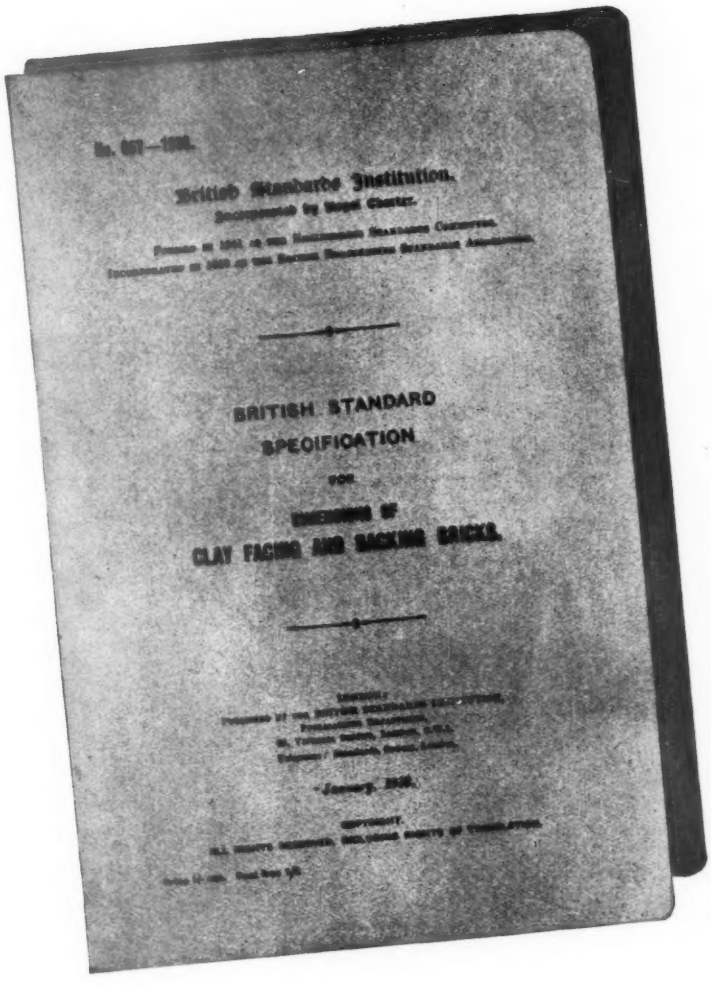
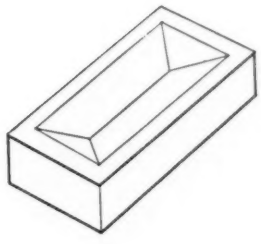
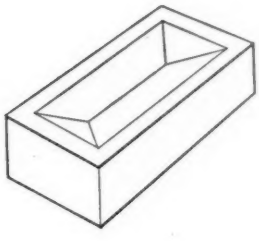
Uniformity in size is essential in building materials



PHORPRES



2″ standard size



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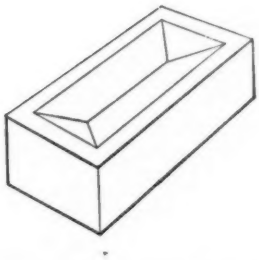

2 7/8″ standard size

(The so-called three-inch size)

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THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER, IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 9 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1

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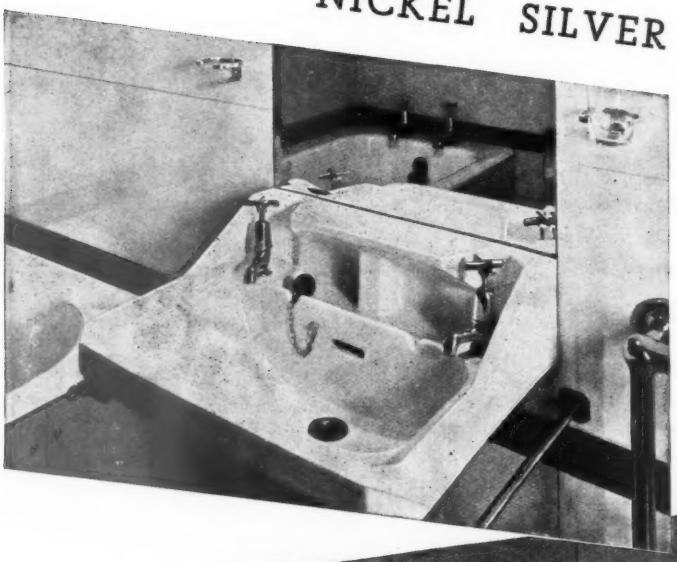
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, AUGUST 18, 1938. NUMBER 2274 : VOLUME 88

PRINCIPAL CONTENTS

NICKEL SILVER PLUMBING FITTINGS in the QUEEN'S HOTEL, LEEDS



Associated Architects: W. Curtis Green, R.A., Son & Lloyd, and W. H. Hamlyn, F.R.I.B.A.

It is typical of the high standard of the services offered by the Queen's Hotel at Leeds that every bedroom has its own private bath or bath lobby. For the visible metal plumbing fittings in these rooms, the architects specified nickel silver.

Nickel silver containing 18-22 per cent. nickel has the dual advantages of good appearance and durability. It has an attractive soft white colour which looks equally effective against white or coloured fireclay, and as it is a solid white metal it has no plating or coating to strip or wear off. Too drastic cleaning, a frequent cause of damage to plated fittings, will not harm fittings of nickel silver.

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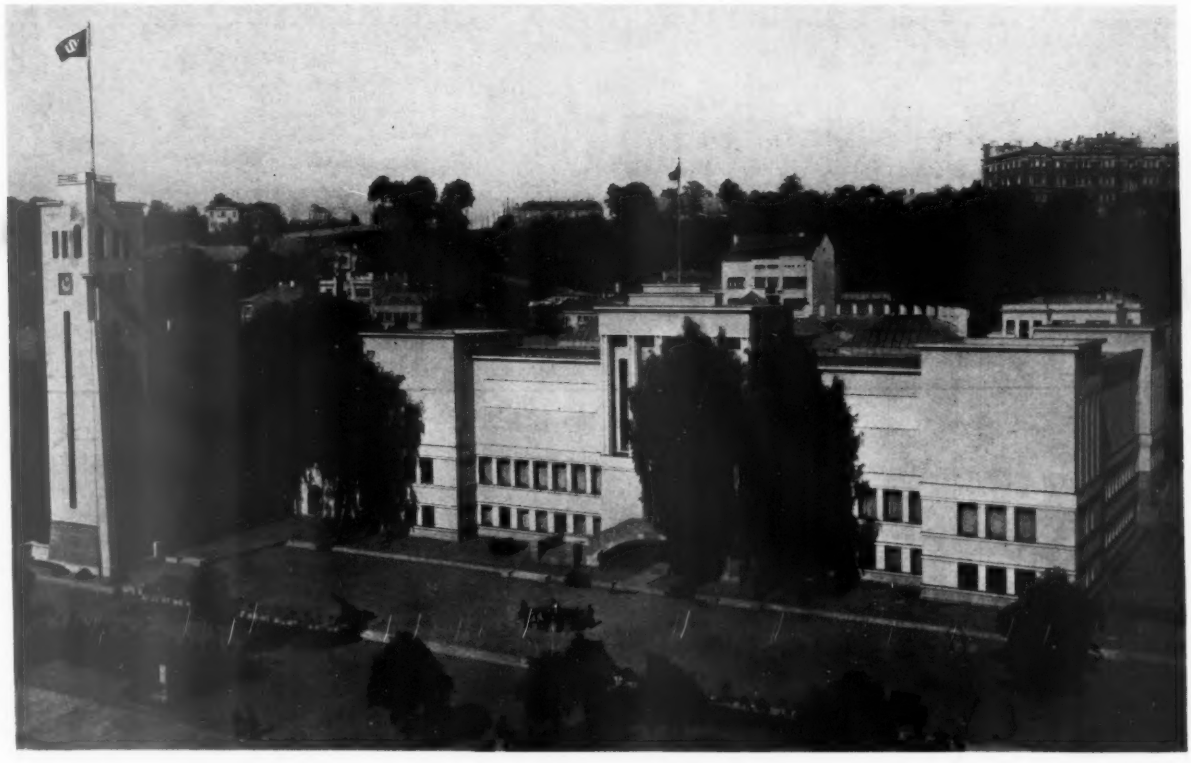
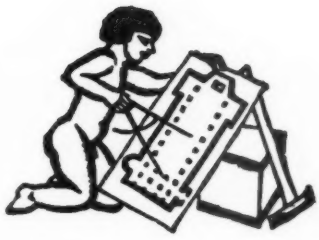


LITHUANIA

The recently completed War Ministry Building in Kaunas, Lithuania.

HOUSE OF GERMAN SPORT, BERLIN

Headquarters of the German National Fitness organizations, the House of German Sport recently completed in the Charlottenburg district of Berlin by the National Socialist architect, Herr March, is designed in the ideologically correct style of neo-classicism favoured by the Third Reich. Above, the central courtyard with its swimming pool.



DESIGN FOR EDUCATION

THE announcement of the names of the seventeen firms of architects appointed to design schools for the West Riding C.C. will give a great fillip to educational design in this country. That such a fillip is needed, was demonstrated conclusively some two years ago in the JOURNAL's Special Issue on Schools. And though the situation has improved considerably for the better in the intervening period, there is no doubt that this country is still very far behind in its provision of school buildings shaped to modern educational trends. We have, for instance, nothing to compare with André Lurçat's work at Villejuif, that at Suresnes, by Beaudoin and Lods, or even the far less radical Katarina Nya Realskola at Stockholm. The question that seems only recently to have been asked is, Why ?

Despite the present policy of the Board of Education, the "Ten-Year Plan for Schools," the National Health Campaign, the R.I.B.A. Exhibition, the *News Chronicle* Competition—and perhaps one may add the efforts of this JOURNAL—it is undoubtedly because the fundamental national importance of school design is still almost pathetically obscure to a remarkable number of people, and, unfortunately, to a large percentage of educational authorities. What are known in Fleet Street as the "class" newspapers (a technical term), continue to receive, and to publish, their quota of communications from readers, at Puy de Dôme and Arosa, running the whole gamut of emotion in their indignation at any increase in educational services ; while the launching by the local boards of a school development programme is frequently no more than an unwilling connivance at something still regarded as an unnecessary luxury.

It was not until the beginning of this century that the conception of State responsibility for education began to be appreciated ; that a fundamental task devolved upon the community to provide for the growing generation those ideas on the use and development of their minds and bodies, the appreciation of an art of living, that would later largely determine their actions as citizens. It was not until a very few years ago that school design, by the efforts of some struggling pioneers, and one or two noteworthy competitions, rose above those dreary standards which had so long obtained that school building programmes did not seem, even apparently to architects, to present an architectural problem at all.

During the next twelve months there is an opportunity before the local authorities and the architectural profession to carry this advance a considerable step further ; perhaps the most considerable step that has yet been taken in educational progress. For the current year the Ministry of Health has sanctioned to the local authorities loans for educational purposes of 15·2 million pounds, as against 10·1 million pounds in the preceding twelve months, the majority of which will be used to carry out building programmes; while next year loans may be expected to exceed this present figure. Here, then, is an opportunity that we may hope the 300 odd local educational authorities throughout the country will seize ; the opportunity to use the architectural profession to an extent never undertaken before in a comprehensive building programme for modern needs.

Mainly, of course, work must be undertaken by the official architects, whose experience will be necessarily superior to that of the freelance architect. But a good case may be made out for awarding a percentage of commissions to outside men. Apart from the North and West Ridings, Cambridgeshire and Derbyshire, two of the most progressive counties educationally, have found this method successful, since the measure of competition, and the possibilities of comparison, inevitably give a great stimulus to the building of better schools.

There are in fact two points for revision before we may look with complete satisfaction on the Health Minister's increasingly generous disbursements to the authorities. The first is that the efforts of the three hundred odd authorities themselves—some controlling the full range of education for large industrial communities, others concerned only with village elementary schools—should be co-ordinated under the direct control of the County Councils, and their building schemes carried out by the appropriate official architect's department. The second point is that a definite —minority—proportion of all schemes undertaken should be commissioned from private architects, who would be selected on an enlightened competitive basis.

By this means, it should be possible to invigorate that conservative attitude to design which at present too often infuses official school architecture, while at the same time throwing open to a wider range of architects the opportunities of vast social importance offered by school building.

In this connection it is interesting to recall the account published not long ago of Lurçat's method of working on Villejuif :

> He disregarded all existing schools ; he did not spend a single instant visiting schools which had already been built, nor did he undertake any research into the solutions provided by other architects. Instead, his preparatory work was devoted to the study of the problem, to consulting educationists, psychologists, teachers and doctors. In this way he became acquainted with child mentality, way of life and peculiar requirements. He was thus able to draw up a table of "needs," and give to each one its appropriate solution.

It is on the independent and original research of such architects that such a system would be able to draw.

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NOTES & TOPICS

AUGUST

WHEN one has had one's holiday it is, I find, about the third week in August that sympathy blossoms for the daily Press.

*

The assistant or the secretary or whoever knows where the important thing is, are, of course, away. So are the clients whom one is still trying to persuade. But when one finds that the clients with whom one is carrying on a rearguard action are none of them apparently going away at all, studying the August hardships of others becomes a real help.

*

The Times, which cannot admit the existence of a silly season, produces a demure little correspondence about the history of Charlie Chaplin's moustache ; in which Mr. G. Brian Herbert illumines an obscure byway of professional knowledge by tracing the famous trousers to the late Mr. Roscoe Arbuckle.

*

Other dailies, after squeezing the last drop—several times over—from the German manœuvres and the affair of the police court and the motorist, have also fallen back on the knowledge or human-interest values of the profession.

*

Mr. Goodhart-Rendel's appeal for the preservation of the Mausoleum at West Wycombe was followed by . . .

MR. HAMILTON'S PALACE

. . . my fellow-columnist, Peterborough of the *Daily Telegraph*, unearthing a hot news-story recently (hot, at least, to me), when he discovered that Mr. Hector Hamilton, the architect of the Air Ministry's new home in Berkeley Square, was the same Hamilton who won the Moscow Palace of the Soviets competition in 1932.

I had always assumed that Mr. Hamilton was one of those American prodigies who rise to momentary eminence from time to time, and then seem to disappear.

*

The Russians made the same mistake, apparently. For when they discovered that Mr. Hamilton was none other than an Englishman (as Anita Loos would say)—and in *1932*—they gave Mr. Hamilton his 2,000 dollars and called the deal off.

*

At least that is Peterborough's story, and apparently he's sticking to it.

THE CHARING CROSS EXHIBITION

Returning as I must to August in London, I find I was wrong about the complete absence of the map (showing sizes of the armies of the world) at the Charing Cross Exhibition. This week it *is* there.

*

The exhibition, *His Majesty's Army*, now emerges as one in several acts. Last week it was the technical training schools. This week it is mechanized infantry, the territorial army and the auxiliary R.A.F. A fearsome array of weapons are on show, with several young and intelligent demonstrators ready to explain what can be expected if the remaining sanity in Europe proves insufficient to go round.

*

On Monday the display was inspected by the Deputy Director of the Territorial Army, Major-General Sir John Brown, one of whose jobs, I believe, is illustrated in this issue.

HIGH ENOUGH

I have just been looking at the photographs of the new Vallot refuge on Mont Blanc, a sectional building which some of you may have seen at the Paris Exhibition last year. 14,500 feet up, at the foot of the last *arête* leading to the summit ; a site which appears to have its difficulties.

MARK HAMBURG'S DAUGHTER TO WED.—Mr. Edward Lewis, a London architect, discussing the score of a concerto his fiancée, Miss Michael Hamburg, is to play at Queen's Hall shortly. They are to be married in October.

From "The Nottingham Guardian."

One of the photographs shows a porter carting up a sheet of plywood about 6 ft. square, apparently in one of those frames itinerant glaziers use for carrying glass—another job I shouldn't like, for any puff of wind could take you sailing off into space with quite far enough to fall.

ALONE AT LAST

My picture, from the *Manchester Guardian*, shows Herr Hitler testing the acoustics of the rebuilt Congress Hall at Nuremberg.

*

Incidentally, I liked gallant General Sir Ian Hamilton's reason for assuming that Hitler was a great man. Or at least the reason ascribed to him after his recent visit to Germany.

*

"After he had chosen the site for his home at Berchtesgaden," said Sir Ian, "the first thing he did was to build a window 60 yards wide and 40 yards high, looking right through the Alps to Salzburg.

*

"Having built the window, he built the house round it."

RURAL SLUM AT OLYMPIA

The theme of the Housing Centre's "New Homes for Old" Exhibition at Olympia during the course of the Building Exhibition will be rural housing. An opportune subject, for rural housing is now receiving close attention from the Government and local authorities in England and Scotland.

*

A rural slum cottage occupied up to a few weeks of the Exhibition is to be demolished and re-erected at Olympia (just as "Susannah Row" was transported in 1934) in order to show the conditions in which many agricultural labourers and their families are living and as an example of one of the chief causes of the drift from the land to the towns.

*

In contrast will be shown a full-size timber cottage, designed in consultation with the Timber Development Association and with accommodation approved by the Ministry of Health for rural housing.

WASH AND BRUSH UP

Major Athoe, I see, is suggesting that local authorities be given powers to make everyone renovate the outside of their properties "regularly and frequently." Aberdeen has already applied for some remarkably wide powers which cover everything from refuse to "neglected sites," and if the Council gets them I daresay several other cities will follow suit.

*

At the time of the Coronation everyone appreciated the spruceness of London, and large numbers of architects discovered interesting buildings which they had never noticed behind inches of soot. And therefore, and especially as a tenant, I welcome frequent compulsory redecoration.

*

"Neglected sites" is a more difficult problem. A woman devotee of Hitler (left) spent a Sunday lunchtime pointing out to me that the site in Knightsbridge where a score of houses have stood derelict for years would never be allowed in Berlin. There, site-owners must get on or get out—space is too valuable to be wasted.

*

As an architect I felt a twinge of agreement. As an architect (or a sentimentalist) I wondered to myself what we *would* get in Knightsbridge eventually.

"CITY OF TO-MORROW"

Advance publicity promises some architectural wonders for the 1939 New York World's Fair. Among them a sphere 200 ft. in diameter—the "largest ever"—or is it, I wonder? The designer, Mr. Henry Dreyfuss, who has constructed this "without internal struts or girders," proposes to transport his visitors through the body of the sphere on suspended moving platforms from which they will see below them "the City of Tomorrow Morning—Democracity."

*

A "perfect traffic system," green belt and decentralized factory zones will be shown, incorporating the ideas of "all the leading American and European architects." Mr. Dreyfuss will disclose these wonders in a music-synchronized tour of six minutes—"each of the 360 seconds being accounted for on a time chart."

*

Six minutes?—*more* than enough.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

BUILDING EXHIBITION

The 21st biennial Building Exhibition will be opened by Sir Philip Sassoon, First Commissioner of Works, at Olympia, London, on September 16 next at 4 p.m. A vote of thanks to the First Commissioner of Works will be proposed by Alderman W. H. Birch, J.P. (York), President, National Federation of Building Trades Employers, and seconded by Mr. George Hicks, M.P., President, National Federation of Building Trades Operatives. The exhibition will remain open until October 1. We are informed that 400 firms who are to show builders' materials and plant are taking great care over their exhibits and that a good number of products will be seen for the first time at Olympia and marketed simultaneously with the opening of the exhibition.

MARYLEBONE ROAD NEW POLICE STATION COMPETITION

In connection with the above competition arrangements are now being made for the designs submitted to be on public exhibition in the New Hall of the Royal Horticultural Society, Greycoat Street, Westminster, S.W.1, as from Monday, August 22, to Saturday, August 27, inclusive, from 10 a.m. until 8 p.m. on Monday to Friday, and from 10 a.m. until 6 p.m. on the Saturday. There will be no charge for admission.

ARTS AND CRAFTS EXHIBITION

The Arts and Crafts Exhibition Society will hold the 50th Anniversary Exhibition of the Society at the Royal Academy from November 4 to December 3, 1938. The first exhibition of the Society was held in 1888 as an effort to encourage the work of individual artist craftsmen and to establish a closer relationship between the worker and the public. The Society was formed by a group of decorative artists, most of them members of the Art Workers' Guild, and was the result of vigorously expressed discontent with the policy of the Royal Academy of that day.

In the past these exhibitions expressed the revolt against industrial production and showed only handicrafts. In its 50th Anniversary Exhibition the Society will show a special section devoted to the work of the craftsman designer, where mechanically produced articles designed by members demonstrate the impact of the Society on industrial production.

It will be the first time that mass-produced goods designed by craftsmen have been shown by the Arts and Crafts Exhibition Society at the Royal Academy.

THE ARCHITECTS' DIARY

Thursday, August 18

POLYTECHNIC SCHOOL OF ARCHITECTURE. *Exhibition of Students' Designs. At the Building Centre, 158 New Bond Street, W.1. Until August 26.*

Monday, August 22

LONDON SOCIETY. *Visit to Chiswick Products, Burlington Lane, W.4. 3 p.m.*

Wednesday, August 24

LONDON SOCIETY. *Coach drive to some modern churches in South London: St. Peter's, St. Helier; the Barn Church, Cheam; Church of the Good Shepherd, Carshalton, and St. Augustine, Tooting. Leave Lancaster House 2 p.m.*

Sunday, September 4

ARCHITECTURAL ASSOCIATION. *Annual Excursion to Holland. Until September 13.*

SANITARY INSPECTORS' ASSOCIATION. *Annual Conference at Edinburgh. Until September 10.*

Friday, September 16

BUILDING EXHIBITION. *At Olympia. To be opened by Sir Philip Sassoon at 4 p.m. Until October 1.*

SLUM CLEARANCE AND REHOUSING

The most recent figures showing the position of slum clearance and rehousing in England and Wales are summarized below:

Clearance Areas and Orders.—During July local authorities declared areas comprising 3,101 houses representing the displacement of 11,027 persons, as compared with 2,105 houses and a displacement of 8,041 persons in June.

The Orders submitted during July covered 3,581 houses and the displacement of 11,121 persons, as compared with 2,319 houses and the displacement of 10,689 persons in June.

The Orders confirmed during July covered 5,854 houses and 22,534 persons as compared with 5,480 houses and 23,245 persons in June. The total number of houses in confirmed Orders is now 202,104, involving the displacement of 855,687 persons.

Rehousing Progress.—The latest available figures are those for June. At the end of that month there were as many as 75,010 houses under construction as compared with 73,270 at the end of May and 64,108 at the end of June last year. 7,569 houses were completed during June as compared with 7,795 during May and 5,857 during June, 1937.

The great majority of these houses are being provided for rehousing persons displaced in connection with slum clearance schemes.

New houses approved during July numbered 7,712 (as compared with 4,957 in June and 7,379 in July 1937).

OBITUARY

SYDNEY TUGWELL

We regret to record the death at Scarborough of Mr. Sydney Tugwell, F.R.I.B.A., the former Bournemouth architect. He was 69 years of age. For more than 35 years Mr. Tugwell practised in Bournemouth, first as partner in the firm of Messrs. Brewerton and Tugwell, and later on his own. Most of his work was in connection with the design of private houses, but he was responsible for designing the operating theatre and maternity block at the Cornelia Hospital, Poole, and also the reconstruction of parts of St. Osmund's Church, Parkstone. He retired last year.

GEORGE E. BOLSHAW

We regret to record the death, at the age of 75, of Mr. George E. Bolshaw, the Southport architect. Born at Crewe, Mr. Bolshaw served his articles in Warrington, and went to Southport in 1886. His works in Southport include the Westminster Buildings, the Coronation Buildings, and the recently altered Prince of Wales Buildings. He also designed several hospitals and schools in Lancashire, Cheshire and Derbyshire.

R.I.B.A.

THE EXAMINATIONS

The Final Examination

The R.I.B.A. Final Examination was held in London and Edinburgh from July 13 to 21, 1938. Of the 244 candidates examined, 139 passed (53 of whom sat for and passed in Part I only, and one of whom sat for and passed in Part II only), and 105 were relegated.

The successful candidates are as follows:

Applegarth, Arnold; Bailey, Hector Oswald; Baker, Leslie Wreford; Ball, William Kenneth (*Part I only*); Barber, Anthony Gerald; Barnes, William Edwin; Bateman, Thomas Robert (*Part I only*); Bates, Harold Selwyn; Beaumont, Harold Cameron; Bellamy, Albert Alexander; Bidwell, Hugh Dryden; Blackburn, Jack; Blackman, Mervyn Henry Gerald; Blease, Leslie; Boddy, James William (*Part I only*); Booth, Frederick Harry; Bragg, Stanley Edward; Broadbent, Francis George; Broadbent, Ronald; Brown, Vincent; Burden, Stanley Ernest; Chapman, Ronald Frederick Henry (*Part I only*); Chappell, Denis (*Part I only*); Choate, Kenneth Haigh; Clarke, David; Clementson, John George; Cooper, Robert Ernest (*Part I only*); Corbett, George Uvedale Spencer; Cox, Geoffrey; Crook, Alec Charles (*Part I only*); Crookes, Rowland (*Part I only*); Dakin, John William Trevor (*Part I only*); Daniell, James Henry; Darlow, Henry Arthur Jack; Dixon, Charles John; Dorey, Wilfrid Athelstan (*Part I only*); Down, Albert Henry; Farms, Kenneth William (*Part I only*); Finch, Francis Edward (*Part I only*); Fisher, Osborne Kirkton (*Part I only*); Fisk, Sidney Hubert (*Part II only*); Forge, James William Lindus; Foster, Jack Stroud (*Distinction in Thesis*); Fountain, Edgar Walter; Franks, Ronald Herbert; Fuller, Thelma Barbara (*Part I only*); Garwood, Walter William (*Part I only*); Goldfinch, Donald Albert; Graham, William Kenneth (*Part I only*); Green, Harry Albert (*Part I only*); Griffin, John Oswald (*Part I only*); Hall, Harry Desmond (*Part I only*); Hargreaves, Harry

(*Part I only*) ; Harris, Eric Bright (*Part I only*) ; Harris, Maurice Henry (*Part I only*) ; Harris, Robert James (*Part I only*) ; Hawkins, George Heslop ; Hayes, Francis Oswald ; Hill, John Dalton ; Hodgson, Edward ; Holmes, Percy (*Part I only*) ; Holtby, Richard (*Part I only*) ; Hopkins, William Albert Larché ; Howard, Francis Aylmer ; Howes, Anthony John (*Part I only*) ; Hughes, Norman Cedric ; James, Bernard Vincent (*Part I only*) ; James, Ernest Edwin ; Jones, Albert Hugh Dennis (*Part I only*) ; Jordan, Ernest Dennis ; Kenchington, Margaret Frances (*Distinction in Thesis*) ; Kennedy, Thomas Brian ; Lawrence, Frederick (*Part I only*) ; Leathem, James Wardle ; Lee, Charles ; Lilley, Victor George ; Lock, Sidney Charles ; Lovell, Henry Wayne (*Part I only*) ; Lowe, Cecil William (*Part I only*) ; Luxton, Horace Newcombe ; Lyon, George William ; MacConville, David Gordon ; Mason, Owen John Currie (*Part I only*) ; Maudsley, John Alan ; Mills, David Butler ; Moss, Geoffrey ; Mulvey, William John ; Myers, Denys (*Part I only*) ; Nash, Gordon Douglas ; Nicholls, Herbert Edward ; Pack, Edwin Victor (*Part I only*) ; Peace, David Brian ; Pearce, Eric ; Penn, Raymond Charles (*Part I only*) ; Pickett, Charles John ; Pilling, Harry (*Part I only*) ; Pite, Frederick Robert (*Part I only*) ; Pratt, Arthur Ronald (*Part I only*) ; Pratten, Frederick Ralph ; Prince, Arthur ; Prince, Dorian Herbert Stanley ; Ralph, Thomas Carlyle (*Part I only*) ; Ralph, William Herbert (*Part I only*) ; Raw, Kenneth Malcolm ; Redknap, Philip Houghton ; Reeves, Arthur George ; Rennie, Arthur (*Part I only*) ; Ross, Sydney George William (*Part I only*) ; Rother, Vincent Jacob ; Royce, Norman Alexander (*Part I only*) ; Sage, Howard Wilfred Mortimer ; Sanders, Thomas Bale ; Sayce, Gordon Henry (*Part I only*) ; Smith, Kenneth John ; Spooner, James Corping ; Stewart, Ronald Alexander ; Sutcliffe, Tom Allison (*Part I only*) ; Taylor, Maurice Ewan ; Thomas, David Lloyd (*Part I only*) ; Thompson, Alan ; Thompson, Eric Hamilton (*Part I only*) ; Thomson, William Frederick ; Torrens, Richard Michael ; Vaux, Edward Hugh ; Wakefield, Peter Laurence Hartley ; Walls, Arthur William (*Part I only*) ; Ward, Elizabeth Murray ; Watson, Alexander Frederick ; White, Henry Alfred (*Part I only*) ; Wildgust, Albert (*Part I only*) ; Williams, Alfred Edward ; Williams, Evan ; Williams, Jonathan Winston ; Wood, Kenneth Martin (*Part I only*) ; Woolmer, Stanley Charles ; Wooster, Clive Edward Doré ; Young, Richard Arthur ; Zunz, Werner (*Part I only*) (not a British subject).

The Special Final Examination

The R.I.B.A. Special Final Examination was held in London and Edinburgh from July 13 to 19, 1938. Of the 62 candidates examined, 19 passed (8 of whom sat for and passed in Part I only, and 1 of whom sat for and passed in Part II only), and 43 were relegated.

The successful candidates are as follows : Briggs, Alan Arthur ; Byne, Arthur Cecil ; Carpenter, Leonard John ; Cook, Ellis Jerden (*Part I only*) ; Deuchars, James (*Part I only*) ; Gaskell, Eric ; Glover, Archibald William (*Part I only*) ; Hall-Kenney, James Herbert ; Helme, Leonard Douglas (*Part I only*) ; Hunt, Glenton de Glenton ; Jury, Archibald George (*Part I only*) ; Mawer, Eric Douglas ; Muir, Harold John (*Part II only*) ; Oak, George William ; Pertwee, Alice Nora (*Part I only*) ; Price, Brinley Richard (*Part I only*) ; Torok, Gyula Laszlo (not a British subject) ; Wilkinson, Eric Valentine ; and Woodhead, Alan John (*Part I only*).

PROFESSIONAL PRACTICE

The Examination in Professional Practice for students of Schools of Architecture recognized for exemption from the R.I.B.A. Final Examination. —The Examination was held in London and Edinburgh on July 19 and 21, 1938. Of the 17 candidates examined, 9 passed and 8 were relegated.

The successful candidates are as follows : Allen, William Alexander ; Gold, Bernard ; Harrison, Ernest Ronald ; Henderson, John George Drysdale ; Hird, John Grenfell ; Kirkwood, James Smith ; Lennex, Gavin Strathearn Allan ; Sanders, William Hamilton ; and Schneider, Arnold.

Sir Edwin Lutyens, R.A., and Mr. Cecil Masey, working on the plans of the National Theatre in the former's office.

Professor Reilly Speaking

The Revolt of the Students

WHAT may be called, a little colourfully, perhaps, " The Revolt of the Students," is not an isolated phenomenon of any particular school. I have before me a long printed document which the Guild of Undergraduates of the University of Liverpool has prepared for presentation to the Senate. It is nominally a report on the working of the lecture system throughout the university. It is in reality a criticism of the teaching in each department of that university with suggestions for its improvement. The immediate upshot is a demand for less factual lectures and for circulated notes to take their place. But the suggestions go much further than that. They ask for greater and more continuous contact between teachers and taught and for more discussions everywhere between the two. Every lecture, these Liverpool students say, should end with a discussion. There should be in addition in every subject more seminars, that is more small groups of students headed by a teacher researching into and discussing the work in hand. This, they note, means the appointment, as at Oxford and Cambridge, of a great many tutors. Finally they say, and this is where they would be in particular sympathy with the A.A. students, the social implications of each subject must always be considered.

So much then for the general criticism of the undergraduates of Liverpool and the conclusions they have arrived at, whether they are studying arts, science, law, medicine, engineering or architecture. The students of the University of Manchester have, I am told, made a similar report on the teaching they receive, with similar suggestions. Further than these two universities the National Union of Students from all universities and university colleges at their 1938 Congress passed two long resolutions aiming in the same direction. Teaching, these resolutions say, should always be directed towards developing a critical faculty and a power to weigh evidence objectively, and—this is particularly interesting—to promoting an attitude rising above personal interests. No subject, however specialized, should be taught without its historical background, its relations to other branches of learning and its social implications.

The special section of the Liverpool

report dealing with the work of the School of Architecture calls in the first year for a course on the Physics and Chemistry of Building Materials, on Elementary Mechanics with practical demonstrations, and on the History and Functions of the Architect and Builder in Society. Clearly most of these should have been covered by previous work at school. Still, the suggestions are interesting as showing the trend of the students' thoughts today. In later years more conferences are asked for between students and staff, discussions at the end of every lecture, more adequate and longer criticisms of submitted schemes and an extension of the group system of working.

Whether these things are needed at Liverpool or not I cannot say. The point I want to make is the stirring of similar ideas and thought in the student mass everywhere throughout the land and the similarity of the demands that are being made.

Those who have read the first number of the little magazine called *Focus*, now reprinted and obtainable again, which the A.A. students have produced, will know that they fear to lose that attitude of enquiry and research into the conditions and implications of each problem set to them, which their late principal, Mr. Rowse, encouraged. Like students everywhere, not only architectural ones, they feel a new world is in the making, or should be, for the old one is obviously crumbling before their eyes. They feel that in a more real sense than ever before the future of civilization is with the young. The old cut-and-dried solutions to problems will no longer satisfy them, for the problems themselves have new meanings, however they are set. They themselves must think these meanings out before attempting a solution. To quote from the very able contribution of Mr. Anthony Cox in his open letter to H. S. Goodhart-Rendel : " the architect under the impact of entirely new conditions has evolved a technique of thought which colours his attitude to all conditions and makes every problem a new problem. This holds good for all buildings, big or small, for the factory accommodating thousands and the privy accommodating one. And it will continue to hold good until new norms have been established."

There it is then. The students everywhere contemplate a new world of which they are to be the builders. It is a fine-spirited attitude, one to be welcomed, not repressed. The bravery of it must be admitted by all. For the architectural students it is especially brave at this time when, whatever is eventually built, according to old conventions or in some new way, may be obliterated in a moment by the bombing aeroplane. Indeed, when I think of them and of other students, like David Hayden Guest, fighting and dying in Spain to maintain the freedom we still enjoy, the freedom which allows us to explore these new worlds, I am more and more impressed by the youth of today. What a privilege to try and teach them, or rather to search out with them the new methods of living, the new ways of building and the uses of the new materials—perhaps, too, to prevent their becoming a little too dilettante by explaining the conditions existing in the outside competitive world in which, at any rate for a time, they will shortly have to work. Clearly the old dictator type of teacher is no longer any good, except for the duffers. The others need an experienced friend who will enter into the great quest with them as enthusiastically as they themselves. If he has himself taken a few steps forward in actual building so much the better.

For the new type of teacher required today, whether in the universities as a whole or in their schools of architecture —freer and more self-governing than anywhere else—or in the schools of architecture outside, like the A.A., there is a glorious time ahead, for never was there such an active enquiring spirit abroad among the students. For the wrong type of teacher there is, equally surely, hell.

So much for education. Examining and testing is another matter. A couple of weeks ago the profession was finally closed by the passing of the Registration Amending Act restricting the use of the term " architect." This implies a test. The test of factual scientific knowledge is easy. Everyone will admit that. How, with all this research and questing after new forms and group-designing, is one to test the individual student as an individual artist ? For that it seems to me there must be individual work, and for that I still think, as in a prize competition, the " irrevocable esquisse " or something equally individual is essential. We do not want today to mark students numerically and put them each in order. That has been given up in the arts faculties of all universities for fifty years or more. A few grades is all that are necessary or desirable. It is desirable, I think, to be able to say that on leaving a man got his diploma or degree with honours, that is to say, that he had shown special ability and was not merely at a pass level. Yet if he works all the time as part of a group no one can say that with certainty. One can make a good guess, of course, but that is not enough in such a public matter. For the occasional test, therefore, I still believe in the Beaux Arts system, not of design, but of competition. For the final assessing of the student's design work at the end of each session one must have, too, the one man show as well as the group show.

Perhaps I *am* an old fogey. When I meet these splendid young men of today I often feel I am.

EXHIBITIONS

[*By D. COSENS*]

THE most interesting exhibition in London at the moment is that of Goya's drawings and etchings at the Victoria and Albert Museum, and the opportunity of seeing this large and well-arranged collection is one that should not be missed. It has been lent by the Spanish Government and will be on view until the end of the month. Its loan and exhibition in this country has caused General Franco to express a somewhat illogical anxiety as to its safety, and general disapproval of the whole idea.

Some knowledge of Goya's background; of his opportunism under four Spanish kings, Bourbon and Buonaparte and back to Bourbon again ; of his life as court painter to them all, and as the outstanding artist of the Spanish rococo period ; of his personal life, not only as onlooker, satirist and commentator, but as an independent and uncompromising part of the scene in which he lived ; of his alternating realism and idealism, and the immense energy and rapidity with which he painted, is perhaps essential for the full appreciation of his work. These drawings at the Victoria and Albert, and the etchings he subsequently made from them, were a comparatively late development in the life of Goya the portrait painter, a reaction against the corruption of court life and the horrors of war. The earliest of them, the Caprices, savage attacks on court life and the Church, and thinly disguised satire on well-known individuals, aroused the anger of the Inquisition, and it was only the intervention of Charles IV that saved the artist. The finest of the four series is the group of drawings of the Bull Ring, magnificently observed and noted incidents. Goya is perhaps best known in this country for his macabre and inventive imagination, but it is in the recording of quick and dramatic action in which he excels.

Few of his paintings exist outside Spain, and a loan exhibition of some of his many portraits from the Prado would be exceptionally interesting if that also could be organized while they are hidden away.

In the next room there is a charming exhibition of illustrated books and drawings of flowers, dating from the middle of the fifteenth century to the present day. Mostly they are illustrations to herbals. One is a drawing made about 1770 for Derby china, and one was made by Parkinson, Charles I's herbalist, of his garden in Long Acre. Many of these exact line and wash drawings are very fine, and they seem to express the character of flowers far better than the usual broad, decorative treatment in which shape and structure is often lost.

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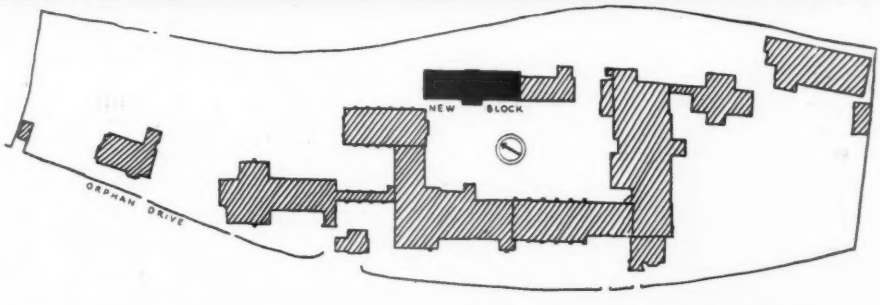
Original Drawings by Goya and new impressions of his Etchings. Victoria and Albert Museum. Until August 31.

ADDITIONS, SEAMEN'S ORPHAN INSTITUTION, LIVERPOOL



SITE PLAN

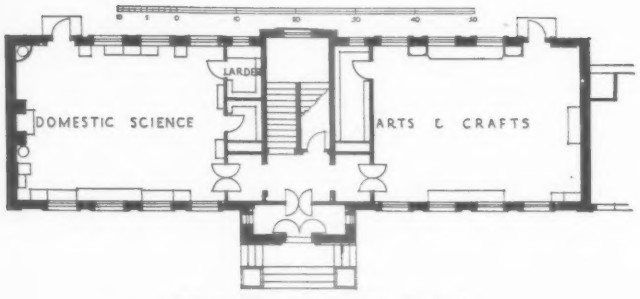
DESIGNED BY

RICHARD H. KELLY

PROBLEM—*A block containing four practical rooms as an addition to the Royal Liverpool Seamen's Orphan Institution, originally designed by Alfred Waterhouse. The rooms have total accommodation for 112 children, and are equipped for domestic science, arts and crafts, wood and metal work, and science and geography.*

Above is the principal elevation and, right, a detail of the carving above the string course by Mr. Edmund Thompson, of Messrs. Thompson and Capstick.

ADDITIONS, ROYAL LIVERPOOL SEAMEN'S

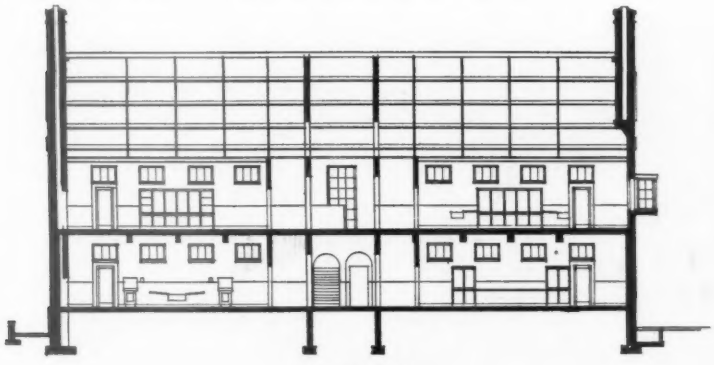


GROUND FLOOR PLAN

CONSTRUCTION AND DRESSINGS—*13½ in. brick with narrow multi-coloured rustic facings and moulded blue brick window surrounds. Dressings are of Portland stone and roof of green Westmorland slates in random courses.*

Above is a detail of the main entrance.

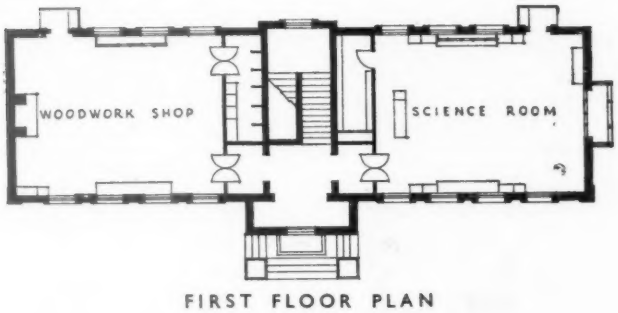
ORPHAN INSTITUTION: BY RICHARD H. KELLY



SECTION

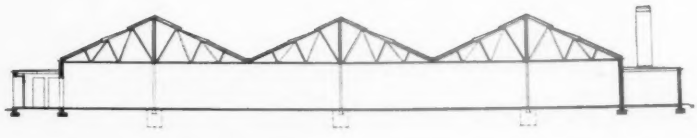
INTERNAL FINISHES—*Domestic science ; floor, teak with tile margin ; walls, green tile dado, and cream over ; furniture, green. Arts and Crafts : floor, wood block ; cream tiled dado and walls ; furniture, buff. Woodwork : floor, maple ; tiled dado, buff ; furniture, etc., steel grey.*

Above is the geography room. On the right, the entrance hall, the domestic science room, and the woodwork room.



FIRST FLOOR PLAN

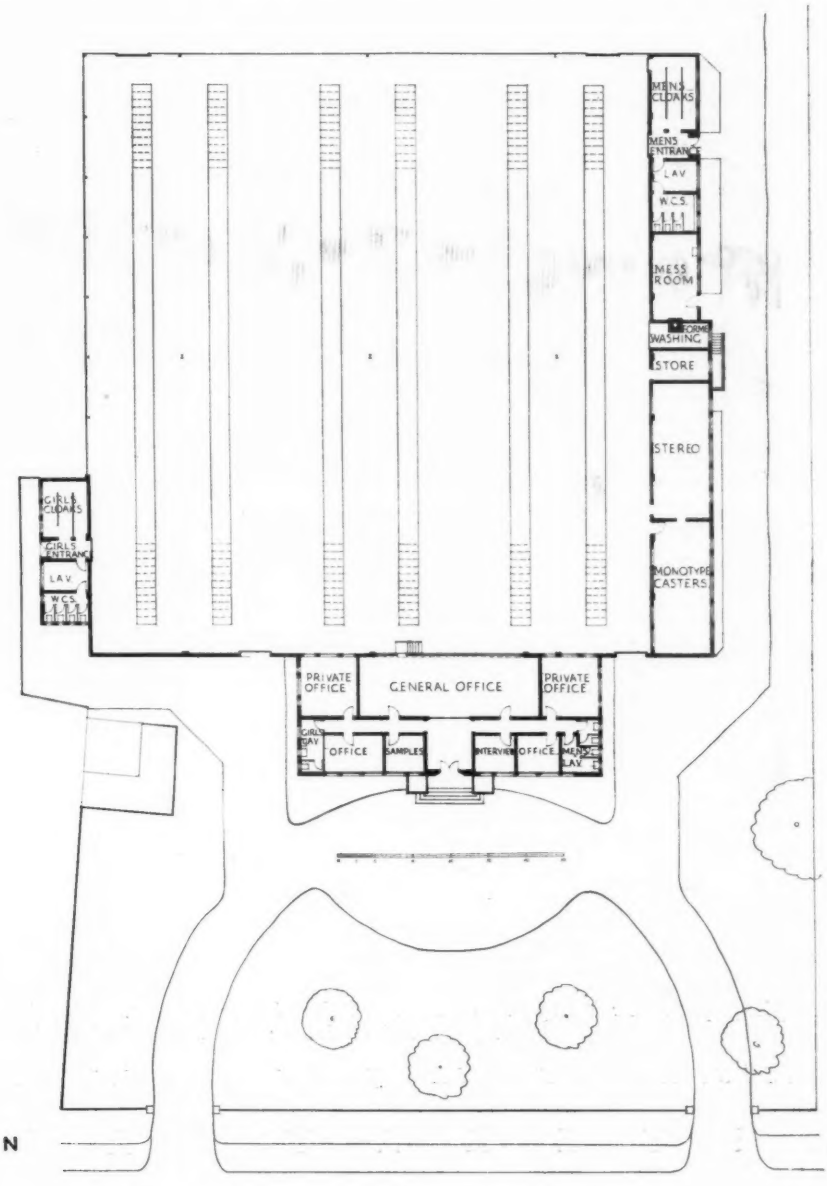
PRINTING WORKS AND OFFICE BLOCK, WORCESTER:



SECTION

PROBLEM AND PLAN — *Printing works and administrative offices. The plan is of normal type with offices facing the forecourt, with working space behind and subsidiary process rooms and lavatories to one side. The principals' offices overlook the working space and also the main works entrances.*
Top, an aerial view, and, left, the office front.

BY SIR JOHN BROWN AND A. E. HENSON



GROUND FLOOR PLAN

CONSTRUCTION AND FINISHES—*Office Block: 11 in. cavity walls, white facings and artificial stone dressings. Flat roofs of timber and patent grit-finished bituminous sheeting. Steel windows and roof lights. Internal corridors are finished in rubber and office in narrow width deal. Hall is panelled in oak and offices in composition board with plaster frieze. Decorative finish in Cotswold blue and pale grey. Works Block: 9 in. brick walls with steel framing and trusses finished with patent steel decking and roof glazing. Two side walls are temporarily covered with asbestos-cement sheeting. Floors are of 1½ in. grano. finish. Dados of patent petrifying enamel with Factory White over. The general contractors were Bowles and Son; for list of sub-contractors, see page 300.*

PRINTING WORKS AND OFFICE BLOCK, WORCESTER

The photographs show : top left, the entrance hall looking into general office. Top, right, the work space. Below, left, the general office, showing observation window ; right, another view of the working space.

DESIGNED BY SIR JOHN BROWN AND A. E. HENSON

LITERATURE

HEALTH

Nineteenth Annual Report of the Ministry of Health, 1937-1938. H. M. Stationery Office. Price 5s.

THE nineteenth annual report of the Ministry of Health, dealing with the year 1937-38, was published on Thursday last as a Command Paper. The report covers the whole range of the Ministry's work, including finance, public health, public assistance, housing, and national health insurance and pensions. A report on the work of the Welsh Board of Health is included.

FINANCE

The Ministry was responsible to Parliament in 1937-38 for a total expenditure of £147,300,000. Of £69,800,000 spent during the year on the services administered by the Ministry, £2,274,136 went on central administration. The remainder consisted of grants to local authorities (including "block grants" amounting to £47,502,000 and housing grants of £14,666,000) and to National Health Insurance Funds.

HOUSING

Further progress in the work of slum clearance, and new provision for the abatement of overcrowding and for improving the housing conditions of the agricultural workers, are the main features recorded.

Slum clearance and re-housing.—The year under review was the last in the original five-year plan of slum clearance. By March 31, 1938, orders for slum clearances including 218,167 houses, had been submitted by local authorities, a figure 10,667 in excess of the total clearance area programme originally formulated in 1933.

During the five-year period, 262,807 new houses had been approved for re-housing purposes under slum clearance, a figure equal to nearly 94 per cent. of the houses to be demolished under the original slum clearance programme.

Since 1933, 800,000 people have been moved from slum houses into new houses. Since the war, over 3½ million new houses have been provided in England and Wales, of which over 1 million have been built by local authorities and over 2½ million by private enterprise.

Abatement of Overcrowding.—The Housing (Financial Provisions) Act recently passed, provides, for the first time, for the payment of equal rates of subsidy per house whether the house is built to abate overcrowding or for the re-housing in connection with slum clearance. The new subsidy, which applies to houses completed between January 1, 1939 (in some cases before that date) and September 30, 1942, is normally £5 10s. annually per house for 40 years, with a corresponding annual contribution of £2 15s. per house from the local rates.

"Appointed days" after which it becomes an offence to create new overcrowding have now been fixed for every area in the country, and most local authorities have now reached a stage at which building for the abatement of overcrowding has begun, or is in prospect. It is hoped that with the

new subsidy they will press on steadily with the provision of the new houses needed.

Houses built.—Local authorities built 77,944 houses during the year, as compared with 71,734 during the previous year; of these, 56,726 replaced slum houses.

The number of houses built by private enterprise, without State assistance, during the year was 257,081, as compared with 273,516 during the previous year.

Nearly 225,000 of these houses had a rateable value not exceeding £26 (£35 in Greater London), and a large proportion were built to let.

The average building cost of a non-parlour subsidy house during the year was £355, as compared with £324 in the previous year.

Rural Housing.—A subsidy of £10 a year for 40 years for each house built by a local authority for the agricultural population, whether for slum clearance, the relief of overcrowding or for general needs is provided by the Housing (Financial Provisions) Act, 1938. The district council and the county council are to supplement this payment by a contribution of a pound a year each from the rates. It is estimated that it would be possible to erect sufficient new houses to meet the urgent needs of the rural population at rents between 3s. and 4s. a week, exclusive of rates, by means of these provisions.

At the same time, the grants available for reconditioning existing cottages for agricultural workers have been made available for a further period of four years on slightly more generous terms by the Housing (Rural Workers) Amendment Act.

Finance.—Government subsidies for housing amounted to £14,715,000 during the year, an increase of £560,000 as compared with the previous year. The annual contribution to housing from the rates amounts to about £3,500,000 a year. The total annual contribution from public funds at the end of last year was, therefore, about £18,000,000.

TOWN AND COUNTRY PLANNING

The acreage of land under planning control has increased by about 1,750,000 acres, the total on March 31, 1938, being 24,163,000 acres, as compared with 22,357,000 acres the year before. This represents nearly two-thirds of the total acreage of England and Wales. Ninety-six planning schemes were submitted to the Minister and 31 were approved, as compared with 76 schemes submitted and 16 approved in the previous year. Among the larger schemes were—one of 357,875 acres by the Mid-North Hants Joint Committee, one of 328,828 acres by the North Devon Joint Committee, and one of 95,146 acres by the Isle of Wight Planning Committee. Nearly half the schemes approved during the year relate to Greater London and the Home Counties, and further progress has been made with the various schemes for preserving the South Downs.

Among the topics discussed in this section of the report are various methods of rural zoning, the restriction of ribbon development, and the importance of harmony in design and colour.

IN THAT CONTINGENCY

THE CURE OF SMOKY CHIMNEYS

The following notes have been received from the Building Research Station [Crown Copyright Reserved]:

SMOKY chimneys are not infrequently a source of trouble and of reference to the Building Research Station. Yet methods of avoiding them have long been on record, notably in the writings of Sir Benjamin Thompson, Count Rumford, the eminent physicist who, in the late eighteenth century, published a comprehensive essay on chimney fireplaces. While it would be possible by further investigation—which the Station has not so far been able to undertake—usefully to amplify and to give greater precision to Rumford's findings in their application to modern fireplaces, yet, taken as they stand, they afford a sound basis for dealing with existing troublesome cases and for avoiding such trouble in new buildings. It is useful for this reason to re-state them. His main point, it is important to note, is that *in the generality of cases the root of the trouble lies in the fireplace design.* Briefly, the features of fireplace design which Rumford considered desirable may be interpreted in their application to modern fireplaces as follows (the letters refer to Fig. 1 on p. 284):—

1: A throat (A) perpendicularly over the fire 4 ins. wide.

2: Splayed sides to the fireplace. (Rumford suggested that in most cases the width of the back of the fireplace should be about one-third of that of the opening).

3: Sufficient depth from the wall face to the back of the fireplace to prevent smoking caused, for example, by draughts across the fireplace opening.

4: A horizontal smoke shelf (B) at the level of the top of the throat, which should be a few inches higher than the top of the fireplace opening.

5: Smooth internal surfaces to all smoke passages (C, D and J) and a rounded internal angle to the top of the fireplace opening (K).

Rumford stated, too, that a sloped back (E) improved the efficiency of the fireplace, but that in order not to impede the rise of the smoke into the flue the slope should be gradual and should start immediately above the fire, and terminate 8 or 10 ins. higher. Rumford also referred to other causes, of which one only need be mentioned here, namely, lack of sufficient ventilation. When a room is not provided with special means of ventilation, and doors and windows are practically airtight, the draught of a flue may be reduced sufficiently to cause smoking. In such cases, reconstruction along the above lines may be sufficient to effect a remedy but, if not, ventilation from the outside should be provided.

Rumford was dealing with old-fashioned fireplaces, but it is possible to construct present-day fireplaces on the same principles, as is shown in Fig. 1.

The effectiveness of these suggestions has been tested, in several hundreds of troublesome cases brought to the notice of the station, by making alterations on the lines of Fig. 1. In these instances, it was necessary to cut and build up existing firebacks to some extent, but firebacks are now manufactured which conform to Rumford's recommendations.

The following are notes on the individual experiments:—

A. A bungalow fireplace of modern design was connected to a 9 ins. by 9 ins. flue 20 ft. long. High trees overshadowed the chimney which emerged from the ridge of the roof. It was stated that smoking occurred at all times, but was worse when strong winds blew in certain directions. The builder had tried many ways of improving the draught with no success, among them being the provision of ventilation through the hearth, fitting various chimney pots and cowls, and partial reconstruction of the flue. Reconstruction of the fireplace in accordance with the principles outlined in this note provided a complete cure. No further alteration was made to the chimney and no pot or cowl fitted.

B. In a property consisting of several five-storey blocks of flats nearly all the chimneys gave trouble, though the chimneys of the upper flats smoked worst. The grates were combination ranges, the chimneys emerged from a flat roof and were not higher than the pent houses which stood on the roof over each staircase. As the ranges were not used for cooking it was decided to replace four of them by open fireplaces in accordance with Fig. 1. Three fireplaces in top-floor flats with 9 ins. by 9 ins. flues 12 ft. long and one in a fourth-floor flat with a flue 20 ft. long were chosen for the experiment. In all cases various pots and cowls had proved ineffective as cures for down-draught.

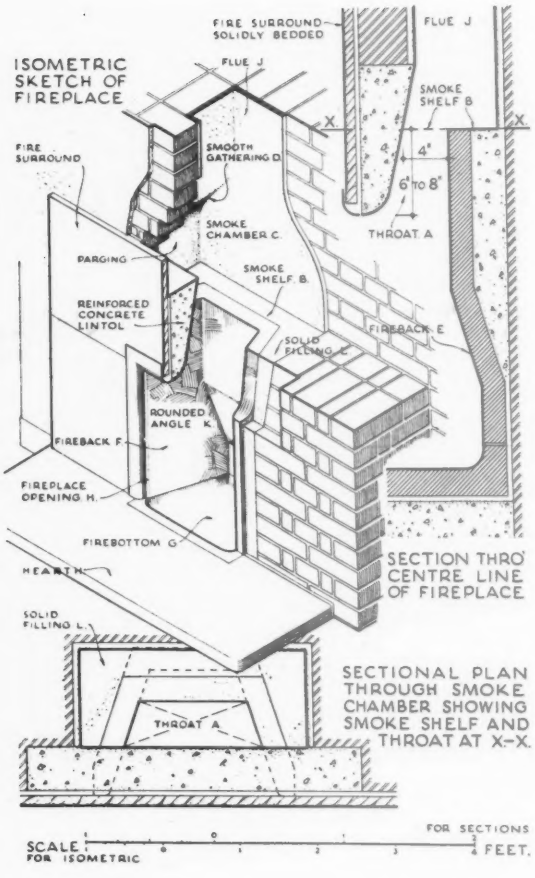
Reconstruction of the fireplace resulted in a complete cure in the case of the fourth-floor flat. In the case of the top-floor flats no smoke nuisance occurred after reconstruction, except to a slight extent during gales in a certain direction, although previously smoking always occurred to some extent and in gales it was impossible to keep a fire burning. In one case a metal cowl 3 ft. high completed the cure, but in the other case a cowl 6 ft. high was found to be necessary to prevent puffs of smoke blowing into the room during gales. Over one hundred fireplaces on this estate have since been successfully treated.

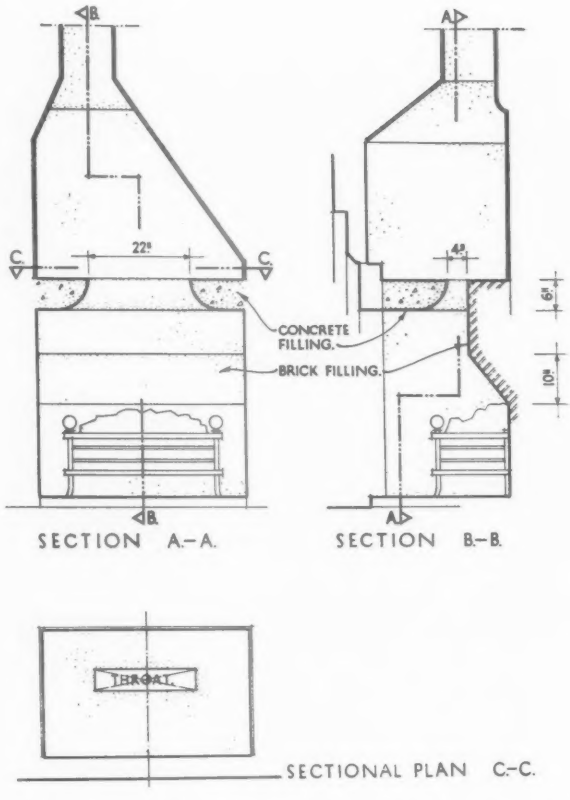
C. In the same property one chimney in a top-floor flat had been raised by 6 ft. and a bend formed in the flue. This had had no appreciable effect on the draught. Reconstruction of the fireplace proved quite successful in remedying the trouble. No cowl was found to be necessary.

D. In the top storey of a small block of flats a fireplace gave continuous trouble. The draught was unaffected by wind and the smoking was in the nature of a steady flow of smoke into the room, and did not occur in puffs. Opening a door or window slightly gave immediate relief. All doors and windows fitted tightly, a carpet prevented draught through floor boards and under doors, and there was no means of ventilation.

The remedy suggested was the insertion of a 9 ins. by 6 ins. square mesh metal ventilator in an external wall. The positions suggested as least liable to cause discomfort were near the hearth (but not immediately under the fire) or at the ceiling level near the fireplace. The latter position was chosen and the suggested remedy proved effective.

E. A large open fireplace of sixteenth-century design smoked under all conditions





Left, Fig. 1, showing construction of fireplace to prevent smokiness. Above, Fig. 2, example of method of reconstructing old fireplace to cure smokiness.

of weather and the room in which it was situated was noticeably draughty.

The installation of a fireplace of modern design could not be considered, and as an alternative the construction shown in Fig. 2, which incorporates the essential features of Rumford's principles, was adopted. The alterations proved successful in eliminating both smoke and draught nuisances.

The length of the "throat" was determined by fixing the width at 4 ins. and making the area of the cross-section equal to the area of the cross-section of the flue.

A number of similar fireplaces have been successfully treated in the same way, but in the case of wider fireplaces the sides have been sloped in accordance with Rumford's recommendation.

The above cases serve to show that the principles of construction advocated by Rumford may be applied successfully in dealing with all kinds of open fireplaces, and it should be emphasized that when the construction of the fireplace and flue entry is at fault these are the parts which should receive attention.

The indications are that even under adverse external conditions fireplaces in which all the features of design discussed above are included will not give rise to trouble unless the flue is badly constructed or too short, provided the room is sufficiently well-ventilated. Flues less than 15 ft. long may require lengthening by extra brickwork or chimney pots. The latter, however, should not be of a smaller section than the effective area of the flue, i.e. the area of the largest circle or ellipse which can be described in the section of the flue.

In some cases of smoky chimneys brought to the notice of the Building Research Station it was found impossible to fulfil all of Rumford's requirements except by incurring excessive expense. In most of these, much improvement was made by the provision of a "throat" and a small smoke shelf which Rumford considered the most essential features of design. However, in all instances where Rumford's recommendations have been adopted in their entirety a complete cure has resulted.

HOUSING

The Minister of Health, Mr. Walter Elliot, has appointed a Committee with the following terms of reference :—

"To consider the observations in paragraph 119 of the Report of the Rent Restrictions Acts Committee (1937, Cmd. 5621) and to advise whether the protection against distress for rent now afforded to tenants of controlled houses should be extended to the tenants of decontrolled houses and other houses of a similar class, and to make recommendations on any other questions in relation to distress for rent in premises of the above classes which may seem to be of importance."

The members of the committee are :—

His Honour Judge C. W. Lilley (chairman), Miss Thelma Cazalet, M.P., Mr. T. Harrison, Mr. P. R. Longmore, O.B.E., Alderman Sir Miles E. Mitchell, Hon. A. E. A. Napier, C.B., and Messrs. T. M. Pritchard, S. S. Silverman, M.P., and Graham White, M.P.

Mr. H. S. H. Hall, D.S.O., of the Ministry of Health, has been appointed secretary to the Committee. All communications regarding the committee's work should be addressed to the Secretary of the Committee, Ministry of Health, Whitehall, S.W.1.

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During the half-year ended June 30 last Scottish local authorities in their operation of the Housing Acts caused 4,699 unfit houses to be vacated with a view to closing or demolition. 21,155 persons were displaced from these houses.

In the same period 8,466 families living in fit overcrowded houses were transferred to uncrowded conditions in larger houses. Of these larger houses, 7,048 were owned by local authorities and 1,418 by private persons. This is the largest number of families decrowded in any half-year since the Housing (Scotland) Act, 1935, became operative.

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CHANGES OF ADDRESS

Messrs. Toms and Partners have removed their offices to "Park West," Kendal Street, W.2. Telephone No. : Paddington 1280.

Mr. R. T. Westendarp, A.R.I.B.A., has removed his office to No. 13 Gray's Inn Square, W.C.1. Telephone No.: Chancery 7267.

ARCHITECTS' WILLS

Mr. F. G. F. Hooper, F.R.I.B.A., of Beckenham, left £15,568 18s. 6d. (net personalty £13,925 11s.). He left £50 to the R.I.B.A.

Mr. T. H. Johnson, F.R.I.B.A., M.T.P.I., of Doncaster, left £98,231 (net personalty £1,761).

WORKING DETAILS : 675

ENTRANCE PORCH & WALL CONSTRUCTION • HOUSE AT SEVENOAKS • WALTER GROPIUS & E. MAXWELL FRY

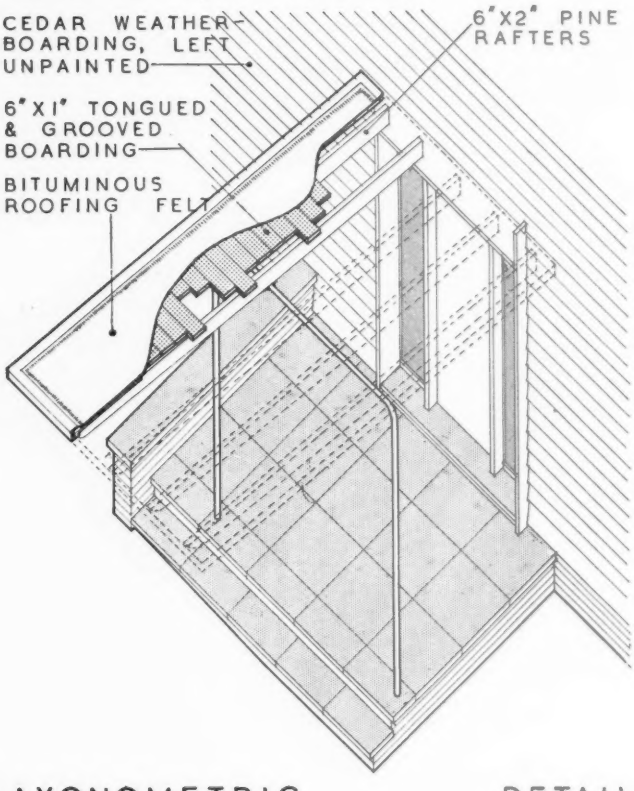
The house is entirely timber framed and the construction aims at thorough insulation. The walls are breeze with, externally, cedar weather-boarding on rough boarding with a layer of building paper between. The weather-boarding is left unpainted and will weather in due course to a silvery grey. Internally, walls and floors are insulated with a layer of compressed fibre slabs, and walls and ceilings are plastered. Windows are also in wood, of a casement type.

The entrance porch consists of a canopy projecting over a small paved terrace and constructed of pine rafters, left open and painted on the underside, and covered with boarding and bituminous felt. The rafters are supported on two tubular steel posts with crossbar.

Details are shown overleaf.

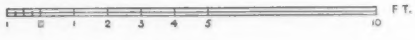
WORKING DETAILS : 676

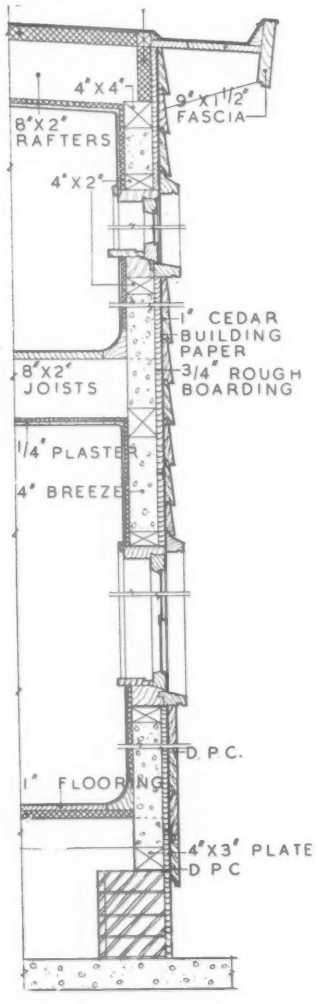
ENTRANCE PORCH & WALL CONSTRUCTION • HOUSE AT SEVENOAKS • WALTER GROPIUS & E. MAXWELL FRY



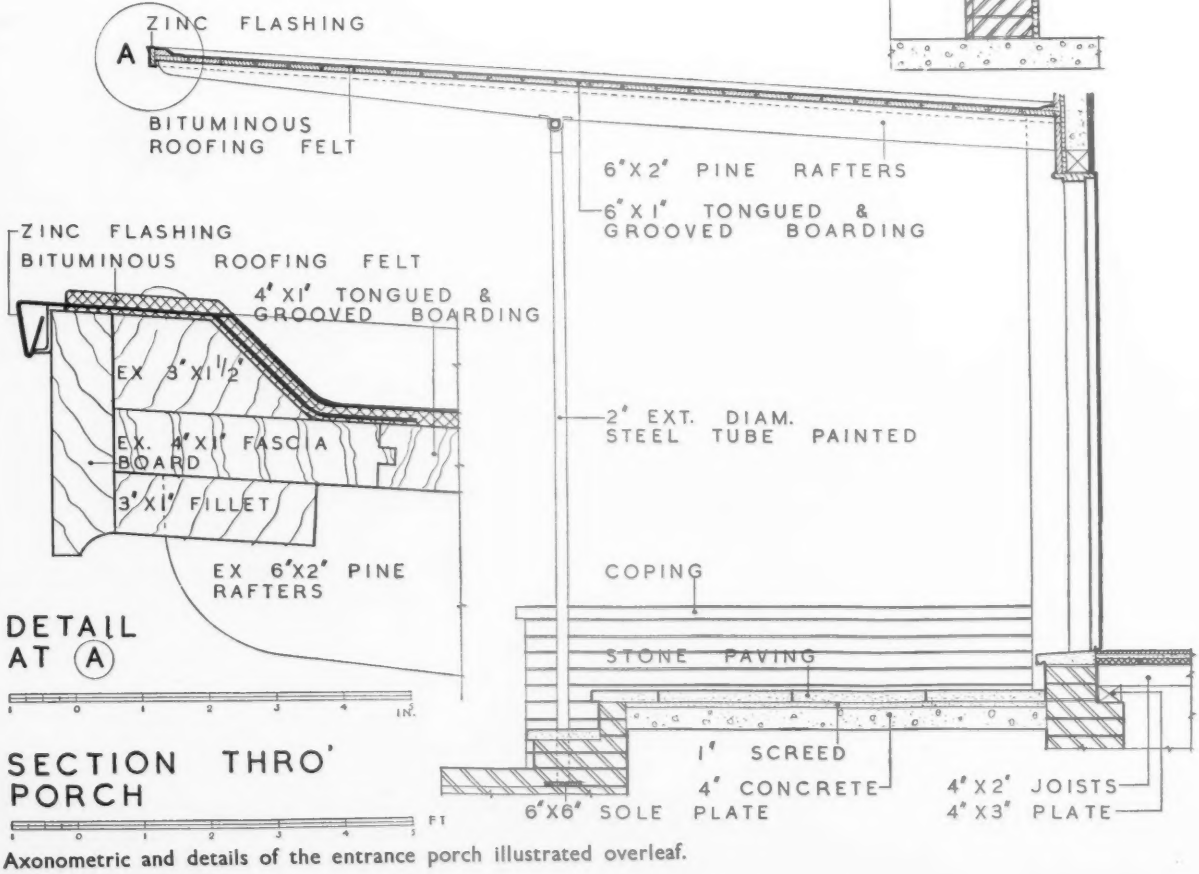
AXONOMETRIC

SCALE:



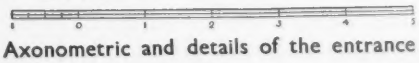


DETAIL OF WALL CONSTRUCTION



DETAIL AT (A)

SECTION THRO' PORCH



Axonometric and details of the entrance porch illustrated overleaf.

The Architects' Journal Library of Planned Information

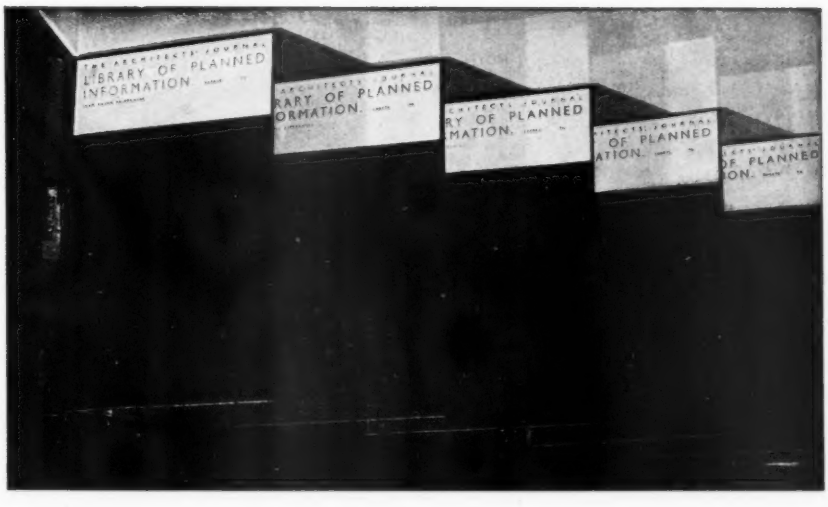
INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

653 Plumbing

654 U.S.A. Plumbing—VIII



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

Sheets issued since Index :

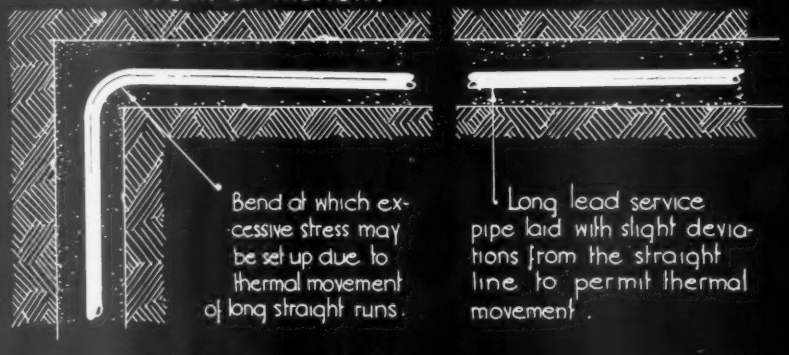
601 : Sanitary Equipment
602 : Enamel Paints
603 : Hot Water Boilers—III
604 : Gas Cookers
605 : Insulation and Protection of Buildings
606 : Heating Equipment
607 : The Equipment of Buildings
608 : Water Heating
609 : Fireplaces
610 : Weatherings—I
611 : Fire Protection and Insulation
612 : Glass Masonry
613 : Roofing
614 : Central Heating
615 : Heating : Open Fires
616 : External Renderings
617 : Kitchen Equipment
618 : Roof and Pavement Lights
619 : Glass Walls, Windows, Screens, and Partitions
620 : Weatherings—II
621 : Sanitary Equipment
622 : The Insulation of Boiler Bases
623 : Brickwork
624 : Metal Trim
625 : Kitchen Equipment
626 : Weatherings—III
627 : Sound Insulation
628 : Fireclay Sinks
629 : Plumbing
630 : Central Heating
631 : Kitchen Equipment
632 : Doors and Door Gear
633 : Sanitary Equipment
634 : Weatherings—IV
635 : Kitchen Equipment
636 : Doors and Door Gear
637 : Electrical Equipment, Lighting
638 : Elementary Schools—VII
639 : Electrical Equipment, Lighting
640 : Roofing
641 : Sliding Gear
642 : Glazing
643 : Glazing
644 : Elementary Schools—VIII
645 : Metal Curtain Rails
646 : Plumbing
647 : Veneers
648 : U.S.A. Plumbing—V
649 : U.S.A. Plumbing—VI
650 : Ventilation of Factories and Workshops—I
651 : School Cloakrooms (Boys)
652 : U.S.A. Plumbing—VII

810. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

SUPPORT FOR LEAD SERVICE PIPING BURIED BENEATH THE GROUND:

INTERIOR PIPES • For methods of supporting lead service pipes running inside buildings, see previous Information Sheets 161 & 646, numbers 4 & 49 respectively of this series.

PLAN OF TRENCH.



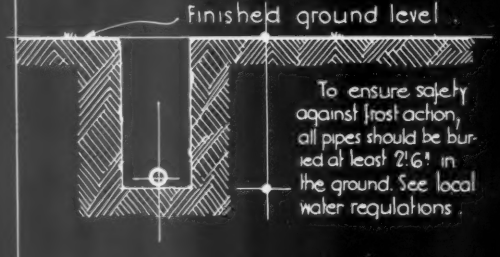
Bend at which excessive stress may be set up due to thermal movement of long straight runs.

Long lead service pipe laid with slight deviations from the straight line to permit thermal movement.

CONTINUOUS SUPPORT:

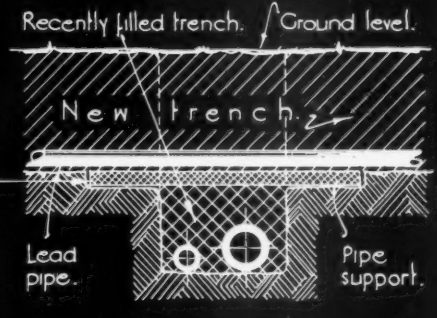
Pipe trench should have bottom of good undisturbed soil for continuous support, free from foreign matter such as broken brick, refuse, lime, etc.

Made-up ground should be thoroughly consolidated.

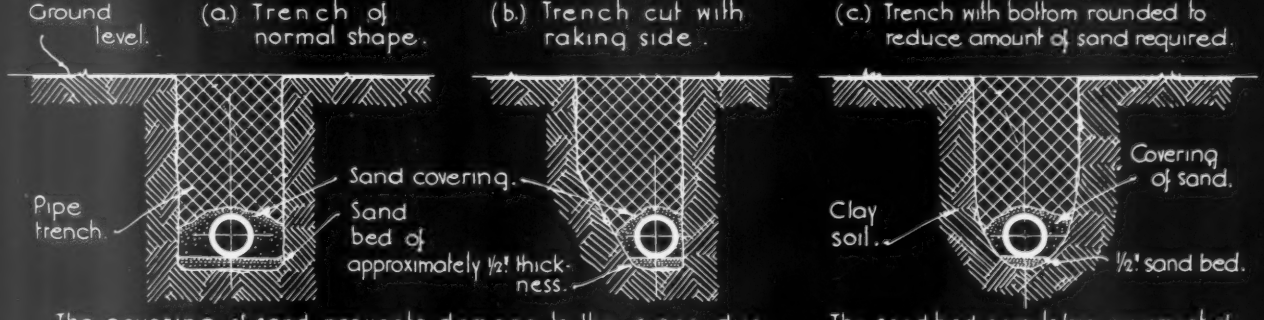


To ensure safety against frost action, all pipes should be buried at least 2'6" in the ground. See local water regulations.

Paving stone, or hardwood, earthenware or other permanent support should be provided across recently filled trenches, etc.



THE CORRECT BEDDING OF PIPES TO PREVENT THE ADHESION OF HEAVY CLAY SOILS, or to prevent corrosion from chemically active soils.



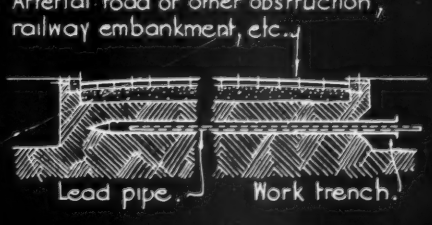
The covering of sand prevents damage to the pipes due to the drying out of strongly adhering clay infilling.

The sand bed permits free movement of the pipe caused by contraction & expansion.

PROTECTION & SUPPORT RECOMMENDED FOR PIPES LAID UNDER ROADS, EMBANKMENTS, etc.

Earthenware pipe conduit to reduce load and vibration from heavy traffic.

Pipes should not be concreted in, but buried a few inches beneath the bottom of the slab to allow free movement.



Typical diagram showing pipe laying beneath road, embankment, etc. by means of pipe pushing device to avoid continuous opening of trenches.

Information from Lead Industries Development Council.

INFORMATION SHEET: THE SUPPORTING OF BURIED LEAD PIPES: No 5

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1

Oscar de Bayne

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 653 •

PLUMBING

Subject : The support and protection of pipes in the ground

General :

This Sheet sets out various precautions which should be taken to give adequate continuous support to piping laid in the ground and to prevent chemical corrosion taking place in certain types of sub-soil. These precautions apply to both water supply and other pipes. Such pipes may be subjected to stresses due to various causes and to corrosive chemical attack, both of which, if not adequately provided for, may tend to shorten the life of the pipe.

Laying :

It is recommended that, as a general rule, the bearing surface on which pipe is to be laid should be level and of a consistent carrying capacity. Pipes should not be laid in absolutely straight lines over long distances. The expansion and contraction owing to temperature variations is cumulative in long straight lengths of pipe and causes excessive movements at the fixed points.

A frequent cause of excessive stress in pipes is the unequal settlement of made-up ground. Care should be taken to have the bottoms of all trenches thoroughly consolidated throughout their length. Where one trench crosses another deeper one, some form of permanent bridging should be arranged to prevent settlement of the upper pipe.

Soils :

Waste Material.—Should the soil or sub-soil through which pipes are to be laid be found to contain any considerable quantity of ashes, building refuse, lime, etc., it is advisable either to coat the outside of the pipe with bitumen or to lay it in a shallow bitumen trough.

Clay Soils.—Some heavy clay soils adhere strongly to pipes and since such clays expand and contract considerably with variations in moisture content, they may subject pipes to fairly severe stresses and continual movement.

To prevent this, the pipes should be laid on a thin bed of sand or inert top-spit and covered with sand before filling in. This prevents the clay adhering to the pipe and allows movements to take place between the two.

Concrete :

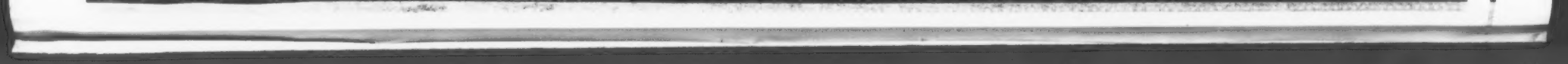
Pipes should not be embedded in concrete or Portland cement screeds where it can be avoided : if they are to be so embedded, they must be wrapped throughout their length with light building paper or felt to allow free movement of the pipe and to prevent the metal from close contact with cement and lime.

Where pipes run underneath concrete or other foundations, the load should not be allowed to bear on the pipe. Should the concrete work be liable to vibration, as in road work, the pipes should be laid in sand or wrapped in building paper or felt to allow free movement to take place and should be placed, whenever possible, at least 6 ins. below the bottom of the concrete slab.

Issued by : The Lead Industries Development Council

Address : Rex House, 38 King William Street, London, E.C.4

Telephone : Mansion House 2855



717.

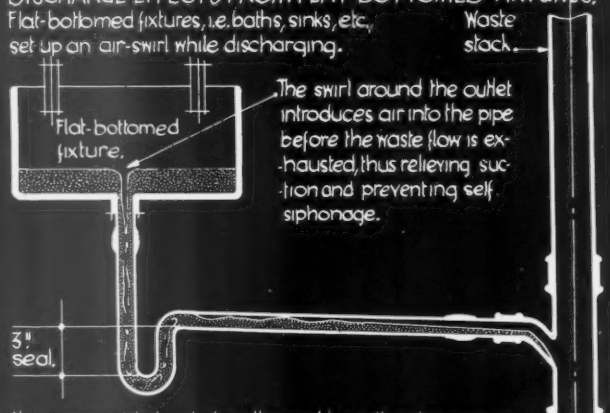
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

U.S.A. DEPT. OF COMMERCE: FIXTURE TRAPS: LIABILITY TO SELF-SIPHONAGE:

This sheet illustrates the conclusions of the U.S.A. Dept. of Commerce Sub-Committee on Plumbing regarding the design and working properties of fixture traps, branch wastes and branch vents to baths, sinks, wash-basins, etc. with special reference to the problem of the self-siphonage of fixture traps. For further information on the arrangement of branch wastes, vents, etc see the first sheet of this series, and for notes on main vent and waste stacks see the second third and sixth sheets of this series.

DISCHARGE EFFECTS FROM FLAT-BOTTOMED FIXTURES.

Flat-bottomed fixtures, i.e. baths, sinks, etc., set up an air-swirl while discharging.

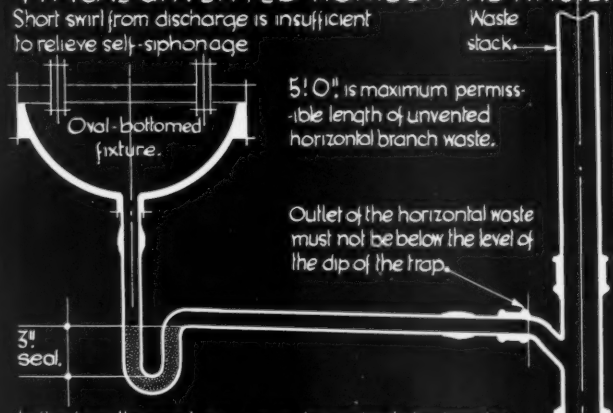


It is impossible to destroy the seal by self-siphonage in the case of flat-bottomed fixtures, hence no limit need be placed on the length of unvented horizontal waste, except that the outlet of the pipe must never be below the level of the dip of the trap.

Note: Protection against pressure effects other than self-siphonage must be provided if necessary.

TYPICAL UNVENTED HORIZONTAL WASTE.

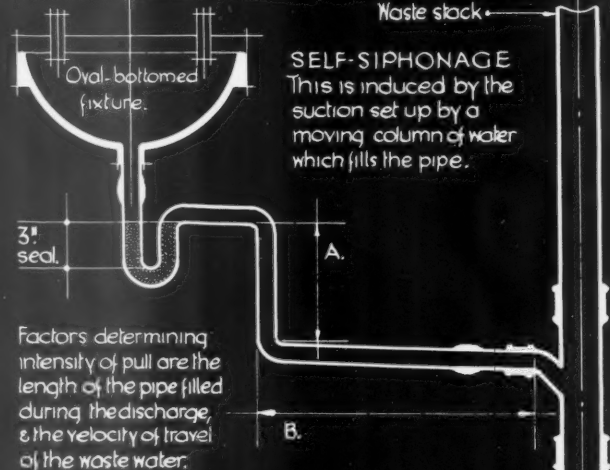
Short swirl from discharge is insufficient to relieve self-siphonage



In this type the seal can never be entirely broken by self-siphonage alone as a certain amount of water will run back into the trap.

The seal remaining after the partial self-siphonage may be destroyed by evaporation, and may also be insufficient to resist any degree of back-pressure which may be transmitted to the branch waste from the main stack.

UNVENTED WASTE LIABLE TO SELF-SIPHONAGE.

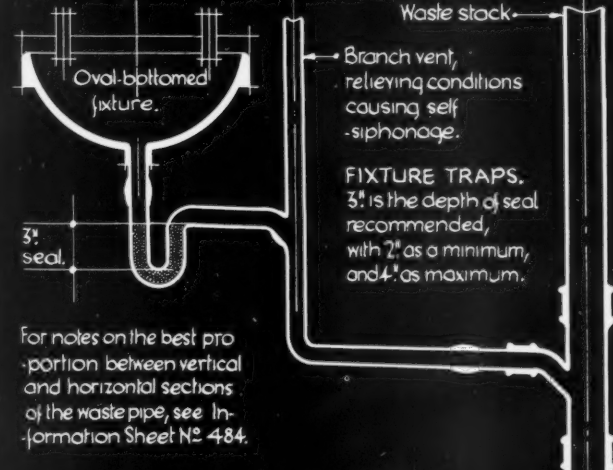


Factors determining intensity of pull are the length of the pipe filled during the discharge, & the velocity of travel of the waste water.

Self-siphonage is almost certain when an unvented waste, such as the one shown here, has a vertical section (as A in the diagram) greater in length than the seal depth of the trap, followed by a horizontal section (B) of near or of the same diameter.

The danger of self-siphonage is increased if the effective diameter of the waste is reduced by fouling.

TYPICAL BRANCH WASTE PROPERLY VENTED.



For notes on the best proportion between vertical and horizontal sections of the waste pipe, see Information Sheet No. 484.

This layout should give satisfactory service and be free from liability to self-siphonage.

The branch vent protects the fixture trap against self-siphonage, and also against pressure effects transmitted from the main stack. Even greater protection against self-siphonage is obtained if the tailpiece used at the basin outlet is a size smaller than the diam. of the waste.

Extracted from a report made by a sub-committee on Plumbing, U.S.A. Dept. of Commerce.

INFORMATION SHEET: EXPERIMENTS ON THE EFFICIENCY OF WASTE PLUMBING: 8

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THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 654 •

U.S.A. PLUMBING—VIII

Subject: Plumbing Systems

This Sheet is the eighth of a series based on extracts from a report, Minimum Requirements for Plumbing, issued by the Sub-Committee on Plumbing of the United States of America Department of Commerce.

This Sheet deals with the self-siphonage of fixture traps.

Venting to prevent Self-siphonage :

In order to prevent a siphon pull sufficient to cause self-siphonage in branch wastes air must be supplied through the vent pipes at the same, or at a greater rate than the discharge of the waste water. In practice the size of vent necessary to do this is so small that it need not be given separate consideration, and it can be taken for granted that a branch vent of any size practical to instal will be large enough to prevent self-siphonage.

Degree of Self-siphonage :

In theory a slight reduction of seal depth is permissible, so long as a minimum of ½ of the normal seal depth remains.

In practice the degree of safety in this depends on the situation of the fixture. In fixtures that are seldom used the seal remaining after partial self-siphonage may be entirely lost through evaporation, whereas in fixtures that are constantly used the trap will be refilled too often to suffer appreciable loss by evaporation.

Inclined Sections of Waste Pipe :

A sloping length of waste-pipe allied to a horizontal waste will not produce self-siphonage, provided that—

(*a*) The angle of inclination of the sloping length is greater than 30 deg. to the horizontal.

(*b*) The horizontal length will not by itself produce self-siphonage.

(*c*) The effective diameter of the sloping waste is not reduced by fouling.

Fouling :

The effect of fouling and consequent reduction of effective diameter in branch wastes is to increase the liability of self-siphonage. It is therefore important from this point of view, as well as from others, that the installation should be self-scouring.

The danger of self-siphonage induced by wastes of diminished effective diameter becomes really serious when the diameter is reduced below that of the fixture outlet orifice and tailpiece.

Recommended Design for Vented Wastes :

It is stressed that in all cases it is desirable that the vent should be formed from a continuation of a vertical portion of the waste.

The committee also recommends that from general considerations, including those relative to self-siphonage, the horizontal length of the vented portion of a horizontal waste should be limited to 6 ft., except when the vent is the continuation of the vertical portion of the waste, in which case it may be extended to $d = \frac{b}{a} c$

where (*a*) represents the vertical distance from the level of the fixture overflow to the level of the outlet of the first horizontal section, (*b*) the horizontal distance from the fixture outlet to the first vertical section, or to the vent connection, (*c*) the length of the vertical section from the vent connection to the level of the outlet of the second horizontal section, and (*d*) the length of the second horizontal section.

This arrangement was illustrated and fully explained in Sheet 484, the first Sheet of this series.

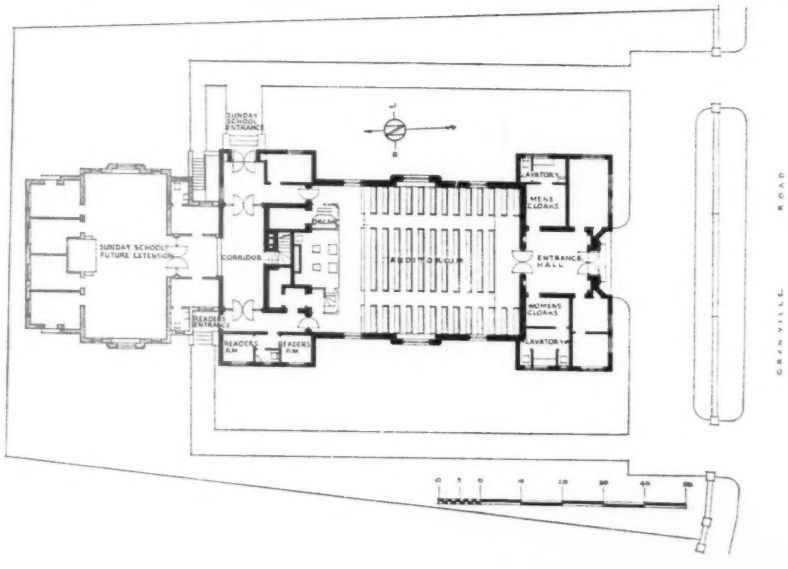
Previous Sheets :

The first seven Sheets in this series are Nos. 484, 518, 547, 551, 648, 649 and 652.

FIRST CHURCH OF CHRIST SCIENTIST, SEVENOAKS

DESIGNED BY

PAUL PHIPPS



GROUND PLAN

PROBLEM—*Auditorium to seat about 200, together with readers' rooms, committee rooms, coats and lavatories. The church has been designed to allow of a Sunday school extension (shown hatched on plan) to be added later.*

CONSTRUCTION—*Auditorium block: 14-in. solid brick walls with projecting plinth. Rest of the building: 11-in. cavity walls. Facing bricks: 2 ins. throughout. Roofs are of plain tile with asphalt flats. Windows generally are steel.*

INTERNAL FINISHES—*Walls are plastered throughout. Floor finishes: entrance hall, precast terrazzo tiles; lavatories, in situ terrazzo; elsewhere, wood block.*

COST—*Total cost, excluding fees, was 1s. 6½d. foot cube.*

Top, the south front; right, the auditorium.

The general contractors were W. P. Banks, Ltd.,; for list of sub-contractors, see page 300.

E

Memorial to King Alexander of Jugoslavia and President Barthou, by G. Castel. The whatnots at the sides are presumably intended to express Jugoslavian and French architecture. [*From "L'Architecture."*]

PERIODICALS

JULY ANTHOLOGY

AMERICA

Architectural Forum

(Monthly, $1·00. 135 East 42nd Street, New York)

JULY. A full report of the designs submitted in the American Gas Association's small-house competition; 58 pages of plans and elevations.

Architectural Record

(Monthly, $1·00. 115 West 40th Street, New York)

July. A house in Hollywood, by Richard Neutra, an interesting plan on a narrow site; Frank Lloyd Wright's "Honeycomb House," a design based on a system of hexagons as opposed to the more usual rectangular plan—is described at some length by the owners who "are learning to live by new patterns"; four pages of showrooms for building materials; illustrated portfolio of fireplaces; the building types section deals quite adequately with cinemas and theatres.

Pencil Points

(Monthly, 50 cents. 330 West 42nd Street, New York)

July. Aymar Embury continues his excellent articles on the æsthetics of large-scale civil engineering schemes, this month dealing with steel bridges—the examples chosen seem not as good as they might be; Mr. Don Graf continues his articles on cinema design; the photographic records of early American architecture continue with Marblehead, Massachusetts.

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FRANCE

L'Architecture

(Monthly, 8 frs. 5 Rue des Ecoles, Paris 5e)

July. Architecture at the Salons of 1938, a depressing record, enlivened somewhat by the decorators' salon.

La Technique des Travaux

(Monthly, 10 frs. 54 Rue de Clichy, Paris 9e)

July. The Louis Pasteur hospital at Colmar, by W. Vetter, a large job on a good open site about 400 yds. square; a girls' school at Vincennes, by Lucien Sallez—both these jobs are very fully described; the rest of the issue deals with canal dredging and river bank protection.

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GERMANY

Baukunst und Städtebau

(Monthly, 1 m. 90. Bauwelt Verlag, Charlottenstrasse 6, Berlin, S.W.68)

July. Bridges, petrol stations and hotels built along the Reichsautobahnen—mostly very good. The work of Mebes and Emmerich. An article on the Greek islands of Poros and Mykonos.

Interior from the German Embassy in Carlton House Terrace, by Professor Albert Speer. [*From "Moderne Bauformen."*]

Baumeister

(Monthly, 3 m. Georg Callwey, Fruhenstrasse 2, Munich)

July. A civic centre in Munich-Pasing, by Rettig, Volbehr and Lämmle; the Scheune housing estate near Stettin, semi-detached houses grouped round the school; a small house and studio near Munich, by Ludwig Kolb; competition for a working class flat block, won by Michael Reichl; notes on the provision of Government-owned travellers' hotels, the example shown being taken from Mehara, Tripoli.

Bauwelt

(Weekly, 90 pf. Bauwelt Verlag, Charlottenstrasse 6, Berlin, S.W.68)

July 7. Country houses, by Hermann Lahme, traditional design well handled.

July 14. The Italian Royal Aeronautical Society's school at Florence, by Raffaello Fagnoni.

July 21. The Evangelical hospital in Karlsruhe, by Gisbert van Teuffel; a small house by the same architect.

July 28. International competition for a State insurance building in Kaunas, Lithuania, won by Walter Zahn; a church near Munich, by Gustav Gsaenger.

Deutsche Bauzeitung

(Weekly, 3 m. 40 per month. Beuthstrasse 6-8, Berlin, S.W.19)

July 6. Additional buildings and further displays at the international arts and crafts exhibition.

July 20. Italian methods of aerodrome planning—an article by General Mario Stanzani.

Buildings Supplement. A number devoted to recent buildings in Italy, Milan airport, Sabaudia, and other fairly familiar jobs.

Innen Dekoration

(Monthly, 2 m. 50. Alexander Koch, Neckarstrasse 121, Stuttgart)

July. Julianenhof, a hunting-box (luxury with stables), by Fritz Breuhaus; some good furniture by Edgar Horstmann.

Moderne Bauformen

(Monthly, 3 m. Julius Hoffmann, Stuttgart)

July. The German Embassy in Carlton House Terrace—photographs of the interior, which has been remodelled by Professor Albert Speer; a house, by Kurt Dübbers, on a steeply sloping site overlooking Stuttgart, many plans and photographs; additions to the Tübingen Anatomical Institute—an excellent lecture theatre, and adequate sections are shown; an official residence for the head of the Tübingen surgical clinic; country houses by Erich Rosenfelder.

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HOLLAND

Bouwkundig Weekblad Architectura

(Weekly, 15 florins per annum. Weteringshans 102, Amsterdam)

July 2. Awards made by the Dutch "Schoonheidscommissie," apparently the equivalent of our C.P.R.E. and R.I.B.A. architecture medals.

July 9. A memoir of the late Professor G. Diehl.

July 16. A small house and office at Aalsmeer, by J. F. Berghoef.

July 23. A memoir of the late G. de Zeeuw. Church at Kaatsheuvel, by C. H. de Bever.

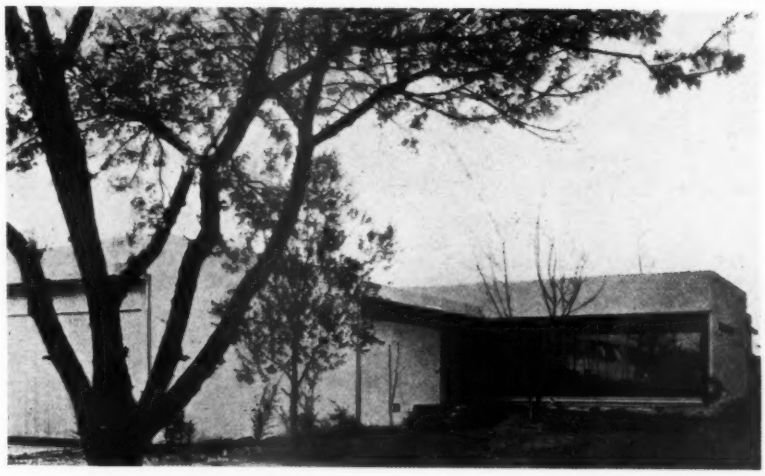
July 30. A combined private house, office and atelier, by H. Th. Wijdeveld.

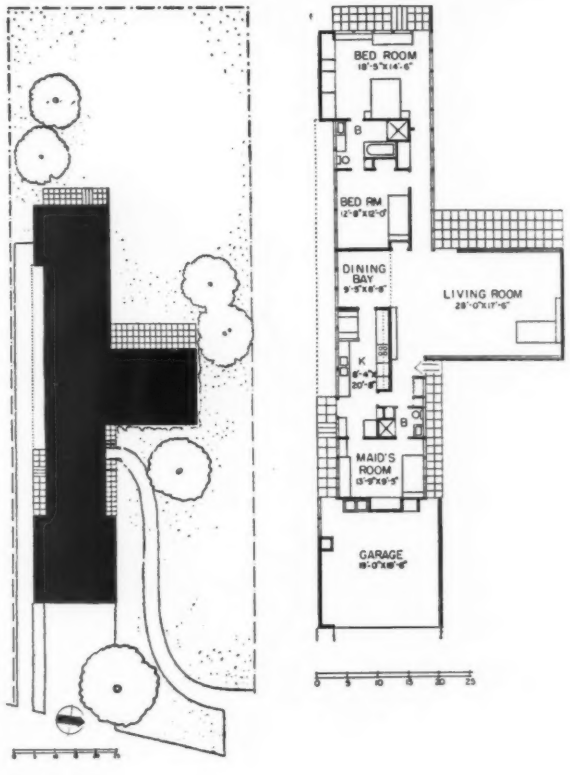
de 8 en opbouw

(Fortnightly, 30 cents. Amstel 22, Amsterdam C.)

No. 14. Notes on the New York World's Fair; motor yacht designs, by S. van Ravesteijn and A. Mastenbroeck.

No. 15. Several perspectives, plans and sections of Mart Stam's proposed Dutch pavilion for the New York World's Fair.





A house near Hollywood, by Richard Neutra and Peter Pfisterer, on a narrow site. [From the "Architectural Record."]

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ITALY

Architettura

(Monthly, 18 lire. Via Palermo 10, Milan)

July. Various buildings forming the civic centre of Aprilia; a residential square overlooking the sea at Genoa, L. C. Daveri,

architect—a flat block has so far been built, a hotel and other buildings are to follow ; four cinemas by different architects ; town planning in the neighbourhood of Stockholm.

Casa Bella

(Monthly, 15 lire. Viale Beatrice d'Este 7, Milan)

May-June. Many designs for tourist hotels by a number of different architects—a useful comparative analysis of different unit plans—many pages of executed jobs—a valuable number for anyone with a hotel to design ; some photographs of recent steel bridges, mostly German, nearly all very good.

Rassegna di Architettura

(Monthly, 15 lire. Via Podgora 9, Milan)

No. 5. Milan airport, the administration building, by G. L. Giordani, a large hangar by D. Torres ; the station specially built for the reception of Herr Hitler, architect, R. Narducci ; a flat block in Milan, by Giovanni Muzio.

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SWEDEN

Form

(10 issues per annum, 10 kr. Nybrogatan 7, Stockholm)

No. 6. Ceramics ; some recent interiors, and some good nursery furniture.

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SWITZERLAND

Schweizerische Bauzeitung

(Weekly, 1 fr. Dianastrasse 121, Zürich)

July 2. Turbine design ; competition for a new Passion Play theatre in Salzach, won by Fritz Metzger—several other designs are illustrated.

July 9. A tramway centre for the Bellevueplatz, Zürich, shop, waiting-rooms, lavatories, and a large covered concourse.

July 16. First instalment of a review of all cars on the Swiss market.

July 25. Competition for a church at Seebach, won by A. H. Steiner ; three other designs are also illustrated.

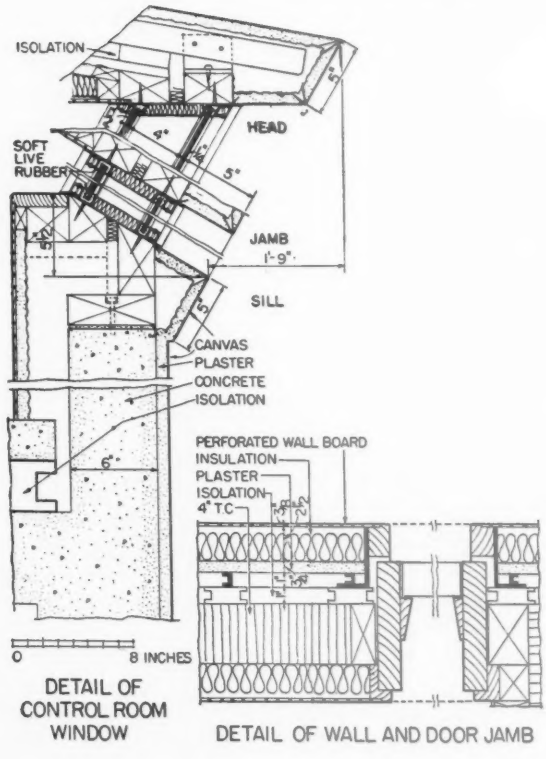
July 30. Car review completed ; more schemes from the Passion Play theatre competition.

Werk

(Monthly, 3 m. 50. Mühlebachstrasse 59, Zürich)

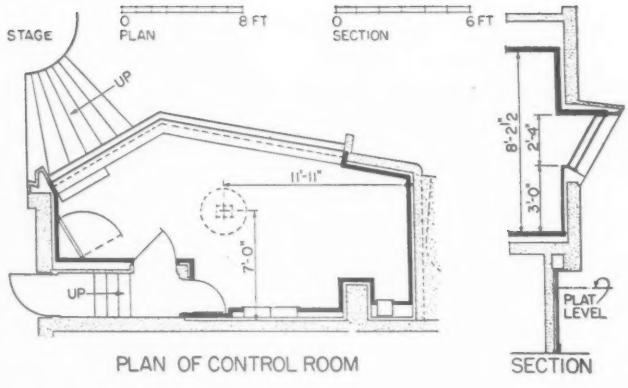
July. Five new Zürich schools—collectively these show a remarkably high standard, both in planning, equipment and finish.

Constructional details of a control room at the Columbia Broadcasting Studios, Hollywood, by William Lescaze. [*From the "Architectural Record."*]



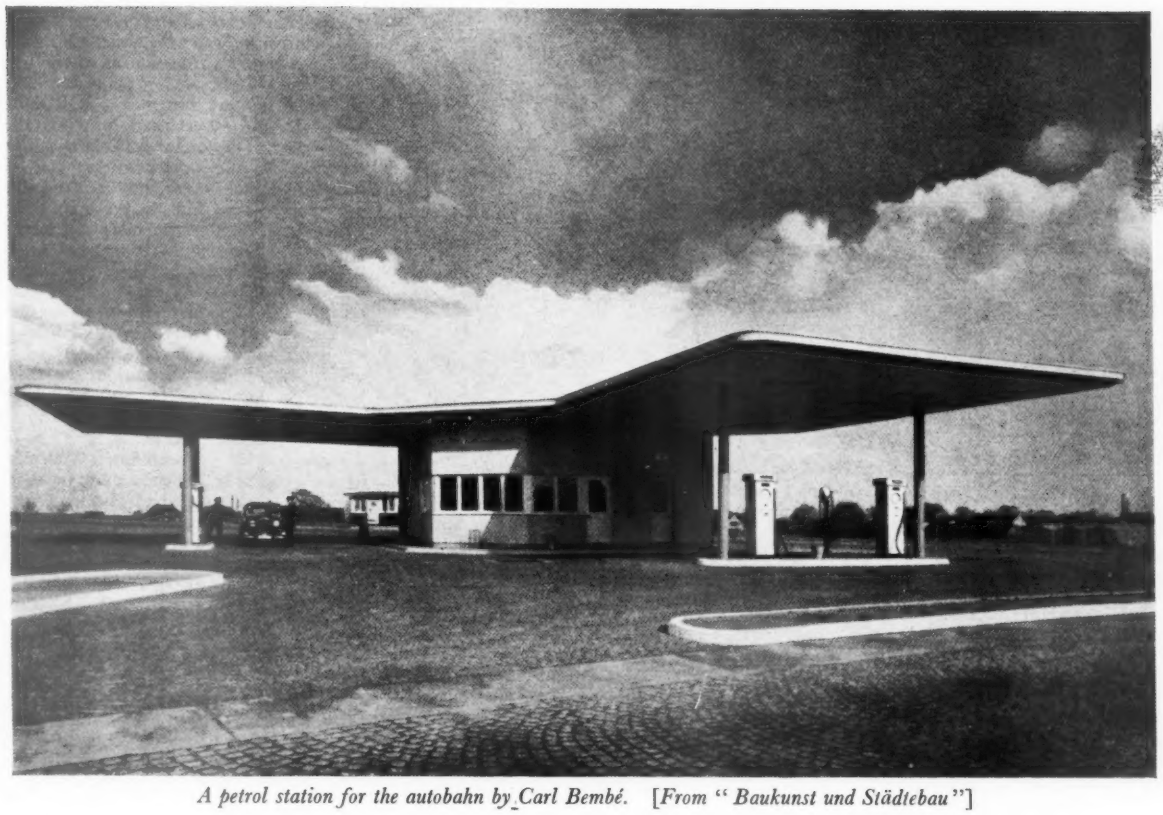
DETAIL OF CONTROL ROOM WINDOW

DETAIL OF WALL AND DOOR JAMB

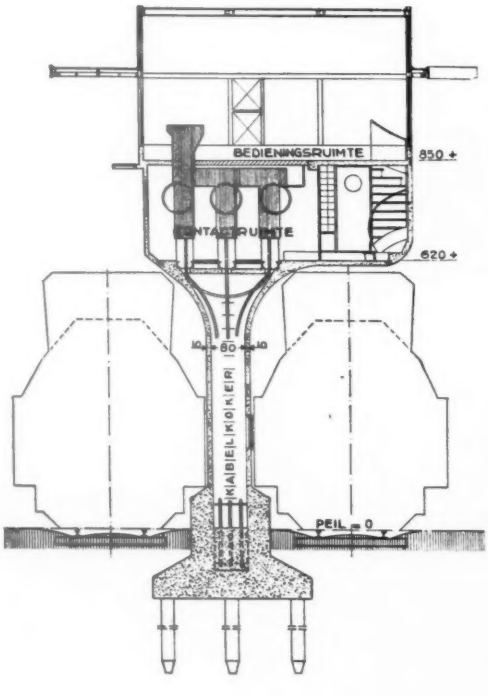


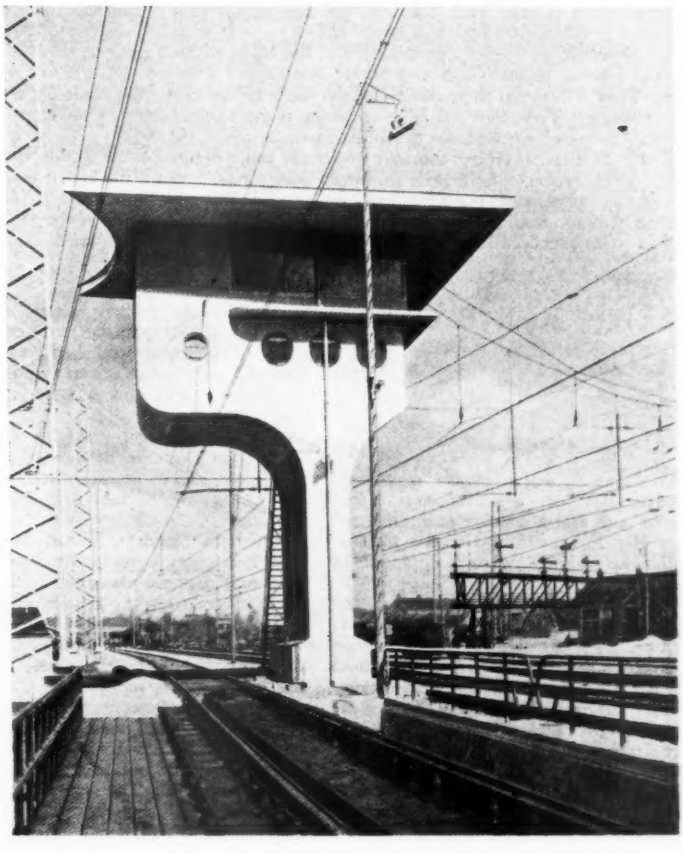
PLAN OF CONTROL ROOM

SECTION



A petrol station for the autobahn by Carl Bembé. [*From "Baukunst und Städtebau"*]





A signal box at Utrecht by S. Van Ravestyn.
[*From "Bouwkundig Weekblad Architectura."*]

From Don Graf's Children's Corner. Reproduced from "Pencil Points."

THE DISREGARD OF THE OBVIOUS

TEACHER : And now, kiddies, what does this picture represent ?
CLASS : It is a gent in a drugstore restaurant.
TEACHER : How do you know he is a gent ?
CLASS : His shoes are shined.
TEACHER : An infallible test. Are there any comedy possibilities in this situation ?
CLASS : Yes. If the guy doesn't quit leaning on the table he will get his cup of coffee right square in the puss.
TEACHER : How many times have I told you not to refer to a man's *mush* as his "puss" ? Why will the liquid chicory be deposited on the chap's person ?
CLASS : Because there is no table leg on his side of the table.
TEACHER : And what is the I.Q. of a table designer who puts three legs on a four-sided table ?
CLASS : Minus five.
TEACHER : Who is the customer at the table ?
CLASS : West Wind.
TEACHER : Cut out the Mah Jong. What happens if East Wind leans on the opposite edge ?
CLASS : He could go to sleep on his edge of the table without danger.
TEACHER : What about North and South Wind ?
CLASS : They will spend their entire time at table trying to get the chair leg to go around the table leg. Then they will give up trying to get their anatomy close enuf to the table edge so they can eat without dribbling in their laps.
TEACHER : Is there anything else sour about the table design ?
CLASS : Yes, teacher—the little 3 in. apron which runs around under the edge was conceived by a charter member of the Just-Try-To-Cross-Your-Legs-While-You-Are-Eating Society, Emily Post Chapter.
TEACHER : An excellent lesson. Will the entire class please all go to the head of the class.

LAW REPORT

ACTION AGAINST A COUNTY COUNCIL

Hanscombe's Trustees v. *County Council of Bedfordshire.—Chancery Division. Before Mr. Justice Farwell*

THIS was an action by the trustees of the late Mr. W. Hanscombe, the owner of land and a cottage at Shillington, against the Bedfordshire County Council claiming an injunction and damages in respect of the acts of the council.

Mr. Roxburgh, K.C., appeared for the plaintiffs, and said the action was the result of certain acts by the council on and around the plaintiffs' land. The question involved the ownership of a ditch which ran along the highway at Shillington. This ditch, which was the plaintiffs' property, had always drained the roadway as well as the adjoining land owned by plaintiffs. The plaintiffs' complaint was that in March last the council laid drain pipes in the ditch and covered it in, with the result that drainage from plaintiffs' land was prevented. In addition to this a cottage on the plaintiffs' land had been seriously affected. Whereas it was formerly in good condition it was now rendered both damp and unhealthy.

Mr. Montgomery, K.C., for the council, contended that the ditch was part of the roadway. The council had only done what he submitted they were entitled to do in filling in the ditch. With regard to the question of drainage, his case was that the very best pipes for land drainage had been used and that the plaintiffs' land had in no way suffered from the actions of the council.

Mr. Roxburgh dissented from the suggestion that his clients had dedicated the ditch to the public use without reserving their legal rights in the land.

Mr. Montgomery submitted that no act of the council had increased the dampness of the land. They took the view that the ditch was dangerous to traffic and accordingly filled it in. The result was that there had been no detriment to the land which the plaintiffs owned.

Mr. B. C. Deacon, F.R.I.B.A., was called as an expert witness for the defence.

His lordship, after hearing counsel, said the case raised a question as to the ownership of a ditch. The plaintiffs claimed the ditch as part and parcel of their land, whilst on the other hand the council said it was part of the highway. He had listened carefully to the evidence that had been given and he could find no affirmative evidence to lead him to presume that the ditch was, as the defendants contended, part of the highway. He was not satisfied, in the absence of that presumption, that the ditch had been vested in the council or that the council had the rights over it which they had exercised. It had been argued that the acts complained of were within the statutory powers of the council, but in his opinion there was nothing in the statutes which gave the council the right to go on this land and act as they had done without the owners' consent. With regard to the result his lordship thought that no substantial damage had been done to plaintiffs, and he would not therefore grant an injunction. He granted the plaintiffs a declaration of title and awarded them nominal damages of 40s. He ordered the defendants to pay the costs of the action.

Ministry of Health

Notes on some loans sanctioned by the Minister during the two weeks ended August 6, 1938 :—

Amersham Rural District Council.—£21,460 for the erection of 42 houses on various sites in the rural district.

Batley Borough Council.—£36,800 for the provision of 108 houses and the necessary road and sewer works on the Dark Lane site.

Beckenham Borough Council.—£12,458 for the erection of a new central library.

Bromley Borough Council.—£10,250 for the purchase of Quernmore School.

Bromsgrove Urban District Council.—£76,196 for the erection of 222 houses on the Orchard Estate.

Buckingham County Council.—£11,354 for the erection of a new public library at Slough.

Chatham Borough Council.—£41,808 for the erection of 68 houses at Street End, 12 houses and 28 bungalows at Palmerston Road, and 10 flats at Cross Street.

Chester County Council.—£13,000 for a contribution to the cost of erecting an aerodrome at Crewe.

Cirencester Urban District Council.—£58,255 for the erection of 129 houses at Chesterton Farm and eight houses at Watermoor Road.

Denton Urban District Council.—£16,700 for the reconstruction of the sewerage system.

Derby County Borough Council.—£78,850 for construction of a culvert forming part of a main drainage scheme estimated to cost £568,600.

Devon County Council.—£66,959 for the erection of police headquarters at Sowton, near Exeter.

Ebbw Vale Urban District Council.—£77,611 for the erection of 186 houses on various sites in the urban district.

Epping Rural District Council.—£22,500 for works of sewerage and sewage disposal for the parish of Theydon Bois.

Hertfordshire County Council.—£59,984 for the erection of a new public elementary school at Manland Common, Harpenden.

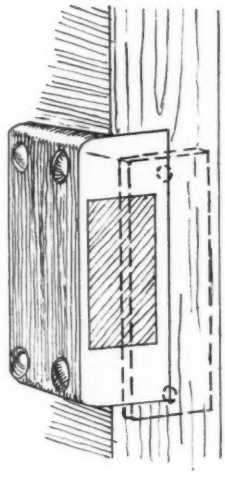
Horbury Urban District Council.—£28,450 for the erection of 96 houses at Dudfleet Lane.

Lancashire County Council.—£200,000 for prospective expenditure on road works.

Leatherhead Urban District Council.—£20,500 for the erection of 63 houses on the Cleeves Road Estate.

Leeds City Council.—£200,000 for the acquisition of properties in slum clearance schemes.

Lincoln, Parts of Kesteven, County Council.—£34,360 for the improvement of various classified roads.



TRADE NOTES

[*By PHILIP SCHOLBERG*]

A Magnetic Door Latch

A FIRM of radio equipment manufacturers, who are presumably interested in magnets as a result of making loud speakers, have just produced a cupboard latch which works magnetically. It is intended to replace the more usual ball catch, and has the merit of being absolutely silent in action, a virtue very definitely lacking in the average ball catch, which makes a surprising amount of noise. The sketch at the head of these notes shows that the whole thing is very simple, the unit holding the magnet being fitted in the reveal, and a small flat plate being screwed to the door itself. Apart from the magnetic attraction between the magnet and the plate, there is nothing at all holding the door shut, but there is a surprisingly strong hold between the two, so much so that the pull required to open a small door seems about as much as it would be if an ordinary ball catch were fitted. It should be realized that the plate must be fitted to the door so that it is in actual contact with the magnet when the door is closed, otherwise the attraction between the two falls off very rapidly as the distance increases. If the door shrinks in dry weather much of the attraction will be lost, but with the plate about a sixteenth of an inch from the magnet there is still quite a good pull, and if the shrinkage becomes at all permanent it would be quite easy to put a small packing piece behind the plate. I know of one distinguished architect who has a door which will never shut if it's going to rain, and although the manufacturers are most anxious to replace it with a new one he will not allow them to do so, as he claims it to be a much more reliable guide than his barometer. With moisture movements as big as this, I doubt if this fitting would be any good, but such movements are almost a record, and it may be reasonably assumed that this fitting is all right in the ordinary way.

On the score of silence, however, this fitting seems quite worth using. It has also a certain novelty value which may appeal to some clients, but it is by no means a toy, for the manufacturers have taken a good deal of trouble to make sure that it will stand up to use. Remembering the old horseshoe magnets of childhood days, one might suspect that this fitting would soon lose its magnetism, but the so-called permanent magnets are nowadays a good deal more permanent than they were, notably since the evolution of a special alloy of nickel, iron, aluminium and titanium, which retains its magnetism much longer than the older cobalt alloys. From the point of view of this fitting, the manufacturers have tested it mechanically for 100,000 slams (and slamming or any other sort of blow is much the best way of destroying magnetism), after which the magnetic loss is claimed to have been negligible. So if the cupboard is opened ten times a day the magnet ought to last for quite a long time. (Work it out for yourself.) Two sizes are made, a small one for cupboards, and a larger one for ordinary room doors. For this latter purpose I am not sure that the device will be very successful, not because I think it will not work, but because most people seem to like a lock on the door, even though they hardly ever use it. Look, for instance, round the average house and see how many keys are missing. But if you have got to have a lock it seems sensible to provide that latch in the same unit, noise or no noise, and on these grounds alone I do not think this magnet idea will be very popular. There is, too, the question of draughts. I have no sample of the larger door fitting, so I do not know how strong its pull may be, but a fresh breeze can exert a very considerable pressure on a door, quite enough to blow it open when held by the ordinary ball catch. If the manufacturers take up the question of the large door at all seriously, I would suggest that they produce an additional model arranged for morticing into the door, and mount the plate on the reveal; the standard model is arranged for rim fixing and will make a rather unnecessary excrescence. Prices are not yet fixed, but it is intended that the smaller unit shall sell at about the same price as a good quality ball catch. If the manufacturers can succeed in getting the price down as low as this, I should think they ought to do quite well, for everybody is noise conscious nowadays, and the great point about this fitting is its silence.—(*The Whiteley Electrical Radio Co., Ltd., Radio Works, Victoria Street, Mansfield, Nottinghamshire.*)

Reflecting the Sun

The idea of mirrors to reflect sunlight into basements and dark rooms in internal courtyards is, of course, by no means a new one, though the open type of plan nowadays allows enough light to penetrate, and mirrors are generally only to be found in the older type of office building, or in the narrow lanes and passageways affected in the City. There are, however, many town sites where the client's demands for a maximum of floor space make internal courts and several basement floors almost essential, and here some form of artificial lighting will be needed during working hours. Electric light costs money, and it may be assumed that the usual mirror angled at 45 degrees outside the window is little more than a gesture implying that the building owners think they have done as much as they can.

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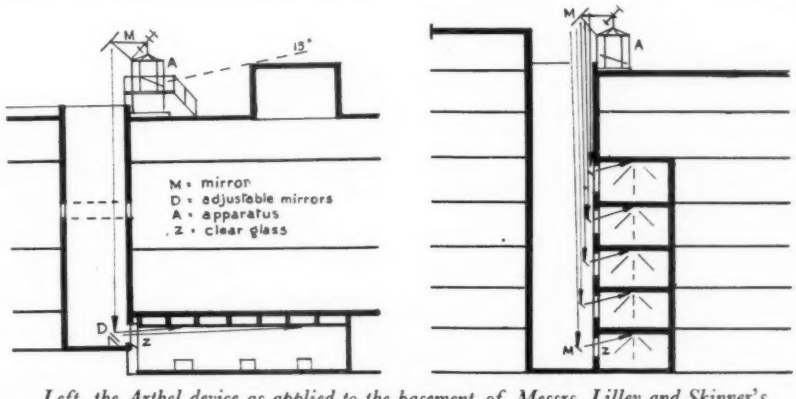
For some years, however, there has been on the market in France a device which



Left, the Arthel device as applied to the basement of Messrs. Lilley and Skinner's Oxford Street shop; right, the same applied to a typical office or flat block.

employs a system of mirrors on the roof, these catching the sun's rays and reflecting them downwards, either inside the building itself through top lights or staircase wells, or down the wall to another mirror outside the window. The sections on page 299 show how the idea works, and although it may seem to involve a good deal of complication it has been used on quite a lot of jobs abroad, mainly for commercial work, too, from which it may be assumed that the device really can show an economy, for otherwise it could never hope to sell. The essential part of the device is the heliostat on the roof, and this has to be arranged to follow the sun round the sky and reflect its rays in the right direction for as long as it is shining. No steady mechanical drive will do this, as the sun's path varies from day to day, and the necessary corrections would make the whole thing far too complicated. The manufacturers attack the problem from the other end and make the sun control the movement of the mirrors through a system of switches. The switch units are hydrogen-filled glass bulbs, the expansion and contraction of the hydrogen under the heat of the sun moving mercury in a series of U tubes to make contact with electrodes controlling the various motors turning and tilting the mirror. Since these switches are virtually everlasting, the whole device can be sealed up in its glass cabin, and no attention is needed beyond the periodic cleaning of such mirrors as are exposed to the atmosphere and the glass walls of the cabin itself. Current consumption is negligible, about 20 watts during the time the sun is shining. It should be realized that as soon as the sun goes in the mirrors remain in the same position, but as soon as it comes out again the mirrors swing round to the new position, after which the movement is intermittent, the motors cutting in for about two seconds every 15 seconds or so. Since there are two motors of only one-sixtieth horse power each, it is obvious that the current consumption cannot, whatever happens, be very large.

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Four different models are standardized, the operation being exactly the same, only the size of the mirrors varying. The smallest size is calculated to give an illumination of 12-foot candles over an area of 1,000 sq. ft.; the largest gives the same illumination over 4,000. From the practical point of view it may be wondered whether the sun shines long enough to make such an installation worth while, and here the Kew records can be used as a basis for the necessary calculation. Over a 30-year average the number of hours of sun in London is 1,478 for the year, and the manufacturers of this device have made a series of calculations for an office working a 44-hour week and a shop working 54. After deducting Sundays and holidays, and a further 10 per cent. for the hours between sunrise and opening and between closing and sunset, the possible saving in electric light bills comes out at 40 per cent. for the shop, and 45·5 per cent. for the office. The cost of installing the equipment naturally varies with each job, but, neglecting any structural alterations which may be necessary, costs run from £300 to £800 according to the size of the roof unit. It should be realized, however, that the light given is the same as daylight, and that there may thus be the additional advantage in shops where the judgment of colour is important. So far only one installation has been made in this country, at Lilley and Skinner's shoe shop in Oxford Street, where it is used to light the basement. A section of this job is also shown on page 299.—(*Arthel, Ltd., 21 Fitzroy Square, London, W.1.*)

Air Raid Precautions Again

Peter Jones have started an A.R.P. department for the gas-proofing of rooms in existing buildings, the work which they recommend consisting of close-fitting detachable panels inside the windows, a wire netting and blanket shield covering the window reveals, panels over the fireplace, an air lock outside the door, and the thorough caulking of all floor boards, ceiling and wall cracks, radiator pipe entries, and any other odd holes through which gas may penetrate. These measures go a little beyond the official recommendations of the Home Office. Rumour has it at the moment that the Home Office is more worried about high explosive and incendiary bombs than it is about gas, but that does not necessarily mean that gas-proofing is not worth while. If everybody is to have a gas-proof room, it does not mean that the architect will be asked to deal with more than the usual minute fraction of the work, but it may be useful to know of a firm making a speciality of this work. As a rough estimate of the probable cost they suggest £12 10s. for dealing with a room 10 by 10 by 8 ft. with one door and one window. Extra windows would cost about £5, and doors about £2 10s. each.—(*Peter Jones, Ltd., Sloane Square, London, S.W.1.*)

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Manufacturers' Items

Following is a list of orders received in May and June by the Helical Bar and Engineering Co., Ltd. May: Floors, etc., at the following buildings: Taylor's Garage, High Street, Wandsworth (Hastie, Winch and Kelly, F.R.I.B.A.); Maternity Block, Wareneford Hospital (Armstrong and Gardner, F/A.R.I.B.A.); Field Road Housing Scheme, Fulham (A. F. Holden, Borough Engineer); Flats, Severn Street, Worcester (R. A. MacKrill, City Engineer, Worcester); Housing Scheme, Islington (E. C. P. Monson, F.R.I.B.A.); Post Office, King Street, Acton (H.M.O.W.). June: Floors, etc., at the following buildings: Ellesmere College, Shropshire (Collcutt and Hamp, F/F.R.I.B.A.); Hotel, Kingston Buci (Ford and Harkess, F/F.R.I.B.A.); Crown Inn, Hull (Gelder and Kitchen, F/F.R.I.B.A.); Dollis Hill Research Station (H.M.O.W.); 166 Victoria Street, S.W.1 (Sir Guy Dawber and A. R. Fox); New Card Stack Building (H.M.O.W.); Flats, Ellerton Lodge, Finchley (Raymond Baker, L.R.I.B.A.); Cavendish Square (Slater, Moberly and Uren, F/F.A.R.I.B.A.); Grammar School, Spalding (W. M. Smith, County Architect); Hatchford Brook Council School, Hatchford (J. A. Swan, F.R.I.B.A.); Shops and Flats, Jamaica Road (Stock, Page and Stock, F/F.R.I.B.A.); County Offices, Trowbridge (P. D. Hepworth, F.R.I.B.A.); Shrivenham Barracks (War Department).

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The following appointments are notified by J. H. Tucker & Co., Ltd., following the transfer of Mr. G. A. Ruff from the Midlands to London as area manager: Mr. J. D. Harris, as representative for East and West Midlands (transferred from Edinburgh); Mr. L. C. Margetts, as representative for Edinburgh and East Scotland (transferred from Midlands, where he was assistant representative); Mr. J. Emlyn Jones, as representative for South Wales; Mr. S. Dore, of Birmingham works staff, as assistant Midlands representative.

THE BUILDINGS ILLUSTRATED

ADDITIONS TO ROYAL LIVERPOOL SEAMEN'S ORPHAN INSTITUTION (pages 277-279). Architect: Richard H. Kelly. The general contractors were John Williams (Liverpool), Ltd., and sub-contractors and suppliers included: Redpath, Brown & Co., Ltd., steel work; Concrete, Ltd., reinforced concrete floors; R. W. Haughton & Co., Ltd., plumbing (external and internal), hot and cold water services; R. W. Brooke & Co., maple and wood block floors; Craven Dunnill, tiling; F. B. Hellon & Co., electrical installations; Troughton and Young, electric light fittings; George Lowe and Sons, metal fanlights, fire-escape, balconies, etc.; North of England School Furnishing Co., furniture; Thompson and Capstick, stone carving; Hulme and Potts, terrazzo stairs and floors; David Peters, heating installation; Sutton Heath Brick Co., bricks.

PRINTING WORKS AND OFFICE BLOCK, THE TRINITY PRESS, WORCESTER (pages 280–282). Architects: Sir John Brown and A. E. Henson. The general contractors were Bowles and Son, who were also responsible for excavation, reinforced concrete, plumbing and plaster work. Sub-contractors and suppliers included: D. Anderson, Ltd., rock foundations; Grovebury Brick Works Co., bricks; John Ellis and Sons, Ltd., artificial, stone; Richards (Leicester), Ltd., structural steel; Carter & Co., Ltd., tiles; Ruberoid Co., Ltd., roofing; Andersons Macasfelt, roofing felt; Helliwell & Co., Ltd., patent glazing; Redferns' Rubber Co., rubber flooring, and Jaconello, Ltd., patent flooring; Hope's Heating and Lighting, Ltd., central heating, ventilation; Abell and Smith's Electrical Co., Ltd., electric light fixtures; Ideal Boilers and Radiators, Ltd., boilers; Henry Hope and Sons, Ltd., partitions, motor stokers to boilers, and metal casements; Baldwins (Birmingham), Ltd., sanitary fittings; K. S. Neale, Ltd., door furniture; Mather and Platt, Ltd., rolling shutters; Allied Guilds, Ltd., decorative plaster; Birmingham Guild, Ltd., metalwork signs; Jaconello, Ltd., wall tiling; K. S. Neale, Ltd., cloakroom fittings; Worcestershire Corporation, water supply.

FIRST CHURCH OF CHRIST SCIENTIST, GRANVILLE ROAD, SEVENOAKS (page 293). Architect: Paul Phipps. The general contractors were W. P. Banks, Ltd., and sub-contractors and suppliers included: Engert and Rolfe, Ltd., asphalt; The High Brooms Brick and Tile Co., Ltd., bricks; Dorman Long & Co., Ltd., structural steel; Tilehurst Potteries, Ltd., tiles; Stevens and Adams, Ltd., wood-block flooring; Croft Granite Brick and Concrete, Ltd., patent flooring; Rosser and Russell, Ltd., central heating; Johnson and Tanner, Ltd., electric wiring; Troughton and Young, electric light fixtures; W. N. Froy and Sons, Ltd., sanitary fittings; Comyn Ching & Co., Ltd., door furniture; Williams, Gamon & Co., Ltd., casements; Garton and Thorne, iron gates.

THE WEEK'S BUILDING NEWS

LONDON

BARKING. *School.* The Roman Catholic Managers are to erect a school for 320 in Porters Avenue, Barking.

EALING. *Central Depot.* The Corporation has obtained sanction to borrow £68,500 for the provision of a central depot and the erection of new refuse disposal plant at Greenford.

EDGWARE. *School.* The Governing Body of the North London Collegiate School has approved plans for the erection and equipment of the new buildings for the school at Canons Park, Edgware, at a cost of £70,000.

ENFIELD. *Extensions, etc.* Plans passed by the U.D.C.: Extensions, Southbury Road, Mr. C. R. Belling; bakehouse and shop front, 852 Great Cambridge Road, Tarran Industries Ltd.; extension, Valour Works, Gt. Cambridge Road, A. J. Maxfield and Son; house, Old Park View, Mr. G. W. Newman; shop with maisonette over, Hertford Road, Marshall and Tweedy; eight flats, 96–102, 112–118 Gordon Road, New Ideal Homesteads; six houses, 231–241 Great Cambridge Road, Mr. M. Blade; six houses, 20 & 22 Trentwood Side, Mr. Duncan Thomson; alterations and additions, "Jolly Butchers" public-house, Baker Street, Stewart and Hendry; two houses, St. George's Road, Mr. James Neilson; 32 houses, off Lancaster Road, Vigers & Co.; 213 houses, Hillview estate, Mr. A. E. Wright; restaurant, store and flats, Chalk Lane, Cockfosters, Mr. Donald Hamilton (subject to conditions).

FINCHLEY. *Isolation Ward, etc.* Plans passed by the Corporation: Isolation ward, Finchley Memorial Hospital, Bow Lane, Finchley Memorial Hospital Authorities; six houses, 156–160a Vivian Way, W. S. Lambeth, Ltd.; two flats, 24 Clifton Avenue, Mrs. Stoller; six shops with eight flats over, and 10 flats, Ossulton Way, Highgates (Builders), Ltd.; 14 flats, 1075 & 1077 High Road, Mr. G. A. Aston.

FULHAM. *Dwellings.* The B.C. has approved plans of dwellings to be erected at the junction of Fulham Road and Fulham Park Road, at a cost of £47,065, and has appointed Messrs. C. E. Ball and Partners as quantity surveyors.

ILFORD. *School.* The Ilford Education Committee has obtained sanction to borrow £42,663 for the erection of Parkhill Council School.

MIDDLESEX. *Extensions.* The Middlesex C.C. is to prepare plans for extensions at North Middlesex Hospital.

PINNER. *Community Centre.* The Middlesex C.C. is to erect buildings in Pinner for use as a community centre.

POPLAR. *Factory, etc.* Plans passed by the B.C.: New factory, Three Mill Lane, F. Bradford & Co., Ltd.; garage, Leamouth Road, Lea Haulage and Wharfage Co., Ltd.; additions, 329 & 331, Roman Road, Sands and Lipscombe, Ltd.; additions, St. Paul's Vestry, St. Stephen's Road, Chinchen & Co.; rebuilding, 242 Poplar High Street, Mr. George Leonard Russell; additions, Church Hall, All Hallows Church, Whitethorn and Blackthorn Streets, Henry C. Smart and Partners; rebuilding, "The Magnet and Dewdrop" public-house, 194 West Ferry Road, and "The Prince Albert" public-house, 74–76 St. Stephen's Road, Stewart and Hendry; extension, Millwall Ironworks, West Ferry Road, Jos. Westwood & Co.; remodelling, "The Eagle" public-house, 190 East India Dock Road, and rebuilding "Bombay Grab" public-house, Bow Road, Mr. S. A. S. Yeo.

POPLAR. *Extensions.* The B.C. has obtained sanction to borrow £40,984 for the enlargement of the electricity showrooms.

REDHILL. *Extensions.* The Middlesex C.C. is to prepare plans for further extensions at Redhill Hospital, at a cost of £52,000.

ST. PANCRAS. *Girls' Club, etc.* Plans passed by the B.C.: Seven-storey building, 63 & 65 Whitfield Street, and 6 & 7 Chitty Street; girls' club, Heathcote Street; buildings on a site on the east side of Tavistock Square, Woburn Place and Tavistock Place; three-storey building, 6 Fitzroy Mews; new building, next Burton Street, for extension to the British Medical Association's premises; extensions, workshops at 4–12 Britannia Street; four-storey building for light industry at 11–17 Longford Street; two-storey factory, 114–120 Arlington Road, and 8–12 Pleasant Row; shops and offices, 209–225 Euston Road, 142–144 Gower Street and 29–35 Gower Place; factory, 116–134 Bayham Street and 31–43 Carol Street.

SHENLEY. *Hospital Extension.* The Middlesex C.C. recommends the further development of the Middlesex Colony, Shenley, to provide accommodation for a further 914 patients and the appropriate staff.

SOUTHGATE. *Flats, etc.* Plans passed by the Corporation: 12 flats, Bramley Road, Mr. L. M. Gotch; three houses, 14, 15 & 16 Leys Gardens, Cockfosters, Mr. G. W. Newman; three houses, 6, 8 & 10, Sussex Way, James & Co.; six houses, Chase Road, Mr. C. E. O. Ward; house and bungalow, 17 Houndsden Road, Mr. E. Lewis; two flats, adjacent "St. Kilda," Cockfosters Road, Mr. E. W. Palmer; house, Chase Side, H. S. Couchman and Son; two houses, Eversley Park Road, New Ideal Homesteads, Ltd.; 28 flats, Chase Road, Mr. J. R. Scarborough; 18 flats, Chase Road, Mr. W. A. Hunt.

SOUTHGATE. *Extension.* The Southgate and Tottenham Corporations are to proceed with extensions at the isolation hospital, at a cost of £155,685.

SOUTHWARK. *Flats.* Plans passed by B.C.: 70 flats, Mermaid Court area, H. V. Ashley and Winton Newman.

TWICKENHAM. *Shops and Flats.* Messrs. Howard Leicester and Partners are to construct shops and flats at the corner of St. Margaret's Road and The Avenue, Twickenham.

PROVINCES

BRISTOL. *Flats.* The Corporation is to prepare plans for the erection of flats in areas at Kingsdown and Clifton Vale.

COVENTRY. *Extension.* The Coventry Corporation is to enlarge the Longford power station at a cost of £357,000.

COVENTRY. *School of Art.* The Coventry Education Committee has selected a site on the Butts recreation ground for the erection of a school of art.

DUDLEY. *Hostel.* The Corporation is to make provision for a municipal hostel in the scheme for the re-development of the Mambles area.

HULL. *Baths.* The Corporation is to erect baths at Bilton Grange, at a cost of £45,000.

HULL. *Clinic.* The Corporation recommends a site in Spring Street for the erection of a central tuberculosis clinic.

MANCHESTER. *Schools.* The Manchester Education Committee has approved revised plans for the senior department for St. Clare's R.C. school and for the proposed New Moston R.C. senior school.

MANCHESTER. *Factory.* Messrs. Gallaher, Ltd., are to erect a tobacco factory and offices on the Wythenshawe estate, Manchester.

MANCHESTER. *Clinic.* The Corporation is to acquire a site for a clinic at Wythenshawe.

SCARBOROUGH. *Workshop, etc.* Plans passed by the Corporation: Workshop, and two houses, Friars Entry, Mr. H. P. Thompson; 24 houses, Scholes Park Cliff, Mr. C. J. Wilson; house, 234 Filey Road, Marsden, Builders, Ltd.; two houses, Ryndle Walk, Mr. J. Helliwell; public house, 69 & 71 Dean Road, C. Rose & Co.; three houses, 1 & 3, Evelyn Drive, Mr. F. W. Plaxton; boarding house, Burniston Road, J. Petch and Son.

SCARBOROUGH. *Showrooms and Offices.* The Scarborough Corporation Electricity Committee has approved plans for electricity showrooms and offices at Northway, at a cost of £33,000.

SHEFFIELD. *Library.* The Corporation is to erect the Manor Branch Library, by direct labour, at an estimated cost of £14,267.

SHEFFIELD. *Church.* The Corporation has sold land in Elm Lane, Parson Cross Estate, to the Yorkshire Association of Baptist Churches, for the erection of a church.

SHEFFIELD. *Houses, etc.* Plans passed by the Corporation: 18 houses, Norton Park View, J. Marsh & Son (Builders), Ltd.; 54 houses, Kirkdale Crescent, Mr. C. S. Smith; two houses, Moor View Terrace, Mr. R. Watson; four houses, Slayleigh Avenue, Mr. J. W. Sivil; additions and alterations, Hall Road, and two shops and stores, Lindsay Avenue and Handsworth Road, Brightside and Carbrook Co-operative Society, Ltd.; two houses and shops and two houses, dairy, and washhouse, Ringstead Crescent, Thos. Knowles, Sons (Builders), Ltd.; two houses, Hemper Lane, Wright and Walton; two houses, Cairns Road, Mr. E. Andrews; two houses, Cliff Road, Mr. C. Middleton; house and licensed premises, Derbyshire Lane, Duncan Gilmour & Co., Ltd.; house and licensed premises, Deerlands Avenue, Tennant Bros., Ltd.; motor showroom and garage, Broad Lane, C. D. Bramall, Ltd.; four houses, Wingerworth Avenue, Mr. J. Ward; 10 houses, Bramley Avenue, E. and H. Oliver; three houses, Gleadless Bank, Mr. C. Bell; two houses, Ringinglowe Road, Mr. G. M. Taylor; six houses, Earl Marshal Road, Mr. E. C. Thompson; four houses, Shenstone Road, Mr. J. Mason; house, stores and offices, Clay Wheels Lane, Carter, Milner and Bird, Ltd.; 22 houses, Gleadless Road, Mr. W. Croft; two houses, Furniss Avenue, Mr. W. Redmile; alterations, Hartshead, Sir W. C. Long & Co. ("Sheffield Telegraph"), Ltd.; switch room and transformer yard, Worksop Road, Brown, Bayley's Steel Works, Ltd.; totalisator, Lowther Road, Sheffield Sports Stadium, Ltd.; three houses, Backmoor Crescent, Mr. J. H. Stevens; additions and alterations, Ellin Street, The Baldwin Electric Co., Ltd.

SHROPSHIRE. *School.* The Shropshire Education Committee is to erect a senior school for approximately 400 children at Market Drayton.

TYNEMOUTH. *Houses, etc.* Plans passed by the Corporation: Layout of part of the Preston Colliery Estate, Queen Alexandra Road, U. A. Ritson and Sons; two houses in flats, 123/124 Queen Alexandra Road West, Preston Colliery Estate, Mr. C. Dunleavy; six houses, Billy Mill Avenue 296/301, Preston Colliery Estate, Mr. J. Rogers; six houses in flats, Balkwell Estate, Mr. T. Swan; alterations, Lambton Castle Inn, Wellington Street, T. A. Page, Son and Bradbury; rebuilding the New Dolphin Inn, Low Lights, Newcastle Breweries, Ltd.; alterations, Albert Inn, Tynemouth Road, Westoe Breweries, Ltd.; offices for H.M. Office of Works, 17 Northumberland Square, Mr. G. H. Gray; two houses, Millfield Gardens, H. D. Burton, Ltd.

WARRINGTON. *Offices.* Plans passed by the Corporation: Reconstruction of premises, Mersey Street and Vernon Street, for Mr. Levi Richardson; offices, Bewsey Road, for Lancashire Cables, Ltd.; shop alterations, Sankey Street and Bold Street, for Messrs. Eustance & Co., Ltd.; showrooms, Patten Street, for Warrington Slate Co., Ltd.; 12 houses, Derwent Road, for Messrs. Wright Bros.; 16 houses, Cowdell Street, for Messrs. Ward and Lambert.

WOLVERHAMPTON. *Houses, etc.* Plans passed by the Wolverhampton Corporation: Eight houses, Beckminster Road, and 15 houses, Sandon Road, Mr. L. T. Taylor; 13 shops with flats, Stafford Road, Mr. E. A. Colman; 28 houses, Fallings Park Estate, Mr. M. A. Boswell; six houses, Mason Crescent, Mr. H. Hewitt; 14 houses, Links Road, G. and F. E. Wilkes; 28 houses, Uplands Avenue, T. Wellings and Son.

WORTHING. *Fire Station.* The Worthing Corporation is considering sites in Christchurch Road, Winton Place and King Edward Avenue for the erection of a fire station.

WORTHING. *School.* The Worthing Education Committee is to prepare plans for the erection of a senior school to accommodate 480 boys in Rectory Road.

YORK. *School.* The York Education Committee has approved the site of the proposed new St. George's senior Roman Catholic school for boys in Margaret Street.

Copies of the loose supplement containing the labour rates for the principal towns and districts throughout the country can be obtained from the JOURNAL, price 2d. to cover postage.

PRICES

ON the following pages appears Prices of Materials —Part I, with the prices, last published on July 21, brought up to date.

Immediately below, Messrs. Davis and Belfield mention the principal changes which have occurred in the last month. Similar notes, and the deductions that may be drawn from them, will be published on this page each month.

★ *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.

NOTES ON PRICE CHANGES

Prices have remained practically unchanged.

O. A. DAVIS, P.A.S.I.

● *Items marked thus have risen in price since last quotation on July 21.*

* *Items marked thus have fallen in price since last quotation on July 21.*

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.
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 previous complete Supplement is contained in the issues of the JOURNAL for July 21, July 28, August 4 and August 11.*

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit.

PART 1

CURRENT MARKET PRICES OF MATERIALS—I

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

CONCRETOR

Cements

All delivered in paper bags (20 to the ton) free and non-returnable.

	4 Tons and over
Portland	per ton 42/–
Rapid hardening	per ton 48/–
Water repellent	per ton 72/–
Atlas White (1 barrel 376 lbs.)	per barrel 44/–
	1 ton upwards
Colorcrete rapid hardening, Nos. 1 and 2	per ton 69/–
Colorcrete non rapid hardening	per ton 140/– to 300/–
Snowcrete	per ton 175/–

	1–10 cwts.	11–15 cwts.	16–20 cwts.	1 ton and upwards
Ciment Fondu, delivered Central London area per cwt.	7/9	7/3	6/–	6/–

Aggregate and Sands (Full Loads)

2″ Unscreened ballast	per yard cube 6/–
¾″ (Down) Washed, crushed and graded shingle	per yard cube 6/2
⅜″ (Down) Ditto	per yard cube 7/6
2″ Broken brick	per yard cube 10/6
¾″ Ditto	per yard cube 11/9
Washed pan breeze	per yard cube 5/3
Coke breeze 1″ to dust	per yard cube 13/6
1/16″ Sharp washed sand	per yard cube 8/3
White Silver Sand for white cement (one ton lots)	per ton 25/–

(For Sands for Bricklaying and Plastering see respective trades)

Pavings

Brick hardcore	per yard cube 2/9
Concrete ditto	per yard cube 3/9
Clean furnace clinker and boiler ashes	per yard cube 3/6
Coarse gravel for paths	per yard cube 6/9
Fine ditto	per yard cube 9/6
Clean granite chippings	per ton 18/6
Red quarry tiles, 6″ × 6″ × ⅞″	per yard super 6/–
Buff ditto, 6″ × 6″ × ⅞″	per yard super 6/6
Hard red paving bricks	per 1,000 150/–

Reinforcement

Basis price for mild steel rods, ⅜″ diameter and upwards, from London stocks	per ton £15 0 0
Extras for :—	
9/16″ and ½″ diameter	per ton 10/–
5/8″ diameter	per ton 15/–
¾″ diameter	per ton 20/–
⅞″ diameter	per ton 30/–
1″ diameter	per ton 40/–
1¼″ diameter	per ton 60/–
Lengths of 40 ft. to 45 ft.	per ton 10/–
Lengths of 45 ft. to 50 ft.	per ton 15/–

CONCRETOR—(*continued*)

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate)	per gallon 20/–	Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto. (for obtaining a bond)	per gallon 12/6	

BRICKLAYER

Common Bricks

Rough stocks	per 1,000 69/6
Third stocks	per 1,000 54/6
Mild stocks	per 1,000 71/6
Sand limes	per 1,000 50/–
* Phorpres pressed Flettons	per 1,000 46/3
* Phorpres keyed Flettons	per 1,000 48/3
Blue Staffordshire wirecuts	per 1,000 165/–
Lingfield engineering wirecuts	per 1,000 95/–
Breeze fixing bricks	per 1,000 57/6
Firebricks, best Stourbridge 2½″	per 1,000 155/–
Firebricks, best Stourbridge 3″	per 1,000 190/–

* At King's Cross. For delivery in W.C. district add 4/3 per 1,000.

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000 85/–
Sand Limes, No. 2	per 1,000 70/–
*Phorpres rustic Flettons	per 1,000 66/3
Midhurst Whites	per 1,000 75/–
Hard stocks, firsts	per 1,000 97/–
Hard stocks, seconds	per 1,000 89/–
Sand-faced, hand-made reds	per 1,000 from 115/–
Sand-faced, machine-made reds	per 1,000 from 110/–
Red rubbers (9¾-in.)	per 1,000 300/–
Hunziker (white)	per 1,000 67/6
Hunziker (creams, light greys, etc.)	per 1,000 from 100/–
Dunbricks (concrete), multi reds, ex works	per 1,000 72/–
Dunbricks (concrete), multi lavender, ex works	per 1,000 75/–
Southwater engineering No. 1 (first quality red pressed)	per 1,000 145/–
Southwater engineering No. 2 (second quality red pressed)	per 1,000 125/–
Blue pressed	per 1,000 174/–

* At King's Cross. For delivery in W.C. district add 4/3 per 1,000. Discount if accompanied by order for pressed 2/– per 1,000.

CURRENT PRICES

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

BRICKLAYER AND DRAINLAYER

BRICKLAYER—(*continued*)

White, Salt and Coloured Glazed Bricks (9″×4½″×2⅞″)

The following prices are subject to 2½ per cent. trade discount and 2½ per cent. cash discount, and include delivery to any railway station (minimum 4-ton loads). Add 10/– per 1,000 for delivery in London area.

Prices per 1,000	White, Ivory and Salt Glazed		Buff, Cream and Bronze	Other Colours	All Colours
	Best	Seconds	Best	Best	Seconds
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Stretcher, glazed one side ..	24 0 0	22 0 0	26 0 0	29 10 0	23 0 0
Header, glazed one end	23 10 0	21 10 0	25 10 0	29 0 0	22 10 0
Double stretcher, glazed two sides	32 10 0	30 10 0	34 10 0	38 0 0	31 10 0
Double header, glazed two ends	29 10 0	27 10 0	31 10 0	35 0 0	28 10 0
Quoin, glazed one side and one end	30 10 0	28 10 0	32 10 0	36 0 0	29 10 0

Limes and Sand

		1-ton lots	6-ton lots
Lime, greystone	per ton	43/–	37/6
Lime, chalk	per ton	43/–	37/6
Lime, blue Lias (including paper bags)	per ton	47/–	42/6
Lime, hydrated (including paper bags)	per ton	47/–	42/6
Washed pit sand	per yard cube		7/9

(For cements, *see* "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

Wall ties, self coloured	per cwt.	19/–
Wall ties, galvanized	per cwt.	24/6
Hoop iron, black	per cwt.	25/–
D.P.C. slates, size 18″×9″	per 1,000	157/6
D.P.C. slates, size 14″×4½″	per 1,000	61/3
*Ledkore D.P.C. Grade A	per foot super	5d.
*Ledkore D.P.C. Grade B	per foot super	6½d.
*Ledkore D.P.C. Grade C	per foot super	8d.

* Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £4 orders.

	9″×3″	9″×6″	9″×9″	12″×9″	14″×9″
Earthenware airbricks: red, blue, vitrified and buff terra cotta each	–/8	1/4	2/4	4/–	6/8
	9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
Black cast iron, School Board pattern airbricks per doz.	3/–	5/6	11/–	11/–	20/–
Galvanized ditto per doz.	5/6	11/–	22/–	22/–	40/–
Black hit and miss cast iron ventilators per doz.	12/–	15/–	21/–	21/–	36/–
Galvanized ditto per doz.	24/–	30/–	42/–	42/–	72/–
	1′ 0″	1′ 6″	2′ 0″	2′ 6″	3′ 6″	5′ 0″
Buff terra cotta chimney pots .. .. each	2/6	3/–	4/4	5/9	13/4	22/6
Fireclay .. per cwt.	4/–					

Wall reinforcement supplied in standard rolls containing 25 yards lin.

2″ wide black japanned	per roll 2/1	Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.
2″ wide galvanized ..	per roll 3/2	
2½″ wide black japanned	per roll 2/7½	
2½″ wide galvanized	per roll 3/10½	

Partitions

		2″	2½″	3″	4″
Breeze ..	per yard super	1/3½	1/5½	1/8	2/3
Clay tiles ..	per yard super	2/3	2/6	2/9	3/1
Pumice ..	per yard super	2/8	3/–	3/6	4/–
Plaster ..	per yard super	2/3	2/9	3/3	4/–

BRICKLAYER—(*continued*)

Shepwood Partition Bricks size 9″ × 2⅞″ and 2½″ on bed. Terms, as for Glazed Bricks

Prices per 1,000 except where stated per brick	White, Ivory and Salt Glazed		Buff, Cream and Bronze	Other Colours	All Colours
	Best	Seconds	Best	Best	Seconds
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Double stretcher, glazed two sides	32 10 0	30 10 0	34 10 0	38 0 0	31 10 0
Single stretcher, glazed one side	24 0 0	22 0 0	26 0 0	29 10 0	23 0 0
	Each	Each	Each	Each	Each
Round end glazed two sides and one end ..	–/10½	–/10	1/0½	1/0½	–/10½

Gas Flue Blocks

		Single Flues	Double Flues
Straight blocks	each	1/1	1/11
Building in set	Per set of 3	2/8	4/10
Cover blocks	each	1/5	3/–
Raking blocks 45°	each	2/9	3/11
Raking blocks 60°	each	1/11	2/10
Offset blocks	each	3/4	4/10
Closer blocks	each	1/1	1/11
Closer flashing blocks	each	1/–	1/8
Straight flashing blocks.. ..	each	1/–	1/8
Terminal and cap	per set	6/9	11/6
Middle terminal and cap.. ..	per set	6/3	10/9
End terminal and cap	per set	6/6	11/3
Corbel block	each	4/10	3/2
Gathering block	each	—	9/8

DRAINLAYER

Agricultural Pipes

		2″	3″	4″	6″
Pipes in 12″ lengths ..	per 1,000	67/6	92/6	120/–	210/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

		4″	6″	9″
Pipes (2′ lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junctions, 2′ long	each	3/4	5/–	9/–
Yard Gulley, without grating ..	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	–/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6″, 9″ and 12″ drains, with iron grating, painted	each	20/–		
Ditto, with iron grating galvanized	each	21/10½		

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Less 20%	Plus 5%
Orders under 2 tons, 100 pieces upwards	Less 2½%	Plus 22½%
Orders under 2 tons, less than 100 pieces	Plus 7½%	Plus 32½%

	Best	Seconds
Orders for 2 tons and over	Less 27½%	Subject to 15% off the price of best quality for all sizes
Orders under 2 tons, 100 pieces upwards	Less 10%	
Orders under 2 tons, less than 100 pieces	Nett	

CURRENT PRICES

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

DRAINLAYER AND MASON

DRAINLAYER—(*continued*)

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size.	9 fts.	6 fts.	4 fts. each	3 fts. each
1 . 1 . 8	4″ per yard ..	6/6	7/3	11/7	8/9
1 . 1 . 20	4″ per yard ..	6/9	7/5	11/10	9/–
2 . 0 . 6	6″ per yard ..	10/–	11/11	19/3	15/4
4 . 0 . 2	9″ per yard ..	18/2	23/9	41/3	31/5

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size.	2 fts.	18 ins.	12 ins.	9 ins.
1 . 1 . 8	4″ each	7/3	6/6	5/8	5/2
1 . 1 . 20	4″ each	7/4	—	—	—
2 . 0 . 6	6″ each	11/6	—	—	—
4 . 0 . 2	9″ each	—	—	—	—

Tonnage Allowances :
Orders up to 2 tons nett.
Orders 2 to 4 tons less 2½%
Orders 4 tons or over less 5%

		4″	6″	9″
Bends	each	6/3	12/10	40/7½
Single junctions	each	11/–	22/–	70/11
Intercepting traps	each	37/6	48/3	137/6
Gulleys ordinary trapped ..	each	15/–	—	—
Extra for inlet 4″	each	4/3	—	—
Grease Gulley trap	each	117/6	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet ..	each	23/9	42/9	—

Cast Iron Inspection Chambers

The larger figures below refer to the main pipes and the smaller figures to the branches

	4″×4″	6″×4″	6″×6″	9″×6″
Straight chambers with two branches one side .. each	56/3	66/10	78/9	153/9
Straight chambers with three branches in all .. each	66/3	76/10	91/3	166/3
Straight chambers with four branches in all .. each	76/3	87/10	103/9	178/9
Straight chambers with three branches one side .. each	71/3	88/9	101/3	—
Straight chambers with four branches in all .. each	81/3	98/9	113/9	—
Straight chambers with five branches in all .. each	91/3	108/9	126/3	—
Straight chambers with six branches in all .. each	101/3	118/9	138/9	—
Straight chambers with four branches one side .. each	93/9	111/3	133/9	—
Straight chambers with five branches in all .. each	103/9	108/9	146/3	—
Straight chambers with six branches in all .. each	113/9	131/3	158/9	—
Straight chambers with seven branches in all .. each	123/9	141/3	171/3	—
Straight chambers with eight branches in all .. each	133/9	151/3	183/9	—

The branches to the above are at 135°

		4″	6″
Extra for branches between 135° and 180°	each	7/6	7/6
Extra for branches between 90° and 135° other than standard angles	each	6/3	6/3

		4″×4″	6″×4″	6″×6″
Curved chambers, no branch 90°–112½°	each	26/10	—	38/2
Curved chambers, no branch 135°	each	26/10	—	38/2
Curved chambers, one branch 135°	each	33/9	48/9	55/–
Curved chambers, two branches 135°	each	40/8	65/8	76/3

Channels in White Glazed Ware (Unselected Quality)

		4″	6″	9″
Half round straight channels, 6″ long	each	2/4	3/2	5/3
Half round straight channels, 12″ long	each	3/3	4/5	6/11
Half round straight channels, 18″ long	each	4/–	5/3	8/5
Half round straight channels, 24″ long	each	4/8	6/4	10/6
Half round straight channels, 30″ long	each	5/10	7/11	13/2
Half round straight channels, 36″ long	each	7/–	9/6	15/9
Half round ordinary or long channel bends	each	8/5	12/11	21/–
Half round ordinary or short channel bends	each	6/–	8/5	—
Three-quarter round ordinary branch bends	each	8/1	11/8	—
Three-quarter round ordinary branch bends, midgets	each	7/3	—	—

		6″×4″	9″×6″
Half round taper channels 24″ long ..	each	7/10	11/3
Half round taper channel bends ..	each	10/3	17/9

These prices are subject to 20% discount.

DRAINLAYER—(*continued*)

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long ..	each	1/3	1/10½	3/4½
Half round straight channels 30″ long ..	each	—	—	4/2½
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends ..	each	1/10½	2/9½	5/0½
Ditto, short	each	1/10½	2/9½	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends ..	each	5/–	7/6	—

		6″×4″	9″×6″
Half round taper channels 24″ long ..	each	3/9	6/9
Half round taper channel bends ..	each	4/8½	8/5½

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

Manhole Covers

	Black	Galvanized
24″ × 18″ single seal for foot traffic. (Weight 0.3.0 in lots of 24) .. .. .. each	12/–	23/3
24″ × 18″ single seal for light car traffic. (Weight 2 cwt. in lots of 24) .. each	35/–	61/6
24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.) .. .. .. each	Coated 55/9	

	Fine Cast	Galv.
Cast step irons, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lbs. each per dozen	12/6	20/6

	4″	6″
Galvanized fresh air inlets, with cast brass fronts (L.C.C. pattern) .. .. each	5/6	20/3

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes .. .. per foot cube	4/6
Add for blocks to dimension sizes .. .. per foot cube 6d.	(each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long) .. .. .. per foot cube	5/–
Templates with sawn beds, sawn one edge per foot cube	6/–
Templates with sawn beds, sawn two edges per foot cube	7/–
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 6-ton loads.)	18/8

Ancaster Stone

Freestone, random blocks .. .. .. per foot cube	3/6
Brown weather bed stone selected for polishing all brown blocks .. .. per foot cube	8/–
Brown and blue weather bed stone selected for polishing .. .. per foot cube	7/–

Prices f.o.r. Ancaster, railway rate to London Station approximately 11½d. per foot cube (minimum 6-ton loads).

Bath Stone

Random blocks, delivered railway trucks, Paddington or South Lambeth .. .. per foot cube	2/10½

Portland Stone

Whitbed, in random blocks of 20 feet cube average, delivered railway trucks Nine Elms, South Lambeth or Paddington .. .. per foot cube	4/5
Basebed—add to the above .. .. per foot cube	–/3
For every foot over 20 ft. cube average—add per foot cube	–/1
For every foot over 30 ft. cube average—add per foot cube	–/0½

¾″ Thick Plain Marble Wall Linings

Roman Travertine .. .. per foot super	5/–
Golden Travertine .. .. per foot super	6/3
Roman stone .. .. per foot super	4/6
Hopton-wood stone .. .. per foot super	5/–
Second statuary .. .. per foot super	4/6
Sicilian .. .. per foot super	4/–

Artificial Stone

6″×3″	Copings and sills	per foot run	1/6
6″×6″	Copings and sills	per foot run	2/4
9″×3″	Copings and sills	per foot run	2/–
9″×6″	Copings and sills	per foot run	3/4
12″×3″	Copings and sills	per foot run	2/4
12″×6″	Copings and sills	per foot run	3/9

Cornices according to detail, per foot cube (from) 6/9

CURRENT PRICES

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

MASON, SLATER, TILER AND ROOFER, AND CARPENTER

MASON—(*continued*)

Reconstructed Stone to match Natural Stone

Sills, lintols, coping, cornices, ashlar, etc., average size per foot cube	11/-
Window sills, 9″×3″ section .. .. per foot run	2/1
„ „ 7″×3″ section .. .. per foot run	2/-

Slate Slabs, cut to size and Planed

	1″	1¼″	1½″
Not exceeding 4′ 6″ long or 2′ 3″ wide per foot super	3/1	3/4	3/11
„ „ 6′ 6″ long or 3′ 3″ wide per foot super	3/9	4/1	4/10
Exceeding 6′ 6″ long or 3′ 3″ wide per foot super	4/1	4/6	5/2
Rubbed faces .. .. ..per foot super	-/5	-/5	-/6
„ edges .. .. .. per foot run	-/4	-/4	-/5

Combined Slate Cills and Window Boards for Metal Windows

Window Width	Straight Cills: Wall thickness 9″	11″	13½″	Circular Cills for C.O.P. Frames: Radius	External reveals 2″	4½″
1′ 8″ ..	4/-	4/8	5/8	2′ 4½″ ..	21/-	24/-
3′ 3½″ ..	7/4	8/7	10/4	2′ 7½″ ..	25/6	28/6
4′ 10½″ ..	10/6	12/3	14/10	2′ 10½″ ..	30/-	33/3

SLATER, TILER AND ROOFER

Best Bangor Slates

	£ s. d.
24″×12″ .. .. per 1,000 actual	33 6 6
22″×12″ .. .. per 1,000 actual	27 19 0
22″×11″ .. .. per 1,000 actual	25 4 9
20″×12″ .. .. per 1,000 actual	24 14 6
20″×10″ .. .. per 1,000 actual	21 15 5
18″×12″ .. .. per 1,000 actual	20 19 3
18″×10″ .. .. per 1,000 actual	17 4 0
18″×9″ .. .. per 1,000 actual	15 11 9
16″×12″ .. .. per 1,000 actual	17 14 9
16″×10″ .. .. per 1,000 actual	15 11 9
16″×9″ .. .. per 1,000 actual	13 19 6
16″×8″ .. .. per 1,000 actual	12 1 11

Prices include for delivery to site in lots of 1,000 and upwards.

Old Delabole Slates (f.o.r.)

Standard sizes.

Prices and computed weights per 1,200.

		20″×12″	16″×10″
Grey medium gradings	per 1,200 cwts.	597/-	366/-
		46½	30
Unselected greens (V.M.S.) ..	per 1,200 cwts.	672/-	413/-
		55½	36

Random sizes.

Prices per ton and computed covering capacities in squares per ton.

		No. 1 Grading 24″/22″ to 12″/10″
Ordinary grey greens	per ton	128/-
Covering cap.:	per ton (3″ lap)	2·37 squares
	per ton (4″ lap)	2·19 squares
		No. 2 Grading 24″/22″ to 12″/10″
Weathering grey greens (V.M.S.)	per ton	139/-
Covering cap.:	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares
		No. 2 Grading 24″/22″ to 12″/10″
Weathering greens (V.M.S.) ..	per ton	149/-
Covering cap.:	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares
		No. 2 Grading 24″/22″ to 12″/10″
Rustic reds (25%) and weathering greens (V.M.S.)	per ton	174/-
Covering cap.:	per ton (3″ lap)	2·25 squares
	per ton (4″ lap)	2·08 squares

Railway rate to Nine Elms, London, minimum 4 tons, 21/9, minimum 6 tons per truck, 18/1 per ton.

Tiles

	£ s. d.
Hand-made sandfaced 10½″×6½″ red roofing tiles per 1,000	4 15 0
Machine-made sandfaced 10½″×6½″ red roofing tiles per 1,000	4 0 0
Berkshire rustic pantiles .. .. .. per 1,000	18 10 0

SLATER, TILER AND ROOFER—(*continued*)

Westmorland Green Slates

	Price per ton	Bests, 24″ to 12″ long. Proportionate widths. Computed cover in sq. yds. per ton
Random sizes.		
No. 1 Buttermere fine light green ..	240/-	30
No. 2 „ light green (coarse grained)	215/-	27–28
No. 5 „ olive green (coarse grained)	197/-	25–27
No. 5 Medium green	197/-	25–26
No. 7 Elterwater fine light green ..	216/-	27–28
No. 15 Tilberthwaite fine light green ..	214/-	26–28
No. 16 „ light green (coarse grained)	202/-	25–27

Prices include for delivery to any station, minimum 6-ton truck loads.

Asbestos-cement

6″ corrugated sheets, grey .. .. per yard super	2/11
Standard 3″ corrugated sheets, grey .. .. per yard super	2/7½

Slates :—

		£ s. d.
15¾″×7⅞″ grey	per 1,000	£6 16 3
15¾″×15¾″ diagonal, grey	per 1,000	£12 18 6
15¾″×15¾″ diagonal, russet or brindled	per 1,000	£16 6 6

Pantiles.

Large russet brown	per 1,000	£19 8 6

Prices are for minimum two-ton loads.

Cedar Wood Tiles

Canadian cedar wood shingles .. per square 32/- (normal quantity).

Prices include for delivery to nearest railway station in England but vary with quantity.

CARPENTER

Carcassing Timber

Prices are for Standards in one delivery; when less than a standard is required, or special lengths, add £1 per standard.

		Per standard £ s. d.	Per foot cube
*4″ ×11″	Scantling	24 15 0	3/-
*4″ × 9″	„	23 15 0	2/10¼
3″ ×11″	„	22 10 0	2/8¾
2″ ×11″	„	23 10 0	2/10¼
3″ × 9″	„	22 0 0	2/8
*2″ × 9″	„	22 10 0	2/8¾
3″ × 8″	„	20 10 0	2/6
*2″ × 8″	„	20 5 0	2/5½
*3″ × 7″	„	20 5 0	2/5½
*2″ × 7″	„	20 0 0	2/5¼
*4″ × 6″	„	23 10 0	2/10¼
3″ × 6″	„	21 0 0	2/7½
2″ × 6″	„	20 0 0	2/5¼
*3″ × 5″	„	20 10 0	2/6
3″ × 4″	„	19 10 0	2/4½
*2″ × 5″	„	19 0 0	2/3¾
2″ × 4″	„	18 10 0	2/3
*1½″×11″	„ (20 ft. lengths and over)	per ft. run	-/4½
*1½″×9″	„ (20 ft. lengths and over)	per ft. run	-/3¾
1½″×7″	„ (20 ft. lengths and over)	per ft. run	-/2⅝

Yellow Deal Battens

¾″×1″	per 100 feet run 1/6
¾″×1½″	per 100 feet run 2/-
*¾″×2″	per 100 feet run 2/9
1″×2″	per 100 feet run 4/3
*1½″×2″	per 100 feet run 5/3

Weather Boarding

Deal :—

*⅝″×⅛″×6″ Feather edge	per square 11/-
⅝″×⅛″×4″ Feather edge	per square 9/-

Western red cedar :—

1″×6″ Bevel sidings	per square 32/-
11/16″×3/16″×6″ Feather edge	per square 11/9
⅝″×⅛″×4″ Feather edge	per square 12/6

Roof Boarding

Deal :—

*¾″×6″	per square 16/-
*1″×6″	per square 21/-

* Items marked thus have fallen since July 21.

TO BE CONTINUED IN NEXT ISSUE