	202/6
" Cabots" Quilt :—(Ex Works Twelve roll lots delivered carr. free.)		
Double ply	per roll 42/-	per half roll 23/6
All rolls 28 yards long by 36" wide. Special terms for quantities.		
Cut steel clasp nails, 1" per cwt.	33/6	4" per cwt. 23/6
" " floor brads, 2" "	22/9	3" " 21/9
Bright oval wire nails 1" "	35/9	4" " 23/6
Scotch glue	per cwt.	60/-

Floor Clips :—

	£	s.	d.
One leg floor clip	per 1,000	8	8 0
2" short leg floor clip	"	8	8 0
2" Regular floor clip	"	8	15 0
3" " "	"	9	0 0
2" Regular ceiling clip	"	8	15 0
Single leg ceiling clip (7 1/2")	"	10	10 0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

	£	s.	d.
Basis price for rolled steel joists sections 5" x 3" to 16" x 6", in 10 ft. to 50 ft. lengths	per ton	15	0 0
Extras on above for :—			
9" x 7" Section	"	0	5 0
4" x 3", 5" x 2 1/2", 10" x 8", 12" x 8", 14" x 8" and 16" x 8" to 20" x 7 1/2" sections inclusive	"	0	10 0
3" x 1 1/2", 3" x 3", 4" x 1 1/2", 4 1/2" x 1 1/2" and 24" x 7 1/2" sections	"	1	0 0
Channels, angles and tees	"	16	0 0
Mild steel plates	"	16	0 0
Screw bolts	"	25	0 0

Fabricated Steelwork

	£	s.	d.
Joists cut and fitted	per ton	21	0 0
Stanchions, ordinary sections with riveted caps and bases	"	21	0 0
Stanchions, compound	"	21	10 0
Girders	"	21	10 0
Framed roof trusses, average span	"	23	0 0

The above prices are ex mills ordered well in advance of delivery. Prices ex London stock are considerably higher, and definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets

(Ex. London Stocks)

	10 cwt. lots £ s. d.	Less quantity £ s. d.
4 to 9 fts. 18 or 20 gauge, 8/3" corrugations	20 0 0	21 0 0
10 fts. 18 or 20 gauge, 8/3" corrugations	20 10 0	21 10 0
4 to 9 fts. 22 or 24 gauge, 8/3" corrugations	20 10 0	21 10 0
10 fts. 22 or 24 gauge, 8/3" corrugations	21 0 0	22 0 0
4 to 8 fts. 26 gauge, 8/3" corrugations	21 15 0	22 15 0
9 fts. 26 gauge, 8/3" corrugations	22 5 0	23 5 0
10 fts. 26 gauge, 8/3" corrugations	22 15 0	23 15 0

F

CURRENT PRICES**PLASTERER, PLUMBER AND INTERNAL PLUMBER**

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

PLASTERER*Plaster and Cement*

	1-ton loads	5-ton loads	
Sirapite (coarse) per ton	70/-	64/-	
" (fine) "	78/-	—	
Victorite No. 1 "	85/-	78/6	{ 6-ton loads
" No. 2 or non sweat "	80/-	73/6	
Thistle (browning, haired and pink finish) "	70/-	64/-	
Thistle (fine) "	78/-	—	
Pink plaster "	66/-	—	
White plaster "	78/-	—	
Keene's pink "	112/6	—	
Keene's white "	117/6	—	
Super Carbo "	—	47/6	{ 4-ton loads
Carbo-setting "	—	37/6	
			1 ton upwards
			£ s. d.
Cullamix No. 2 cream per ton		5 10 0	
" No. 3 cream "		5 10 0	
Snowcrete mixture "		5 5 0	

Sundries

Sharp washed sand per yard cube	8/6
Cow hair per cwt.	35/-
Goat's hair "	55/-
$\frac{3}{8}$ " laths per bundle	2/-
$\frac{1}{2}$ " laths "	2/4½
Expanded metal lathing, 9' 0" x 2' 0"	
$\frac{3}{8}$ " mesh x 26 gauge per yard super	-11
Lath nails (galvanised) per cwt.	48/6
" (bright wire) "	27/-
	Less than 150 yds. 300 yds. Over 300 yds.
$\frac{3}{8}$ " Plaster board per yard super	1/- -11 -10
$1\frac{1}{4}$ " Galvanized nails per lb.	-5
Serim cloth in 100-yard rolls per roll	2/3

Wall Tiles

Commercial quality.	
Ivory, white, etc., glazed 6" x 6" x $\frac{3}{8}$ " per yard super	9/9
Angle beads (1½" wide) per yard run	1/2½
Rounded edge tiles "	2/6½
Coloured enamelled bright glazed, 6" x 6" x $\frac{3}{8}$ " per yard super	14/9
Angle beads (1½" wide) per yard run	1/4½
Rounded edge tiles "	2/8½
Eggshell gloss enamelled, 6" x 6" x $\frac{3}{8}$ " per yard super	16/3
Angle beads (1½" wide) per yard run	1/7½
Rounded edge tiles "	2/10½

PLUMBER*Lead*

3½ lbs. and upwards milled sheet lead in quantities of 5 cwt. and upwards per cwt.	24/-
Add if cut to sizes "	3/-
Lead ternary alloy, No. 1 quality "	29/-
" " No. 2 "	31/-
Allowance for old lead delivered to merchant "	13/9

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are subject to 20 per cent. trade discount, and the prices of the fittings are subject to 5 per cent. and 20 per cent. trade discount.

Rainwater Pipes

	2"	2½"	3"	3½"	4"	4½"	5"	6"
Round pipes per yard	2/8½	2/9½	3/7½	4/0½	4/9½	6/1½	7/2½	9/2
Shorts, 2' 0", 3' 0" and 4' 0" extra per yard	-3½	-3½	-3½	-3½	-3½	-5	-5	-5
Bends each	1/9	2/-	2/6	3/-	3/7	5/-	6/6	8/5
Offsets 4½" and 6" projection each	2/2	2/8	3/-	3/5	4/4	6/3	7/6	9/10
Offsets, 9" projection each	2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single each	2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes each	1/6	1/9	2/-	2/8	3/-	4/4	5/5	7/6

PLUMBER—(continued)*Square and rectangular pipes.*

3" x 3" per yard	6/9½
3½" x 3½" "	8/4
4" x 2" or 2½" "	7/4½
4" x 3" "	7/4½
4" x 4" "	9/0½
4½" x 3" "	8/5½
5" x 3" or 3½" "	9/7

Gutters

	3"	3½"	4"	4½"	5"	6"
Half round gutters per yard	1/9½	2/1	2/1	2/2½	2/4½	3/7½
Shorts 2' 0", 3' 0" and 4' 0" extra per yard	-2½	-2½	-2½	-2½	-3½	-3½
Angles and nozzle pieces each	1/5	1/7	1/9	2/-	2/2	3/1
Stop ends each	-5	-5	-7½	-9	-10½	1/-
Ogee gutters per yard	2/1	2/3½	2/4½	2/6	2/9½	3/10½
Straight back and shorts 2' 0", 3' 0" and 4' 0" extra per yard	-2½	-2½	-2½	-2½	-3½	-3½
Angles and nozzle pieces each	1/11	1/11	2/-	2/4	2/8	3/3
Stop ends each	-6	-7½	-9	-10½	1/-	1/3

Mild Steel Rainwater Goods

The following prices should be increased by 10 per cent. and are subject to 7½ per cent. trade discount.

24 Gauge rainwater slip jointed pipes	2"	2½"	3"	3½"	4"	
Galvanized round pipes with ears per 6' 0"	2/7½	3/1½	3/9	4/3	4/9	
Painted round pipes with ears per 6' 0"	2/7½	3/-	3/4½	3/10½	4/3	
Painted or galvanized short lengths with ears, extra each	-6	-6	-6	-6	-6	
18 Gauge Gutters,	3"	3½"	4"	4½"	5"	6"
Galvanized half round gutters per 6' 0"	2/-	2/3	2/4½	2/9	3/-	3/7½
Painted half round gutters per 6' 0"	1/6	1/9	2/-	2/3	2/6	3/-
Painted or galvanized short lengths extra each	3	3	3	3	3	3

Asbestos-Cement Rainwater Goods

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

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

Round pipes.

2" per yard run	1/8
2½" "	1/10½
3" "	2/3
3½" "	2/8
4" "	3/1
4½" "	4/5
5" "	5/3
6" "	6/6

Gutters

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

	3"	4"	4½"	5"	6"	8"
Half round gutters per yard run	1/2½	1/5	1/6	1/9	2/5	3/-
Ogee gutters per yard run	—	1/9	1/10½	2/3	2/9	3/7

INTERNAL PLUMBER

Lead pipe in coils, 5 cwt. and upwards per cwt.	23/6
Lead ternary alloy, No. 1 quality ditto "	28/6
" " No. 2 "	30/6
Lead soil pipe "	26/6
Plumber's solder "	89/-
Tinman's solder "	115/-
Drawn lead traps with brass screw eye, 6 lbs. 1" 1½" 1¾" 2"	
S. trap each	1/8 1/11 2/5 3/6
P. trap "	1/5 1/7 2/- 2/10
Extra for 3" deep seal "	6 6 6 6

CURRENT PRICES

I N T E R N A L

INTERNAL PLUMBER—(continued)

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

Tubes.	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"
Tubes 2 ft. long and over per ft.	5 $\frac{1}{2}$	6 $\frac{1}{2}$	9 $\frac{1}{4}$	1 1	1 4 $\frac{1}{2}$	1 10
Pieces 12" to 23 $\frac{1}{2}$ " long each	1 1	1 5	1 11	2 8	3 4	4 9
Bends each	11	1 2	1 7 $\frac{1}{2}$	2 7 $\frac{1}{2}$	3 2	5 2
Fittings.						
Elbows, square each	1 1	1 3	1 6	2 2	2 7	4 3
Elbows, round	1 2	1 5	1 8	2 4	2 10	4 8
Tees	1 3	1 7	1 10	2 6	3 1	5 1
Crosses	2 9	3 3	4 1	5 6	6 7	10 6
Sockets, plain	4	5	5 8	6 10 $\frac{1}{2}$	7 13	
Sockets, diminished	6	7	9	1 1	1 4	2
Flanges	1	1 2	1 4	1 9	2	2 9
Caps	5	6	8	1	1 3	2
Plugs	4	5	6	8	10	1 3

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

	Tubes	Fittings	Flanges
Gas	62 $\frac{1}{2}$ 0	53 $\frac{1}{2}$ 0	57 $\frac{1}{2}$ 0
Water	58 $\frac{1}{2}$ 0	50 0	52 $\frac{1}{2}$ 0
Steam	56 $\frac{1}{2}$ 0	46 $\frac{1}{2}$ 0	47 $\frac{1}{2}$ 0
Galvanized gas	53 $\frac{1}{2}$ 0	46 $\frac{1}{2}$ 0	47 $\frac{1}{2}$ 0
" water	48 $\frac{1}{2}$ 0	42 $\frac{1}{2}$ 0	42 $\frac{1}{2}$ 0
" steam	43 $\frac{1}{2}$ 0	38 $\frac{1}{2}$ 0	37 $\frac{1}{2}$ 0

Brasscock. Best Quality

	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
Chromium plated screw-down bibcocks, screwed for iron per dozen	34 6	56 3	99
Ditto, with screw ferrule	43	67 3	105 6
Ditto, with capstan head lettered, screwed for iron per dozen	40 6	62 3	108
Ditto, with screw ferrule	49	73 3	124 6

	Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male and Iron Unions
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1 per dozen	37 6	43	35
1	59	65	54
1	90	97 6	84
1 each	12 9	13 6	12
1	20 6	21 6	19
1	39 9	41 3	37 6

	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
Portsmouth pattern ball valve for low pressure, screwed for iron each	3 10	6 1	10 6
Ditto, with flynut and union	4 6	7 2	12
High pressure ditto, screwed for iron each	3 10	6 1	12 6
Ditto, with flynut and union	4 6	7 2	12

	2"	2 $\frac{1}{2}$ "	3"	4"
Socket thimble sloping shoulder per dozen	11	14	16 6	23 6
Flanged ferrule thimble	8 $\frac{1}{2}$	9 6	14 6	17

	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"
Union joints for lead and iron per dozen	7 6	10 3	14	26	42 6	92
Single nut short boiler screws per dozen	6	9	14 6	21	33	60
Double nut boiler screws per dozen	8 6	10	15	23	44	69
Belfast sink wastes stamped brass with brass plug diameter of outlet 2" per dozen						18

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

The following prices are subject to 20 per cent. trade discount:—

	14-gauge £ s. d.	12-gauge £ s. d.	$\frac{1}{2}$ " plate £ s. d.	$\frac{3}{8}$ " plate £ s. d.
50 gallon capacity each	2 5 11	2 14 5	3 1 7	7 0 8
100	3 8 9	4 2 11	4 16 9	9 10 8
200	6 6 9	6 19 5	7 18 3	13 1 0
500	12 6 0	13 16 1	15 16 3	22 6 9
1,000		21 9 4	24 19 5	34 15 4

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

P L U M B E R

INTERNAL PLUMBER—(continued)

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 20 per cent. trade discount:—

	16-gauge tested to a pressure of 1 lb. per sq. inch= 1 $\frac{1}{2}$ ft. head of water	14-gauge tested to a pressure of 3 lbs. per sq. inch= 4 $\frac{1}{2}$ ft. head of water	12-gauge tested to a pressure of 7 $\frac{1}{2}$ lbs. per sq. inch= 10 ft. head of water	$\frac{1}{2}$ " plate tested to a pressure of 10 lbs. per sq. inch= 15 ft. head of water
Capacity	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20 gallon	2 0 3	2 3 11	2 7 8	2 12 9
40		3 1 7	3 9 0	3 16 8
		Tested to a pressure of 5 lbs. per sq. inch = 7 $\frac{1}{2}$ ft. head of water	Tested to a pressure of 7 $\frac{1}{2}$ lbs. per sq. inch = 10 ft. head of water	
60		4 19 3	5 5 5	
80			7 5 7	
100			8 4 5	

Screwed flanges or bosses

	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"	2 $\frac{1}{2}$ "	Extra per flange or boss.
1 8	2	2 4	2 11	3 4	3 9	4 8	6 9	
2 $\frac{1}{2}$ "	3"	3 $\frac{1}{2}$ "	4"	4 $\frac{1}{2}$ "	5"	6"		
8 4	14 3	16 9	19 3	26 11	30 1	45 1		

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

The following prices are subject to 20 per cent. trade discount:—

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

Cast Iron Soil Pipes and Connections, L.C.C. $\frac{3}{8}$ " metal.

The following prices for soil pipes are subject to 20% Trade Discount, and the prices of the fittings are subject to 20% and 5% Trade Discount.

	2"	2 $\frac{1}{2}$ "	3"	3 $\frac{1}{2}$ "	4"	5"	6"
						$\frac{1}{2}$ "	$\frac{1}{2}$ "
						metal	metal

Minimum weights in lbs. per 6' 0" length	24	30	35	41	46	78	92
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Pipes coated or uncoated per yard run	3/10 $\frac{1}{2}$	4/0 $\frac{1}{2}$	4/5 $\frac{1}{2}$	5/-	5/8 $\frac{1}{2}$	11/8	14/0 $\frac{1}{2}$
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Double sockets extra each	-/11 $\frac{1}{2}$	-/11 $\frac{1}{2}$	-/11 $\frac{1}{2}$	-/11 $\frac{1}{2}$	-/11 $\frac{1}{2}$	1/0 $\frac{1}{2}$	1/0 $\frac{1}{2}$
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Short lengths extra							
2', 3' and 4' per yard run	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/5	-/5

Single spigot branch cast on pipe each	4/3	4/5	4/7	4/9	4/11	7 6	9 3
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Single socket branch cast on pipe each	10 9	11	11 3	11 6	11 9	16	19
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Bends, standard angles each	3/1	3/5	3/9	4/8	5/3	9 4	12 9
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Large radius bends each	4/-	4/4	5/-	6/-	7/-	13	16 9
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Inspection bends raised flange door, 4 gunmetal bolts each	16/1	16/11	17 9	18 8	19 3	31	10 36 6
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Swannecks 4 $\frac{1}{2}$ " and 6" projection each	3/9	4/4	5/11	6/10	7/11	14 11	20 1
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9" ditto each	5/-	5/7	6/10	7/11	9/4	17 1	22 10
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12" ditto each	5/11	6/10	7/11	9/8	10/7	19 1	27 1
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Single branch with two sockets.							
T. pieces.	3 9	4 8	5 7	6 6	7 6	15 10	21 8

T. pieces diminishing two sockets, inverted two sockets.							
Parallel branch pieces not exceeding 6" centres.	4/10	5/11	6/10	7/11	8/11		

Y pieces.							
Anti-syphon branches with curved arm.							

Double branch pieces, three sockets each	5/11	7/-	7/11	9/-	10 3	20 3	27 3
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Inspection branch pieces double oval access door, 2 gunmetal screws each	12/11	14/-	14/11	16 6	17 9	29 2	36 2
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Long branch pieces each	5/-	6/-	7 3	8 6	9 9	19/-	25/-
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CURRENT PRICES

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

COPPERSMITH AND ZINCWORKER, GLAZIER AND PAINTER

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges	
to 24 wire gauge	per lb. - 9½
Copper tube, seamless solid drawn	1 0½
Copper wire 10 and 12 gauge	- 9½
Copper nails, 1" and up	- 10

Fittings for Copper Tubes

Compression Type :	½"	¾"	1"	1½"	2"	2½"
Straight coupling						
each	1 1½	1 4½	2 0½	2 8	3 9½	5 7½
Obtuse elbow ..	1 10½	2 2½	3 3	4 1½	7 1½	10 5½
Tees ..	2 1½	2 5½	4 -	5 9½	9 3	13 1½
Crosses ..	3 -	3 4½	5 2½	6 3½	10 11½	15 3
Reducing coupling						
each	—	1 4½	2 0½	2 8	3 9½	5 7½
Bends ..	1 7½	1 11½	2 11	3 8½	6 7½	9 10½
Brass stop cocks						
each	3 11½	5 10½	8 7½	15 11½	22 3½	37 8½

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

Capillary Type

Straight coupling						
each	7 ½	10 ½	1 3½	1 8½	2 3½	3 4½
45° elbow ..	1 3½	1 8½	2 4½	3 2	4 9	7 1½
Tees ..	1 5½	1 7½	2 8	3 11½	5 7½	8 3½
Crosses ..	1 10½	2 0½	3 4½	4 9	7 2½	10 6
Reducing coupling						
each	—	6 ½	8 ½	1 0½	1 7	2 9½
Bends ..	1 7	1 11	2 9½	3 9½	5 11½	8 3½
Pillar tap connection ..	each 1 -	1 5½				

Extras for Polishing 15%; Chromium plating 40%; Nickel plating 27½%

Zinc

	Quantities of less than 3 cwt.	Quantities of more than 3 cwt.	Quantities of more than 5 cwt.
Sheet zinc, 10 gauge and up per cwt.	32/6	32/-	31/6
8 gauge zinc safe hole perforated sheets, size 8' 0" x 3' 0"	per sheet	4 10½	4 1½
7 gauge ditto		4 4	3 8½
6 gauge ditto		3 10½	3 4

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

	In squares not exceeding 2 ft. 4 ft. 5 ft. Over 6 ft.
18 oz. clear sheet .. per foot super	-2½ -2½ -3 -3½
24 oz. ditto	-2½ -3½ -4 -4½
36 oz. ditto	-4½ -6½ -7½ -8½
Obscured sheet glass net extra	-1½ -1½ -1½ -1½
¾" figured rolled glass, white per foot super	-6½
¾" ditto, normal tints	-9½
Hammered, doubled rolled, Cathedral white	-6
Ditto, normal tints	-8½

Thick Drawn Sheet Glass cut to size

	In squares not exceeding 1 ft. 2 ft. 3 ft. 4 ft. 6 ft. 8 ft.
¾" thick .. per foot super	-9 -11 1/- 1/2 1/3 1/4
¾" thick	-11 1/- 1/3 1/5 1/7 1/9
	In squares not exceeding 12 ft. 20 ft. 45 ft. 65 ft. 90 ft. 100 ft.
¾" thick .. per foot super	1/6 1/7 1/9 — — —
¾" thick	1/10 2/2 2/4 2/8 3/- 3/-

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

British or Foreign Polished Plate Glass cut to size

Ordinary ¼" Substance	Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
In Plates not exceeding 1 ft. super .. per foot super	1/-	1/3	1/7
2	1/4	1/6	1/10
3	1/10	2/1	2/6
4	2/6	2/9	3/2
6	2/10	3/-	3/6
8	2/11	3/4	3/8
12	3/1	3/8	3/11
20	3/1	3/9	4/1
45	3/3	4/-	4/4
65	3/7	4/3	4/11

GLAZIER—(continued)

British or Foreign Polished Plate Glass cut to size—(contd.)

Ordinary ¼" Substance	Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
In Plates not exceeding 90 ft. super .. per foot super	3/11	4/8	5/1
100	4/-	4/10	5/4

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

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

	Plates up to 4 ft. super	All plates over 4 ft. super
1" to 5/8"	per foot super -2	-4
1" to 3/8" exact	-2	-3
1" to 1/2"	No extra	-1½
1" bare	"	-1½
1" exact	-2	-2
1" to 3/8"	No extra	-4½
1" exact	-2	-6

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

Silvering

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

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

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

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

Plates over 160 in. long at special rates.

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

Wired Glass Cut to Sizes

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

Supplied in sizes up to 110 in. long and up to 36 in. wide. For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	12/6
Washable distemper	"	60/-
Petrifying liquid	per gallon	4/6
Ready mixed white lead paint (best) 5-cwt. lots, 14 lb. tins	per cwt.	70/-
White enamel	per gallon	25/-
Aluminium paint	"	20/-
Stiff white lead, genuine English stack process.		
1-ton lots, 1-cwt. kegs	per ton	50/3
Driers	per cwt.	36/-
Linseed oil raw (5-gallon drums)	per gallon	3/1
" boiled	"	3/10
French polish	"	11/6
Knotting	"	16/-
Oil stain	"	12/-
Varnish, oak	"	10/-
" copal	"	16/-
" flat	"	20/-
Turpentine, genuine American 5-gallon lots	"	3 7½
Creosote, 1-gallon lots	"	1/4
Putty	per cwt.	12/6
Size	per firkin	3/6
Best English quality gold leaf, 23 carat	per book	2/3
Extra thick, ditto	"	3/6