THE ARCHITECTS' JOURNAL

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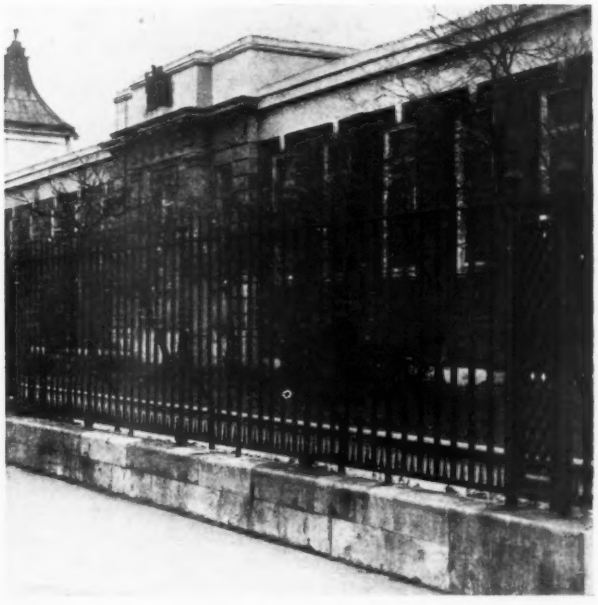
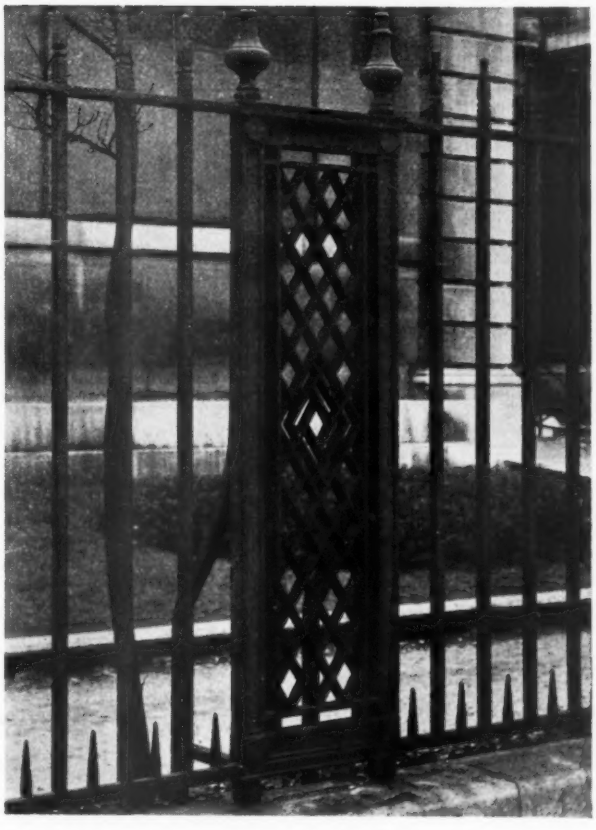
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, MARCH 24, 1938. NUMBER 2253 : VOLUME 87

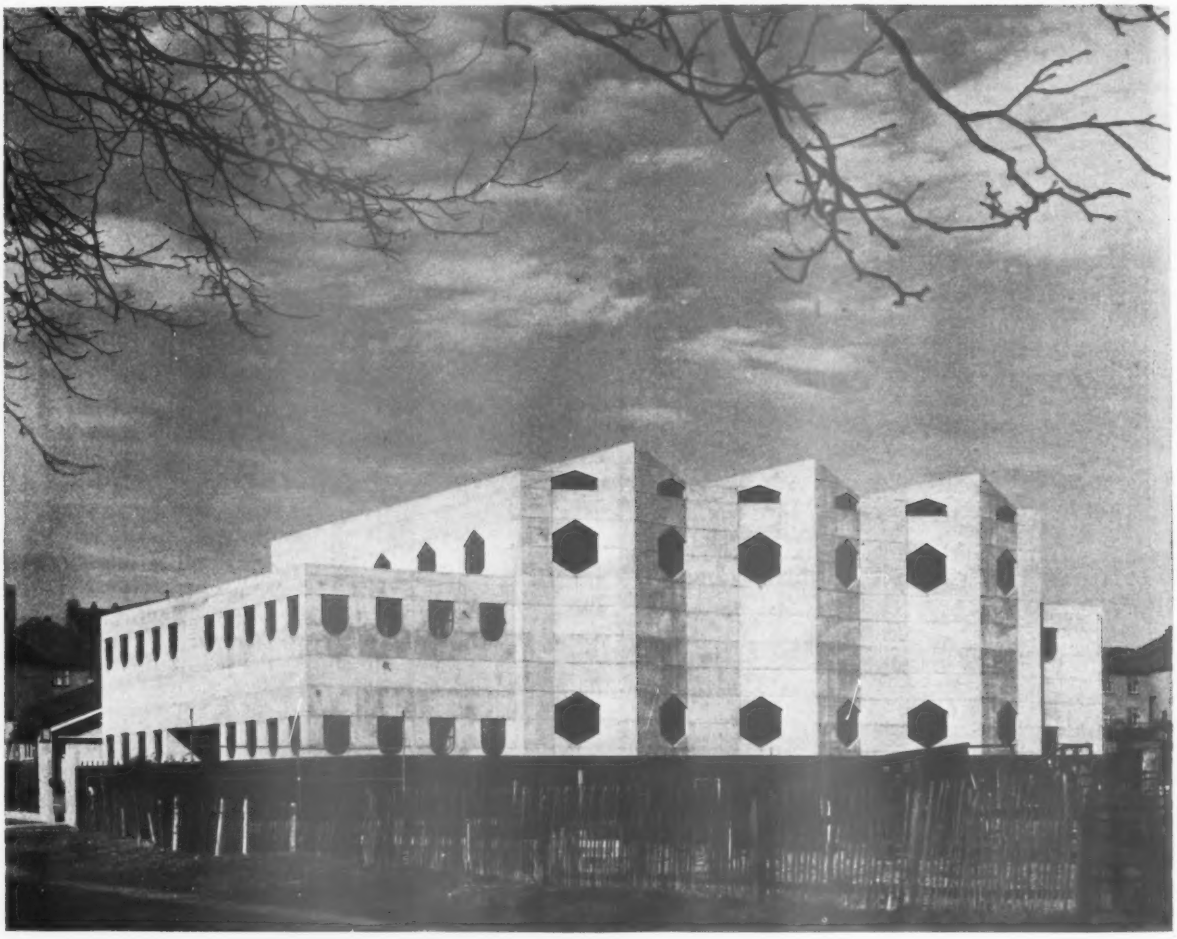
PRINCIPAL CONTENTS

HOSPITAL GATES TO BE REMOVED





The entrance gates and the railings, over 800 ft. in length, which have stood outside King's College Hospital, Denmark Hill, S.E., for the past twenty-four years are to be taken down. The reason is psychological and not architectural or constructional. It is considered that their removal will create a greater communion between the hospital and the public and will remove any undesirable suspicion of seclusion which in certain minds might appear to make the hospital inhospitable. What is to become of the gates and railings is at present a mystery. If, as is possible, there may be any public authorities or landowners who would like to possess them, they should apply to the Secretary of the Hospital.



SYNAGOGUE AT DOLLIS HILL

This synagogue, designed by Sir E. Owen Williams, K.B.E., is situated in Park Side, Dollis Hill, Middlesex. It is built of reinforced concrete and has seating accommodation for 840 persons.

The external finish of the building is in natural concrete cast against building board shuttering and, except for rubbing down by hand by carborundum blocks, the surface has not been treated in any way. The steel windows are of two shapes, both of which are perfect for allowing the concrete to be cast around them. The motif of the hexagonal windows is the Shield of David; of the remainder the Seven Branched Candlestick.

Above is a general view. Further illustrations and plans appear on pages 489–491.

PUBLIC TENSION—I

FOREIGN affairs and internal problems are the two divisions of political endeavour. And in those nations which have not blanketed the second to support some policy in the first, it is a tragic characteristic that only at moments of foreign tension do individuals rise enough above the petty and partisan to see domestic tendencies as they really exist.

The present is such a moment. The causes of most acute anxiety lie beyond the scope of the JOURNAL. Architecture, from beginning to end, is essentially constructive, and can hope for no gain to set against its losses from international tension. And it is therefore as private persons that architects must record their opinions on foreign affairs.

That done the JOURNAL believes the present should be used by architects to recognize and remember that if external affairs lie outside their professional scope internal affairs do not. The profession, as the representative of the planning idea, is the symbol of the logical method of solving the internal affairs of the country. Individually each architect designs buildings to earn his living. Collectively the profession must rise above the stage of units to a sense of its responsibilities—which are national responsibilities influenced by national tendencies.

The first of these tendencies is the increased opinion among common men that the primary possessions of the country could be better used from the point of view of the whole population. The average man is no doctrinaire ; equality of income and a completely socialized economy may make little appeal to him, but in a crowded country he believes, and at the moment is saying so, that the first essentials of a tolerable life for everyone should be safeguarded from individual and sectional abuse.

His ideas of what should be regulated and the methods to be employed are not clear cut, but they are sufficiently well indicated to be of huge significance to architects.

The average man is beginning to realize, perhaps *via* Czechoslovakia, that agricultural land is as important as built-on land, that a field, though he may never see it, is as important for a hero as a home, a job and a bus service. Without knowing anything of remedies he is showing that he is not satisfied with the present regulation of land usage. He resents re-housing without open spaces at a distance from centres of employment, the dreary twelve-to-the-acre congestion of houses where access to shops, recreations and transport is a matter of chance.

Particularly, if he has children, he resents the deadly muddle of the roads.

Roads are the second most obvious example of dwindling public patience. In a motor age they are part of the elementary framework of being alive at all and each new section might be expected to be as carefully laid out and shielded from injury to its efficiency as a new telescope at Mount Wilson. The contrast between reason and reality is now recognized as intolerable. Barely can there be imagined any abuse of the obvious functions of roads today which has not been extravagantly and repeatedly perpetrated—nearly always for the profit of private individuals at the cost of roads users. In the last statistical year this cost in casualties, without considering financial injury, was 6,540 killed and 230,000 injured.

The public attitude towards these two domestic problems—they are the most important that affect architecture—cannot be too fully considered by architects. They are the greater and lesser divisions of the same question of territorial planning which in turn is only a shorter title for the use of land surface for the greatest public good, or if the worst comes to the worst, for survival.

Just now, when the strategic mistakes of territorial *laissez faire* are obvious, the social and economic failings are also exposed. There is in our view no body of men, not even politicians, who have the incentive to study or the responsibility to put forward solutions for these problems in any way comparable to architects. Unless architects are prepared to assume these responsibilities they cannot expect to be awarded in the future more than a second-class *rôle*, to avoid relapsing into that public estimation of them as external decorators from which they are so painfully emerging.

But they cannot individually trifle with national questions. Their efforts must be collective, organized and continuous ; and later the JOURNAL intends to put forward some suggestions as to the scale and method which would be needed. Next week we shall consider the more recent past and some of the problems which might have called for collective action had architects been organized for any collective action more sustained than passing a resolution.

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NOTES & TOPICS

GLORIOUS FUTURE

THIRTY-THREE town-planning schemes are likely to be approved by the Ministry of Health within the next month. These schemes cover in the aggregate only 100,000 or so acres, but the first feeling of architects is one of pleasure that town-planning is, perceptibly, moving forward.

*

The train of thought from that point onwards is quite likely to be: efficient use of land, properly considered building schemes—schemes which pay attention to the landscape. And then the architect may say, "Ah—— I wonder."

*

It will be plain to you all what he is wondering about: that little matter of the external appearance of buildings. A little enquiry, very little, and sinister possibilities begin to crop up.

*

Of these 33 schemes, 32 have taken the question of external appearance seriously. In the case of ten of them if the Council disapproves external appearance an appeal will lie to the local justices. In the case of the remaining 22, the appeal will be heard by a tribunal, consisting of one Member of the R.I.B.A., one member of the Chartered Surveyors' Institution, and one local J.P. In both cases the decisions will be final.

*

The members of the tribunal will probably be local men, and the possibility of deliberate obstruction of outsiders cannot therefore be dismissed. But the greatest danger is the likelihood, almost the certainty, of standards of design being increasingly reduced to the level of the locally familiar.

*

If ever there was a case for architects to insist on the retention of a right of appeal to a national tribuna', it is here and now.

SEE BELOW

The home of Major and Mrs. Pershouse, in Gloucester Square, is outwardly a typical nineteenth-century London house, vast and stuccoed.

Inside, according to the *Sunday Express*, it is a complete French chateau of the Renaissance period, "the spiritual sphere of its chatelaine."

*

From the genuine Louis XII staircase, a six hundred year old Gothic arch gives on to a cocktail bar, where drinks are served from "centuries old Venetian glass goblets of exquisite hues." The carved chimney-piece in the Gothic salon still bears the sabre marks of duelling, and, disguised as a window behind a wrought-iron grille, is a lift "just big enough to carry Mrs. Pershouse to her mirror-lined boudoir above."

*

Here is a "cabinet of memories," leading into "a bath-room lined with Rose Aurore (dawn pink) marble, which took over a year to collect."

*

We are told that Mrs. Pershouse (if not the Major) has lost all count of what it has cost to re-create this mediæval atmosphere.

TITLE FOR ABOVE

"Though you build your house in the wood, the world will make a pathway to your door, if you have something good to offer."—*Emerson.*

T.D.A.

"Fifty-six different types of wood will be used in the erection of the Timber Development Association's pavilion at the Empire Exhibition, Glasgow."

*

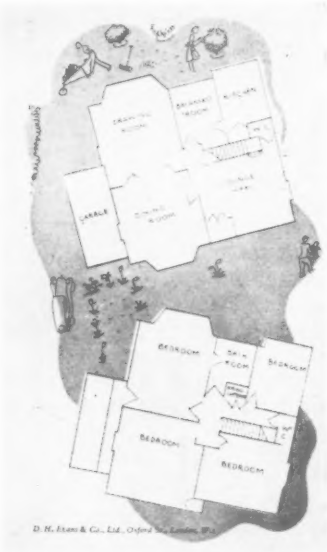
How one shudders at the news, remembering the horrid hotch-potch inlays of South Africa House, the "Queen Mary" and a thousand board rooms.

*

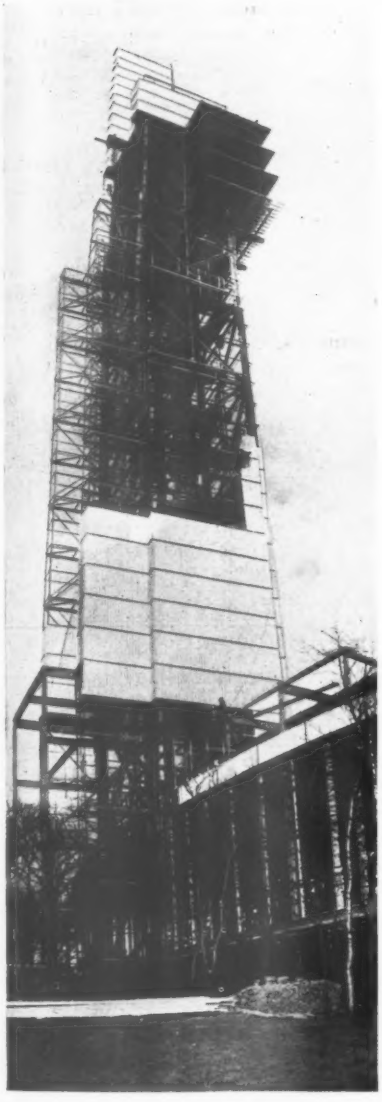
Mr. Furneaux Jordan, however, the architect, has designed a little building so charming in its Scandinavian simplicity and gaiety, that the journey to Glasgow becomes worth while. A feature will be the two 30-ft. telegraph poles, supplied by the G.P.O., which support the projecting portico.

JAUNT WITH EVADNE

There emerged from my post the other day a booklet. I was, I fear, just going to throw it away when I noticed the plans which are shown below. Even at breakfast there is something about a plan . . .



The plan referred to above



A progress photograph of the central tower—popularly called "Tait's Tower"—at the Empire Exhibition at Glasgow.

The booklet, from Messrs. D. H. Evans, was called "Round the Linen Section with Evadne," and began its allurement thus :

An Englishman's home is his castle . . . an Englishwoman's pride is her linen cupboard. Strangely enough, the artist's forgotten to include this most important of hide-outs in the house plan, but believe me it's there, somewhere in the vicinity of the airing cupboard.

*

Now art is art and the aim of Evadne for the moment was neither house design nor literature. But I have a feeling that Evadne's conducted tour would be larger in numbers and her hint more widely taken if her ideal house plan worked, and the linen cupboard was so perfectly arranged that it would be a crime not to fill it.

INFORMAL MEETING

Mr. Pointon Taylor, chairman of the Informal Meeting on March 16 called "Health, Wealth and Architecture," managed for once to persuade architects not to sit still and be talked at.

*

Mr. Philip Massey opened with the four stages of territorial planning : interference to protect the individual, to regulate single industries, the present regional planning and the inevitable national plan. Dr. Edith Summerskill came down to detail, maintained that liaison between a County Council's committees and their Architects' Department was lacking, and denounced the R.I.B.A. for ineffective propaganda.

*

The rest of the discussion was wide and spirited. Parlours or no parlours, north or south kitchens, scarcity of architects in metropolitan borough councils and architectural publicity were ended by Dr. Summerskill still maintaining that architects had everything to learn about propaganda.

MELLOW MARTELLO'S

The fashion for building follies, which seems once again to be spreading through the peerage, is apparently a great worry to rural councils and authorities. It was a long time before the designs for Lord Berners' tower at Faringdon were approved, and the Hambledon Rural Council are now considering again the plans of a Martello Tower which Lord Inchcape proposes to erect on Clinthurst Hill, Surrey.

*

Although the scheme was at first viewed with disfavour, I understand that it is now likely to be approved. His lordship's representative pointed out to a breathless deputation who had scaled the hill, that the tower would be almost invisible, and that (in case it *was* seen) special care was being taken to make it "look old from the start." It is to be built of timber specially treated to give a mellow effect, will contain two reading rooms, and will serve also as a summer pavilion.

*

A wooden Martello is certainly a pleasing whimsicality in the true tradition of aristocratic eccentricity. It is with a sharper interest and anticipation that I look forward to the day when Lord Brocket builds a folly.

LEEDS FOLLOWS NEW YORK

What is claimed to be the first skyscraper block in England will shortly be erected in Leeds if the plans are approved by the corporation.

*

The building, promoted by (among others) Sir Henry "50s. tailor" Price, and designed by Adie Button and Partners, will occupy a site between Briggate and Trinity Street, and with its 23 storeys will reach a height of 370 feet from the pavement. Of this height 68 feet is taken up by a flagpole, and fifty feet by "an architectural feature which will be floodlit at night."

*

To help local residents to gain a clearer idea of the building's scale, the *Leeds Mercury* points out that the owls on top of the 170 ft. towers of the Leeds Civic Hall, are each 7 ft. 6 ins high.

ARCHITECTS ALL

Ex-architect Hitler is no longer the only member of the profession who is also the head of a State.

*

General Skwarcynski, who holds an architectural degree, has been elected a political leader of Poland.

*

I haven't heard yet whether he feels the same way as Hitler about flat roofs.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

THE REGISTRATION BILL

The Report Stage and probable Third Reading of the Architects' Registration Bill will be reached on May 13. A full report of the Committee Stage is given on pages 512-514.

L.C.C. NURSERY SCHOOL: EXPERIMENT BY THE COUNCIL

Architects in private practice have already been employed by the L.C.C. four times since 1935 to design new L.C.C. elementary schools. Now a similar experiment is to be made for a nursery school. At Tuesday's meeting of the Council the following recommendation of the Education Committee was adopted: "That, as an experiment, the employment of an architect in private practice to design and supervise the erection of a nursery school to be built by the Council be authorized, on the understanding that expenditure in excess of the normal is not thereby involved; and that the Education Committee be authorized to approve the architect to be so employed, and to settle the details of the arrangements to be made in the matter."

R.A. EXHIBITION

The days for submission of works for the Royal Academy Summer Exhibition (May 2–August 6) are as follows: Tomorrow, March 25: water-colours, pastels, miniatures, paintings in tempera, black and white drawings, colour prints, engravings, and architectural drawings. Saturday, March 26, and Monday, March 28: Oil paintings. Tuesday, March 29: Sculpture. Hours for the reception of works are 8 a.m. to 10 p.m., (except March 26, 8 a.m. to 2 p.m.). All works must be delivered (unpacked) at the Burlington Gardens entrance.

TEMPERATURE OF THE TUBES

Two interesting experiments are about to be made by London Transport with a view to controlling further the temperature of the tubes. The first will be made at Trafalgar Square Station. Apparatus will be installed to eject invisible water atoms into the station. The vaporization will absorb heat and the cooled air will be pushed along the north-bound tunnel by trains to Piccadilly Circus Station. This plant should be working within a month.

At Tottenham Court Road Station a large refrigerator will be fitted in a disused lift shaft. This plant will circulate a cold fluid through a system of pipe grids. Electric fans working behind the grids will blow cool air into the station.

London Transport is giving special attention to the temperature and ventilation of the tubes because of the heavier traffic that will result when the £40,000,000 programme has been completed.

THE ARCHITECTS' DIARY

Thursday, March 24

R.I.B.A., 66 *Portland Place, W.1. Exhibition: "Health, Sport and Fitness." Until March 31, 10 a.m to 8 p.m. (Saturday, March 26, 10 a.m. to 5 p.m.).*

SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL [CARDIFF] BRANCH). *At the Technical College, Cardiff. "Giving the Public What it Wants, with Special Reference to the Planning and Design of Small Libraries." By Edward Carter. 7.15 p.m.*

CHADWICK PUBLIC LECTURE. *At the London School of Hygiene, Keppel Street, W.C.1. "Water Supply in Relation to Public Health." By W. J. E. Binnie. 5.30 p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, Piccadilly, W.1. "The Defences of the Roman Town of Isurium Brigantum (Aldborough, Yorks)." By J. N. L. Myres and K. A. Steer. 8.30 p.m.*

DESIGN AND INDUSTRIES ASSOCIATION. *At the Royal Society of Arts, John Street, Adelphi, W.C.2. Discussion on "The New Type of Art School." Speakers: Austin Cooper, P. H. Jowett, H. G. Murphy. Chairman, F. R. Yerbury. 8 p.m.*

INSTITUTION OF ELECTRICAL ENGINEERS, *Savoy Place, Victoria Embankment, W.C.2. "Plastics and Electrical Insulation." By Dr. L. Hartshorn, N. J. L. Megson and E. Rushton. 6 p.m.*

LONDON SOCIETY. *Visit to British Legion Poppy Factory, Richmond. 2.30 p.m.*

Friday, March 25

ARCHITECTS' REGISTRATION COUNCIL, 68 *Portland Place, W.1. Sixth annual meeting.*

NORTHAMPTONSHIRE, BEDFORDSHIRE AND HUNTINGDONSHIRE SOCIETY OF ARCHITECTS. *Annual Dinner. At the George Hotel, Luton. 7 p.m.*

Monday, March 28

NORTH-WESTERN EDUCATIONAL ASSOCIATION FOR THE BUILDING INDUSTRY. *At the College of Technology, Manchester. Timber Research Exhibition. Until April 2.*

Tuesday, March 29

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Tuesday lunches: "House Property Management." By Miss E. Murray. 1 p.m.*

ROAD TO LINK TWIN PORTS

Construction of the Grimsby–Immingham direct road—linking the twin ports of Grimsby and Immingham with their 1,500 acres of docks, quays, and dock estates—has been approved by Lindsey (Lincolnshire) County Council and a start will be made as early as possible. The new road is designed to facilitate the development of industrial sites on which attracted industries will have the choice of services at the two ports, with access to inland waterways. The estimated cost is £210,850.

PORTSMOUTH CATHEDRAL EXTENSION

The Portsmouth Cathedral Council has instructed Sir Charles Nicholson, its architect, to invite tenders for the next section of the cathedral extension, which is to include four of the seven bays of the nave, and any work necessary to adapt to the new section the portions already completed. The estimated cost of this section is £30,000, of which £16,000 is now available.

CHANGE OF ADDRESS

Mr. H. R. Finn, L.R.I.B.A., has moved his office to Court Chambers, 3 Victoria Street, St. Albans. Telephone No.: St. Albans 285.

APPOINTMENT

Mr. Richard Dudley Ryder, who was for long associated with this JOURNAL and who sprang into public fame as organizing secretary of the famous 1933 Dorland Hall Exhibition devoted to British Industrial Art in Relation to the Home, has joined Messrs. Troughton and Young and the Lighting Centre in the capacity of personal assistant to the Governing Director.

CORRECTION

In the issue of the JOURNAL for March 10, on p. 423, a refrigerator is illustrated which is described as the Master a type of Frigidaire. This is incorrect, the model shown being in fact the Frigidaire type M.R.-3.

OVERCROWDING—LONDON

The Minister of Health, Sir Kingsley Wood, has made an Order fixing the "appointed day" under the Overcrowding Act, 1936, for the Metropolitan Boroughs of Bermondsey, Bethnal Green, Finsbury, Islington, Poplar, Shoreditch and Stepney. As from the date provided in the Order the overcrowding provisions of the Act of 1936 become operative in the area and the local authority has the duty of taking steps to abate existing overcrowding and to prevent fresh cases of overcrowding from arising.

The new Order is the last of a series covering 1492 local authorities in England and Wales.

ELECTRICAL DEVELOPMENT ASSOCIATION

The growth of the electrical industry during the past ten years was referred to by Dr. Leslie Burgin, Minister of Transport, at the annual luncheon of the above Association at the Savoy Hotel, W.C., on Friday last. In 1927, he said, its capital expenditure was £240,000,000, its revenue £40,000,000, and it had 2,000,000 consumers. In 1937 its capital expenditure was £570,000,000, its revenue £70,000,000, and its consumers numbered 8,500,000. When it came to his turn to submit to Parliament as Minister, measures for the improvement of the distribution side of the industry, his objective would be that the problem should be handled as a business one—a mixture of technical and practical. Unity was strength, and, other things being equal, the larger concern could afford more for technical research and improvement than a number of smaller concerns spread over a wide area.

Mr. J. Chuter Ede, M.P. (President) said that the best means of bringing to the housewife a knowledge of the advantage to be gained from the use of electricity was through press advertising. The Association had sent over 300,000,000 messages through the press into the houses of the people making known the diverse forms at their disposal for the improvement of the home and the lightening of work there. Only 2½ per cent. of domestic consumers of electricity need to pay more than a penny a unit for their current, and more than 60 per cent. of them paid less than a halfpenny a unit. Those facts represented an advance which fully justified the activities of the Association.

IN PARLIAMENT

The Housing (Financial Provisions) Bill is now through the House of Commons, and is before the House of Lords.

On the third reading debate in the Commons last week, Sir Percy Harris declared, on behalf

of the Liberal party, that he did not take exception to the unification of subsidies, but he hoped that the Minister would not suggest that this Bill was the last word in housing legislation. It was a temporary measure to continue existing laws and to simplify them. It was vital now to encourage houses for large families. He wished to emphasize the danger of making our great towns cities of flat dwellers. He agreed that if they were going to rehouse people on a cleared site it must be necessary to build upwards, but he was assured by architects that when they were rebuilding a slum area they could include on the site a certain number of cottages. It was a great temptation to architects and surveyors to sweep away areas in order to get an attractive and well-planned development. He used to be very attracted by that theory, but in the light of experience it was found that they were throwing out of their homes people devoted to their houses, and pushing them into the monster buildings and skyscrapers which we were now seeing. By all means let them clear the slums and, where necessary, let them fill up the gaps by block dwellings, but let them spare the decent homes of the working-classes in all the great towns.

Mr. Greenwood moved the rejection of the Bill on behalf of the Labour party because, he alleged, it would slow down housing. It was only a stop-gap measure.

Sir Kingsley Wood vigorously defended his policy. He hoped that the Bill would ensure a continuous programme for the next five years for the local authorities. He was anxious that full opportunities should be taken by those authorities. So far as could be estimated, the Bill would mean an extra Exchequer contribution of some £500,000 a year. He hoped the Bill would keep the housing and slum clearance work alive.

The third reading was carried by 134 votes to 63.

AN ARCHITECT'S WILL

Captain Walter Pank Hack, L.R.I.B.A., of Peterborough, architect and surveyor, who died on November 29 last, left £6,395 16s. 8d. (net personalty £4,930 8s. 2d.).

EXHIBITIONS

[*By D. COSENS*]

THROUGH the hard uncompromising quality of his painting William Roberts comments, in his own way, on the less amiable characteristics of man. The simplification and the extreme solidity of form, and the strongly stressed linear pattern of his design serve accurately to interpret his vision. His work is undoubtedly both harsh in treatment and biassed in content, but it has an all too rare integrity and his exhibition of paintings and drawings at the Lefevre Galleries is of great interest. Some of his large paintings seem to gain little by their size; and he achieves his object most successfully and by the simplest means in the pencil drawing "Oboes" (33) with its slight and exactly placed colour washes. This is a lovely drawing and the most completely realized thing in the exhibition. The two or three examples of his more recent work are freer, less wooden, and at the same time far less personal than that in his accustomed manner.

•

There is an unusual candour in Cedric Morris's portraits. If the sitter happens to be hard-faced and middle-aged he says so without hesitation, and then he adds: "but underneath all that make-up and that silly manner you are really like this or that," and all is forgiven even by the vainest—or should be. The likenesses are excellent in the many recognizable portraits, and it is a pleasure to see the work of a portrait painter so direct in statement and so completely free from flattery—work in which the painter's real interest is in the nature of his subject and the colour pattern into which he fits it. This is Cedric Morris's first exhibition of portraits.

•

It is misguided to think that because Picasso can give the full content of his subject by slight inflections of outline that kind of simple-looking drawing is easy. It is the most difficult thing in the world, for to simplify it is essential to have a master's grasp of all the facts—to simplify down from complete knowledge, not as a short cut. Mervyn Peake's drawings are very mannered, after Picasso. Often his line is sensitive, often his design is good, but these elegant outlines are singularly vacant. But his water-colours are another matter. These are his clearly defined impressions of landscape, and his simplifications and abbreviations are just and relevant. In his painting his expression is not hampered by the constricting manner of his drawings, and all his water-colours are interesting and show great promise.

Paintings and Drawings by William Roberts. Lefevre Galleries, 1A King Street, St. James's. Until March 26.

Portraits by Cedric Morris. Guggenheim Jeune, 30 Cork Street. Until April 7.

Drawings and Paintings by Mervyn Peake. Calmann Gallery, 42 St. James's Place. Until March 26.

GENTLEMAN'S ARCHITECTURE

[*By John Gloag*]

The fence is safe, the goal is far,
I do not like things as they are,
I want to compromise, but then
I only know such violent men.
I always want extremes to meet,
I want all bitter faith made sweet;
My way is not the way of MARS,
My eyes are seldom on the stars,
Instead my gaze is on the past,
Regarding things men built to last:
The architecture I admire
Was made with *manners*, not with fire.
I do not care for engineers,
Nor hairy highbrows downing beers
And playing darts in rustic pubs
And telling stories of their cubs
All unrepressed, obscene and free,
Who're learning just how not to be
The kind of Christian gentlemen
From whom we might recruit a Wren,
Some architectural saviour who
Will know exactly what to do
With all the new materials that
In lesser hands become so *flat*,
So *earnest*, dull and coldly pure,
Always so *new*, till something newer
Dates these eruptions of an age
That clamps an economic cage
Around us all, so men who build
Soon have their inspiration killed,
And turn to so-called social science,
And, by a puritan alliance
With *left*-wing uplift, soon refuse
To serve God, Mammon, or the Muse.

•

Professor Really Speaking

I HAD an opportunity recently at a little artists' club in a town near to the one in which I live of listening to a debate on how to save the country, not from Hitler and his friends in the British Press—though that, of course, is the major danger at the moment—but from those gamblers in land and houses who cut up and sell any of its major or minor beauties for an immediate profit. The painters were finding the old villages in which they congregated in little groups being swamped by sudden suburbs of restless villas, and stretch after stretch of the soft countryside which they sincerely loved, even if most of them made realistic Academy pictures of it, ruined by the harsh notes of some crude bungalow or other. Some who had been taking their holidays in Cornwall explained how the little grey stone towns down there with their tiny harbours had, from their point of view, been destroyed one after another by the emergence of, say, a bright white garage with a sharp red roof of a different pitch to the surrounding slate ones, or by a single brilliant villa for a retired policeman. But we all know this garden-suburbanising of England which is going on, and we seem as helpless to stop it as poor Schuschnigg and his Patriotic Front were the advancing Germans. "Town Planning" seems to be but a blessed word like "Mesopotamia" which the old nurse used to repeat in reading aloud if she came to a name she could not pronounce. She just said "Mesopotamia" and passed on. So we just think there's "Town Planning" and leave it at that, hoping for the best.

That it does not achieve anything for the best, or even for the second best, is clear to us all. Town planning as understood today by authorities big and little up and down the country would not save England in time even if the direction it is taking were right. By the time the whole country is zoned for ten or eight or six houses to the acre, there will be no country left to save, and that is all town planning means in the majority of cases. Indeed, it does positive harm. It spreads the evil and blinds men's eyes and closes their consciences for the time being.

At this meeting in the artists' club, a young surveyor, whose business it was to develop suburban estates round

London, led the attack on the speculator. He really turned King's evidence as it were, and showed us pictures of decent, quiet, early nineteenth-century tree-lined and streamlined streets of two-storey working-class property in the East End of London, and contrasted them with " town planned " two-storey streets in Ilford today with little villas of every colour and shape, looking as if they could be knocked down with one good push. Unfortunately, they cannot. Then he showed us a road from London to the South Coast with a municipal development on one side, sedate and decent, and a speculative one on the other, perky, restless and absurd. He told us, and this was the saddest thing of all, that if the houses on the speculative estate had been designed soberly like those on the municipal one, they would not sell. Like the headlines in the national newspapers, houses on such estates must be garish and over-emphatic, giving prominence to superficial things.

The official town planner to the Corporation, who was an invited guest, then got up. He was even better, that is to say, more damaging still. Indeed, he gave the show away entirely. He said his job, he was beginning to feel, was a piece of bluff to take in the public. Though under the Town and Country Planning Act his Corporation had power to disapprove any elevation to or any material or any colour used in any of the new buildings, as well as their lay-out, they never did so, or so rarely as to make no effect upon the whole. Though the Act gave the Corporation power to co-opt on to its Town Planning Committee outsiders with special knowledge up to 50 per cent. of its members, it had not co-opted anyone. Although a panel of architects was in existence offering their services without fee (that, perhaps, he thought, was a mistake) to vet and improve the designs, it was never consulted. There were, indeed, far too many members of his Committee personally interested in the kind of development which was going on for them to desire to check or alter it in any serious way.

Finally, an older man, a retired professor of architecture, said he felt the root of the matter lay in the new temporary owners of the land and the new users. The temporary owners treated it as any other commodity to be bought or sold at a profit, not something to be held and cherished like their predecessors had done. The great ground landlords of England, and particularly of London, had in other centuries not only sought the best advice in the laying-out of their estates, hence such things as the London squares, but had insisted on the speculators who built on their property employing the best architects of the time. That was how Bedford Square came about with Leveson and Nash's work in Regent Street and in the Carlton House Terraces. For the old and beautiful Regent Street, the ground landlord, the Crown, which did not then imply public ownership as it does today, had held a competition which Nash had won. Whoever heard of a competition for developing a shopping and residential estate today unless the estate was publicly owned and the houses for the working classes ? In his, the old professor's opinion, the only hope of saving the country lay in nationalising the land. Then real planning and real control could take place instead of sham planning and sham control. If, too, the land were nationalised, the sort of secret graft that went on everywhere today could be stopped. Finer brains with a different outlook could be put into the work. With the new users of the countryside, brought there by bus and motor-car and with no knowledge of how to live in the country when they got there, and with no instinctive taste such as generations of country life had given their predecessors, absolute control by disinterested people with taste was necessary. That used to be provided locally by the ownership of the land being on a large scale and by the right type of person. Now the old owners were selling it, or if keeping it, to judge from what was happening in the London squares today, in Grosvenor Gardens and Portland Place, they did not feel the same responsibility or take the same care, or more probably had not themselves the same standards of taste and were therefore no longer to be relied on. The only safety, then, was in national ownership and control. In short, it was only possible to act as a gentleman today in such matters and to put a proper curb to one's competitive animal instincts if one adopted the socialist's theory of property. If we remained a nation of competing shopkeepers willing to sell to anyone our dearest possessions, if we continued in this as in other matters to put capital before country, we should not only lose our Empire and sink to the position of a third-rate Power, but, what was more important still, lose the loveliness of England as well.

LETTERS FROM READERS

PERCY J. WALDRAM, F.R.I.B.A.
D. STARKIE, M.Sc., Ph.D.
D. P. MARTIN
ELLEN HECKFORD, B.A.
H. AUSTEN HALL, F.R.I.B.A.
HARRY BATSFORD

Lighting

SIR,—Your correspondent, in the issue for March 17, has apparently failed to appreciate that the figures for natural light afford but little guidance as criteria for artificial illumination.

It is not generally appreciated that the human eye reacts to daylight in a fashion quite different from its reactions to artificial light. Whilst fairly responsive to variations in the latter it will remain absolutely unconscious of variations in the former which are not only large but huge. In any ordinary side-lit room with adequate windows the light may drop by 90 per cent. from the window wall to the back wall. It appears to be about the same all over, like a room under properly designed artificial light.

If the recommended minimum lighting for a school classroom, 0·5 per cent. daylight factor equal to 5 foot-candles on a dull day, obtains on the row of desks furthest from the window, the remaining desks would be simultaneously enjoying, say, 20 to 100 foot-candles. That generous surplus will neither be used nor even appreciated, but it will be there.

It is by no means certain that the experience of our eyes of artificial illumination, limited to a generation or so instead of the countless millions of years of adaptation to daylight, will be capable of similarly screening the retina from excess of artificial light.

In this connection it is desirable to bear in mind that many of the high intensities of artificial illumination which appear in print were originally recommended by those interested in the sale of expensive high-power lamps. The architect would be well advised to train his own judgment by taking every opportunity of studying the characteristics of installations of proven excellence with a portable photometer.

PERCY J. WALDRAM

SIR,—It is difficult to see how a general illumination of 15 to 20 foot-candles can be considered dangerous in view of the intensities obtained from daylight. For instance, I am writing this letter in a daylight illumination of 40 foot-candles and I am by no means disturbed by the brightness.

What would be dangerous would be to have my desk with an illumination on the paper of 40 foot-candles and the rest of the room in darkness. Under those circumstances my eyes would be required to adjust themselves continuously whenever I looked up from the paper and after a short time would feel the strain.

Everyone will agree that there should be not the slightest possibility of eye-strain in the classroom, and that particular attention should be paid to the lighting conditions in schools. Sharp contrasts in illumination should be avoided and an even illumination provided over the whole room. Further,

direct glare from the light sources should be avoided.

As regards the actual intensity of this even illumination a great many practical tests have been carried out in the last few years in order to find what illumination is necessary for various operations. For office work an illumination of from 7 to 9 foot-candles is considered to be good, and in a good many cases illumination appreciably higher than this is being used. It would appear that if intensities such as these have been found necessary in offices after careful tests, at least as much illumination should be provided in schools, if only to make absolutely certain that there is no possibility of eye-strain.

Admittedly, and perhaps unfortunately, there are a large number of schools where the illumination is less than 4 foot-candles, and the children are able to work without complaining. That is due to the fact that the eye is very long-suffering and any eye-strain accumulates without being immediately apparent.

Our experience, then, has been that intensities appreciably higher than 4 to 5 foot-candles should be provided in classrooms, but that the lighting scheme should be carefully planned along the lines suggested.

D. STARKIE

Roads for Motorists

SIR,—Over 6,000 were killed on our roads and streets last year. Pedestrians suffered most, cyclists came next. Going on from year to year we are losing valuable lives—parents their children — and children becoming orphans. An enormous army of cripples is also being made. Either pedestrians must be put off our streets and roads, or motorists, who are the greatest transgressors.

How is this to be done? You can't free the streets of pedestrians, but you can largely reduce the motor traffic. Give motorists a separate road to themselves.

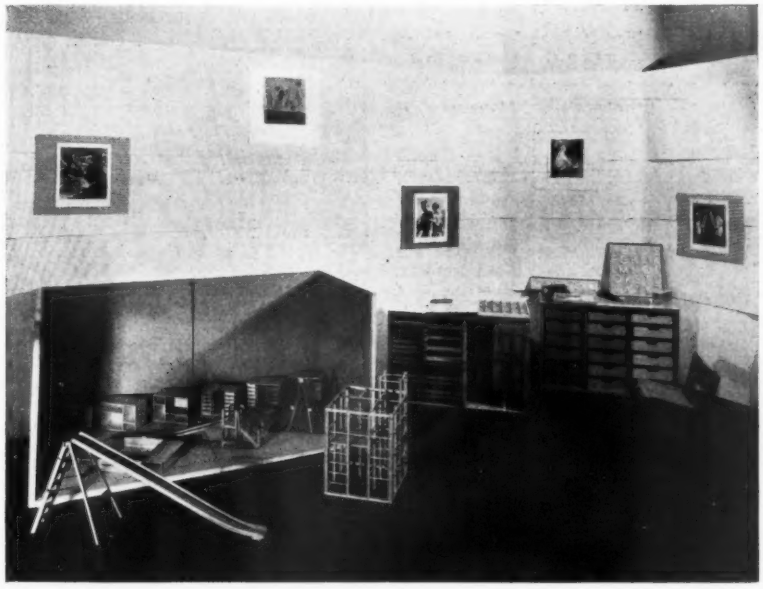
This can be done speedily and at once when Parliament passes the Act by erecting motor roads over existing railroads, built on columns, and having an open iron-work bed. There would be no delay in commencing as the railway lines are already there. What do your readers think of this?

D. P. MARTIN

"Tee-Square Hour"

SIR,—The interesting article on "The Tee-Square Hour" in your issue for March 3 has suggested to me that your readers might be interested in a costing system which has proved satisfactory in practice.

To take a fictitious example, say that a firm consists of two partners, three senior assistants and three junior assistants. It also has a secretarial staff of two and an office boy. The annual



A section of the Nursery Schools Exhibition at the Housing Centre, arranged by Erno Goldfinger and Mary Crowley. Models of indoor and outdoor equipment are displayed diagrammatically. On the right are two typical furniture units. Sets of drawers are painted in different colours.

expenditure, including a salary for partners, is £5,145.

Given this material, we would grade the value of the time of partners and architectural assistants as follows:

Partner	Senior Assistant	Junior Assistant
5	3	2

As there are two partners and three senior and three junior assistants, the total number of units in the firm will be 25. But the partners in this office only spend half their time on specified jobs, and the working number of units is therefore reduced to 20.

As the working expenses are £5,145 a year, the value of a unit is £257 5s. a year, which, taking a 49-week year and a 35-hour week, will work out at £5 5s. a week or 3s. an hour. On this basis the value of the principals' time will be 15s. an hour or £5 5s. a day, and of the senior and junior assistants', £3 3s. and £2 2s. a day respectively. The values of the secretarial staff's and office boy's time are treated as overhead charges and, together with rent, heating, etc., are, under this system, provided for in the calculated value of the time of those actively engaged on the jobs.

ELLEN HECKFORD

Artists' General Benevolent Fund

SIR,—May I appeal to the generosity of architects through your columns for the support of the Artists' General Benevolent Institution?

The fund was founded sixty-six years ago in the interests of architects, painters and sculptors in need of financial help, and for their dependants. Since that time hundreds of members of our profession, as well as widows and children, have been helped by the Society.

Subscription lists for the current year close on May 4, when the annual dinner will be held. I have been asked to represent the architects, and contributions, however small, will be gratefully acknowledged.

H. AUSTEN HALL

"The Land of Wales"

SIR,—Your reviews of our works are so uniformly sympathetic and appreciative that we think the recent notice of "The Land of Wales" must have been written under a misapprehension on somebody's part.

The book is really a serious study of Wales, the land and its people, and has a quite considerable section on the industrial side of the country. As a matter of fact, the holiday-making is an aspect which is scarcely touched at all. Incidentally, the title of this series is "The British Heritage," so there is no difficulty about the provincial kingdoms.

HARRY BATSFORD

Mr. Batsford's letter has been referred to our reviewer, who replies:

The delicacy of Mr. Harry Batsford's insinuation that "The Land of Wales" was reviewed without being read is humiliating. It is not true; but it must be admitted that neither is the implication in the review that industrial life of Wales was almost entirely unrepresented in the book. Save that the drift of an argument I was elaborating must have swept me into injustice, I have no explanation to offer, and I withdraw my statement with regret.

YOUR REVIEWER

[*Owing to pressure on space several letters have been held over.—Ed.*, A.J.]

R.I.B.A.

A paper entitled "Speculative House-Building" was read by Mr. Stanley C. Ramsey, F.R.I.B.A., *at a general meeting of the R.I.B.A., on Monday last. Extracts from the paper are printed below:*

Since the War, if my information is correct, we have built some three and a half million houses, some two million of which have been built by private enterprise, and it is this unprecedented volume of domestic building, both by private enterprise and by local authorities, that has made us aware of the immensity of the problem. We must remember that even before the War the supply of ready-built houses had been severely curtailed by the effect of the 1909 Land Act, and the shortage of houses was accentuated by the War—so that in 1919 there was an immediate and pressing problem. Practically anything that remotely resembled a house was greedily snapped up. A man without any trousers is not likely to be over-critical of the cut of the first hastily improvised pair that may be handed him; neither must the rest of us allow ourselves to be duped by his recently acquired enthusiasm into the belief that they are models of sartorial perfection.

The ready-built house is as much a necessity to-day as ready-made boots and shoes, ready-made clothes, and ready-made motor-cars.

Architects and superior people generally are apt to use the word "Speculative" to imply a patronising contempt, and yet, why should it be any worse to build a house for sale for profit than it is to make a pair of shoes or a motor car? It is largely a matter of standards, and it is indicative that those we know as "Speculative builders" have of late changed their name to that of "House Builders."

Generally speaking, I submit that the "House Builder," to give him the name he prefers, gives very good value for money, and the type of structure and plan, accommodation and appurtenances that suit his public. The appearance of the houses are not always quite so happy, and in spite of the improvements—and there has been a marked improvement during the last decade—there are far too many houses built which do not conform to any reasonable standard of design.

There are, if I may use a simple analogy, a triangle of forces representing the factors which can provide for better houses. These factors are, first, the Building Societies who find all the essential money. Their responsibilities are mainly financial, and it is not their direct duty, I submit, to concern themselves with either questions of structure or design, except in so far, and this is a very wide term, except in so far as they are represented in value. The Building Societies should be aware, and they are to a far greater extent than is sometimes assumed, of what constitutes a well-designed and well-built house. Generally speaking, the well-built house (and in this term I include good design), all things being equal, affords a greater factor of safety than the not so well built.

It may be argued, however, why do not Building Societies insist that all houses shall be designed by architects before they make advances, which would be a very desirable state of affairs for the architectural profession? The objections, however, are many and varied. First, if you have too well-designed and too well-built a house in the wrong neighbourhood, instead of its being an asset, it may well become a liability to the Building Society advancing upon it if the society is ever so unfortunate as to have to realise. This is because in an area such as Hampstead Garden Suburb there has been created a public who demand a certain type of house, but if such a type of house were built in some of the less favoured areas where there is a lower standard of demand, the re-sale of such a house would be governed to a large extent by the average price of the average house in such a neighbourhood. Again, as a nation we are so curiously constituted that we very much object to the exercise of an assumed authority not implicit in the actual functions of such an authority.

I seem to remember—to quote an example from the insurance world—from statistics it was assumed by certain insurance companies that teetotallers were a better risk than those who permitted themselves the use of alcohol, and certain companies did, and I believe to this day do, give preferential terms to total abstainers; but these companies are, I believe, the exception and not the rule; so that the most we should expect of our Building Societies, if they are to function properly, is that they should be alive and sympathetic to the higher standards of design in our houses representing desirable, and we hope in the not too distant future obtainable, higher standards of life.

The second of my forces is represented by the builders, and their concern is in particular that of structure. When a builder speaks of a well-built house he usually means a house built of good materials with the use of good workmanship, sometimes irrespective of whether the house is well planned and well placed. To give a rather pathetic example of this, a small country builder whom I knew and who had done work for me, and was in every respect an excellent and conscientious builder, decided in one of those periods of slackness which seem at times to affect even the best builders to indulge in a little private speculation of a group of houses as an investment. He asked me if I would go and see these houses because he found he had some difficulty in letting them. From the point of view of craftsmanship they were excellent, i.e., the materials and the workmanship were good. The stone dressings to the bay windows were about as good as they could be (except to look at!), the floors were tongued and grooved, the roofs were boarded, and, generally speaking, good materials and good workmanship had been used throughout. Unfortunately, the houses were about 20 years out of date in plan and fitments, and to his great indignation a rival builder, who had not put anything like the workmanship into his houses but who had provided a modern plan in the sense of providing light and air, and without back additions, was able to let his houses with the greatest readiness. This perhaps is an extreme example; but there is, I suggest, such a thing as a too well-built house, although possibly this may seem a contradiction in terms.

The average life of the ordinary mass-produced house is, I suggest, some 30 to 40 years. After that it begins to deteriorate in value, until after some 50 or 60 years it becomes definitely out of date. The actual term of years is open to discussion.

Every purchaser of a house has a right to expect that he shall get good value for money, but it is unreasonable to expect a Rolls-Royce for the price of a Ford. The means should be predetermined to the end, and it might be desirable to definitely fix the life of houses and provide means for their replacement on a financial basis. That builders are peculiarly and rightly sensitive to aspersions on their good name by the malpractice of certain of those who call themselves builders is shown by the recent formation of the Council of Registered House Builders, which provides a scheme for ensuring that a house shall be built to an approved specification and a certificate issued to the purchaser of a house, which states that the house has been so built, providing safeguards in cases of default.

Now amongst many house-builders there is a veiled, if not open, hostility to architects, and this not altogether without reason. In many cases architects who have essayed to design houses for sale have unfortunately placed themselves in the position of barristers who have not studied their brief. They have taken on their job much too light-heartedly, and instead of working in close collaboration with the builders in an endeavour to ascertain the real needs of the people who have to live in these houses, they have imposed their own ideas, in many cases with disastrous results.

Happily, many house-builders do work in friendly relation with architects, and the result has been a notable improvement in the houses. This tendency is growing, and during the last ten years I should say that of the plans submitted to building societies to-day some 20 per cent. are designed by architects.

The last of my forces composing the triangle is the architects, and theirs is, as I have attempted to indicate, a great responsibility. Not only is the responsibility particular to those who design the houses but it is a responsibility which must be shared by the whole profession. Their field of study is the immediate and implicit needs of the public or of various sections of the public. I have heard architects say that it is impossible to do anything with the plan of the average speculative builder's house—which is known to-day as the "Universal Plan," i.e., three bedrooms, bathroom, w.c., two living-rooms, kitchenette—as they cannot do anything with this as a unit of a design. They, therefore, in an endeavour to provide some alternative, attempt to press what is really not an "Urban" plan but a "Country" plan on the public, and the result is a foregone failure! The long-fronted narrow house with back to front sitting room on one side and a living room kitchenette on the other is not popular amongst the superior artisan or the lower-paid "clerical" classes, and this for certain obvious reasons. In such houses the life of the family is frequently carried on in the rear living room where the father of the family can sit with ease (in his shirt sleeves if he wishes to) and be surrounded with a gramophone, the dog, wireless, and all the paraphernalia of family life. The front room is used for the more serious family occasions, such as the reception of distinguished visitors, safely barricaded off from the life at the back. These are the fundamental needs of one section of the community, and although the long-fronted house might suit a more sophisticated section, it does not suit this.

After all, is it more difficult to take the accepted "Universal" plan, which I for one will not admit is incapable of improvement and development, and use it as did the builders in Georgian times use the plan of the typical London house which they developed into so many magnificent squares?

NEWS BULLETIN

Royal Gold Medal.—The presentation of the Royal Gold Medal to Professor Ivar Tengbom (Sweden) on Monday, April 4, will be the occasion for a further tribute to Professor Tengbom's work, when the Acting Swedish Minister in London will present to him a complimentary address prepared by the Federation of Swedish Architects (Svenska Arkitekters Riksforbund).

Additions to the R.I.B.A. Library.—Recent outstanding additions to the library include a remarkable collection of drawings and other documents from the office of Sir Charles Barry, R.A. (1795–1860) and his successors in the Barry firm. The most important items are early drawings of the Houses of Parliament, which show the development of the design from the first stages, and Sir Charles Barry's notebooks and diary covering almost the whole of his professional career. These have come partly by purchase and partly on "permanent loan" from Mr. C. A. R. Barry (A).

Drawings and letters by Sir Robert Smirke, R.A. (1781–1867) and his younger brother, Sydney Smirke, of great personal and historical value, have been given to the library by Mrs. Dorothy Biggar, Sydney Smirke's granddaughter.

The British Architects' Conference, 1938.—The seventeenth British Architects' Conference is to be held at Bristol from June 22 to 25. This is the annual gathering of representatives of the Royal Institute and its Allied and Associated Societies throughout the world.

Health, Sport and Fitness.—The Health, Sport and Fitness Exhibition, which will later tour the provinces, ends its London run on Thursday, March 31, at 8 p.m.

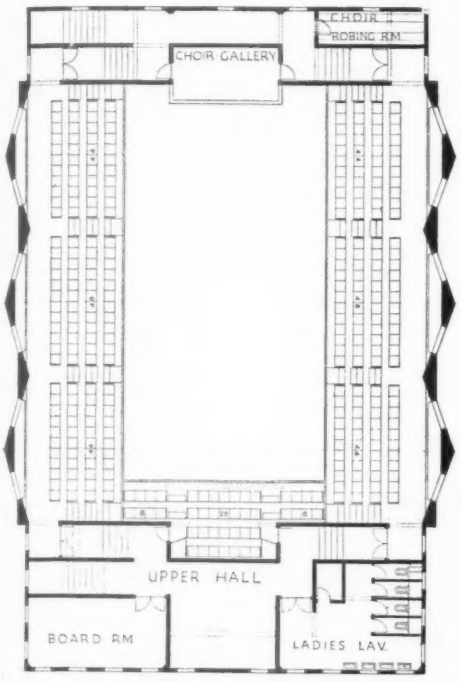
The President of the Board of Education, The Right Hon. Earl Stanhope, who with Countess Stanhope, visited the exhibition on Thursday, March 17, was greatly impressed by its scope and interest. He expressed the hope that all connected with the National Fitness Movement would visit the exhibition.

Lord Stanhope's suggestion at a conference of physical training instructors on the following day brought large numbers of his audience to the exhibition.

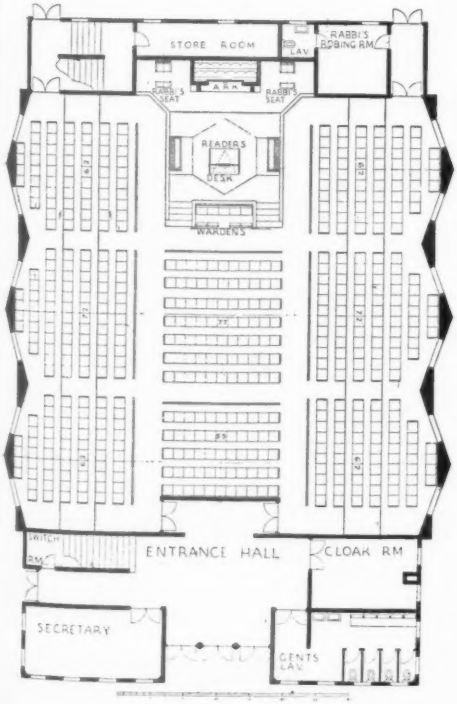
Touring Exhibitions.—"Airports and Airways" opens at the Museum and Art Gallery, Derby, on March 25.

SYNAGOGUE, DOLLIS HILL, MIDDLESEX

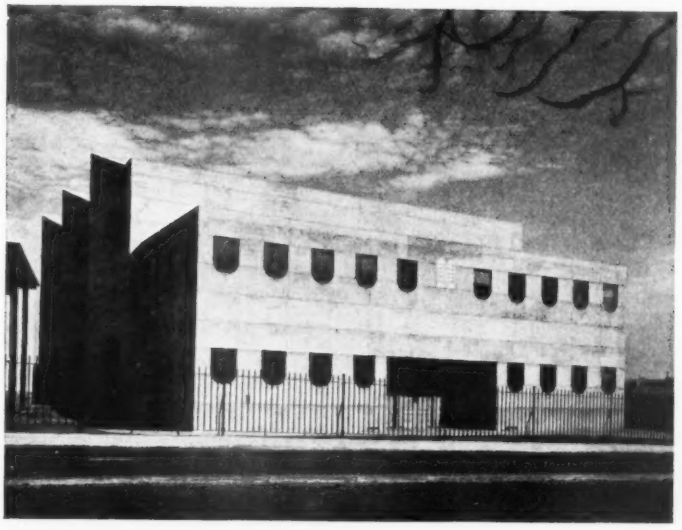
DESIGNED BY SIR E. OWEN WILLIAMS, K.B.E.



UPPER FLOOR PLAN

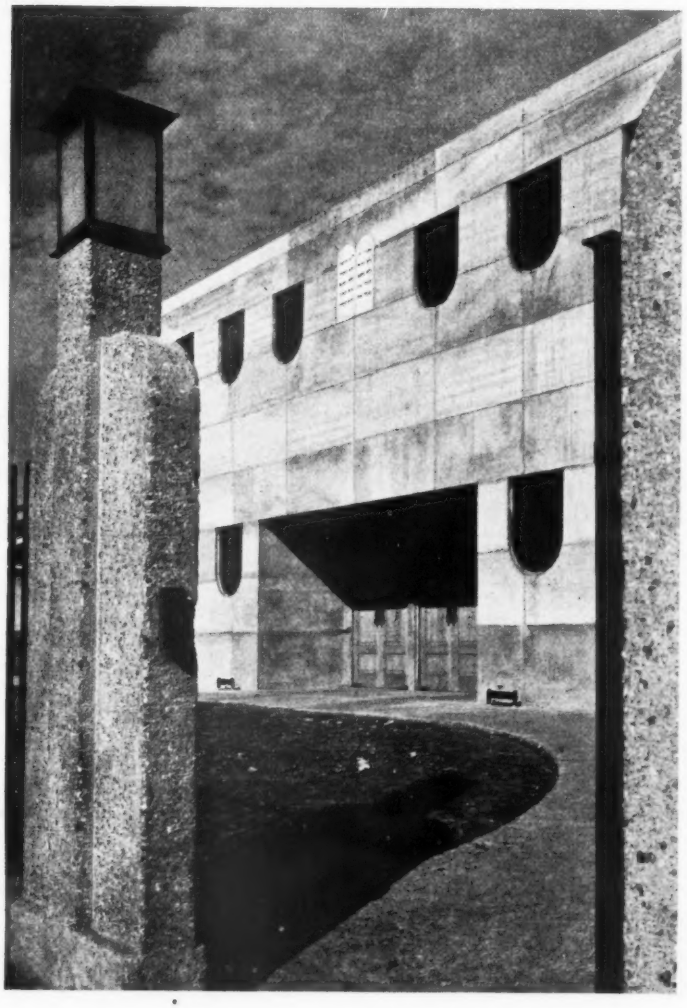


GROUND FLOOR PLAN

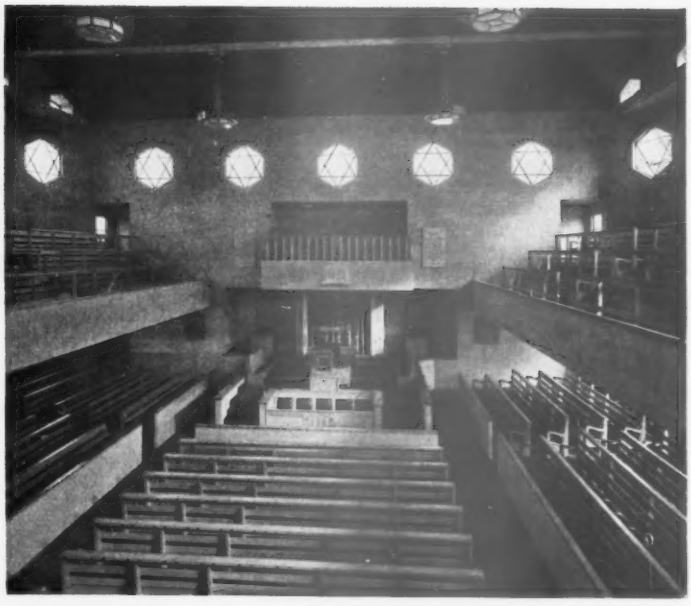


PLAN—*The main hall provides seating for 524 men on the ground floor and 316 women in the gallery.*

The photographs show : above, the main front ; below, a view from the entrance gates.



SYNAGOGUE, DOLLIS HILL, MIDDLESEX



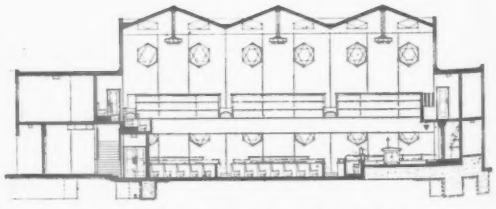
CONSTRUCTION—*The concrete mix used throughout was 2½ parts washed ⅝-in. shingle, 1½ parts sharp sand to 1 part Portland cement; working stress 1,100 lb. per square inch direct compression and 1,450 fibre stress. A fibre stress of 18,000 lb. per square inch was worked to on the steel reinforcement. In determining the amount of reinforcement, the prevention of shrinkage cracks was an important factor as on the roof, for instance, there is no asphalte or waterproofing material. The valleys of the roof bays are laid to a good fall to asbestos pipes cast in the main walls. Similarly, on the low roofs there is no asphalte. The steel and the cast concrete slabs were laid to a good fall to form a watertight roof. The building is set out on a grillage of 2 ft. 9 in. units, which unit was also used vertically to form concreting lifts. Shuttering panels of open boarding, faced with building board attached to vertical steel clamps, were used throughout to avoid the filling in of bolt holes. The vertical joints of the shuttering panels were arranged to occur regularly.*

INTERNAL FINISHES—*The internal surface, except for the entrance hall, staircase and offices, which are treated with two coats of cream stippled plaster applied direct to the concrete surface, is also in natural concrete. The underside of the roof of the main hall is covered with 3 ft. by 1 ft. panels of 1-in. thick corkboard cast in with the roof slab for thermal and acoustic reasons. All joinery is oak polished; window frames, lighting fittings, seat upholstery, carpets and curtains are blue. The door furniture, guard-rails, etc., are in matt stainless steel.*

HEATING—*Electric tubular heaters. In the main hall they are installed under the seats.*

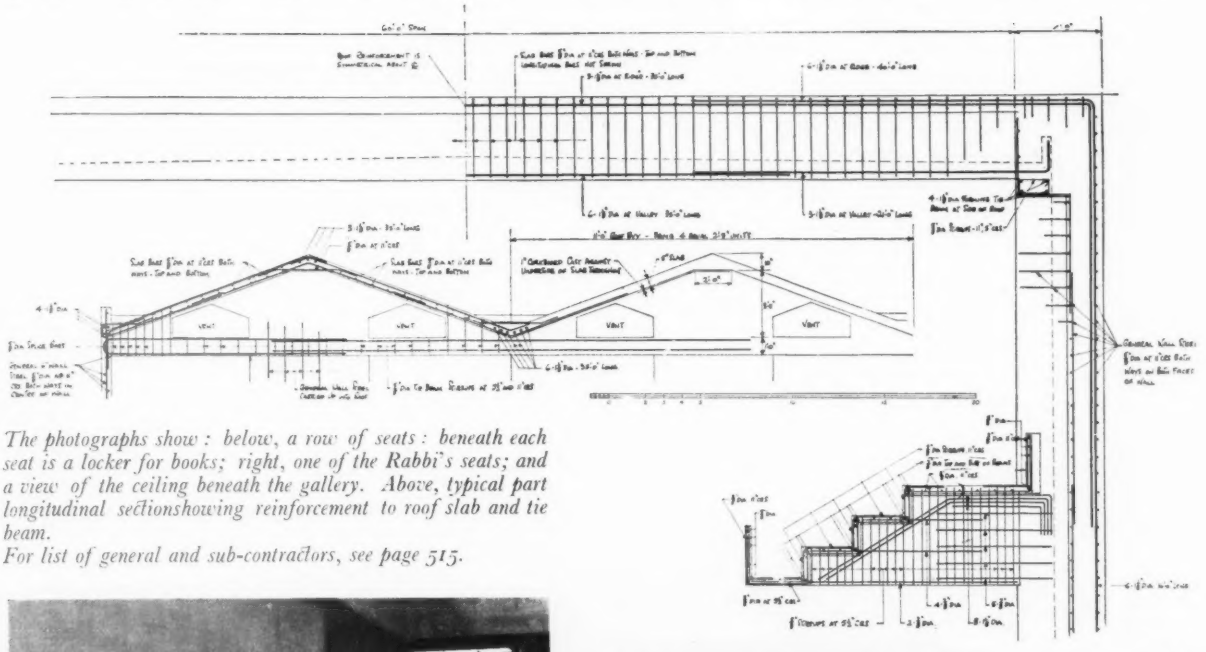
LIGHTING—*Six octagonal hanging fittings, each with one 1,000 watt bulb, and twelve smaller fittings under the galleries, each with 200 watt bulbs, light the main hall. Staircases and offices are lighted by box fittings attached to the ceilings.*

The photographs show: the entrance hall; and a general view from the gallery, looking towards the Ark.



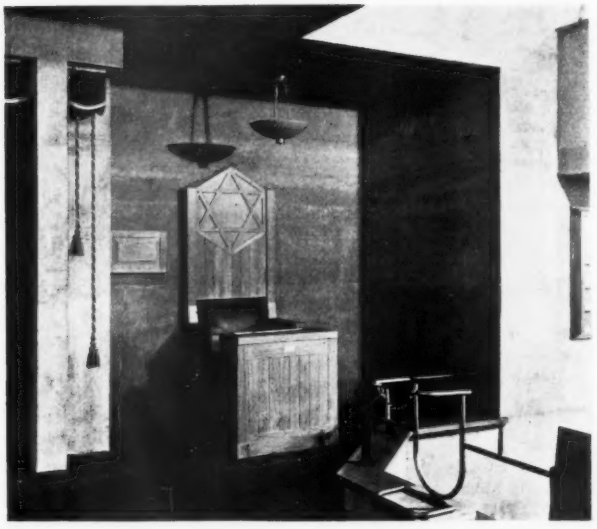
LONGITUDINAL SECTION

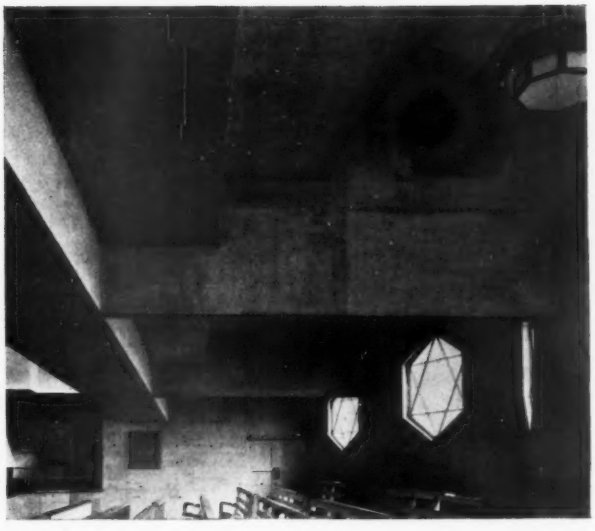
BY SIR E. OWEN WILLIAMS, K.B.E.



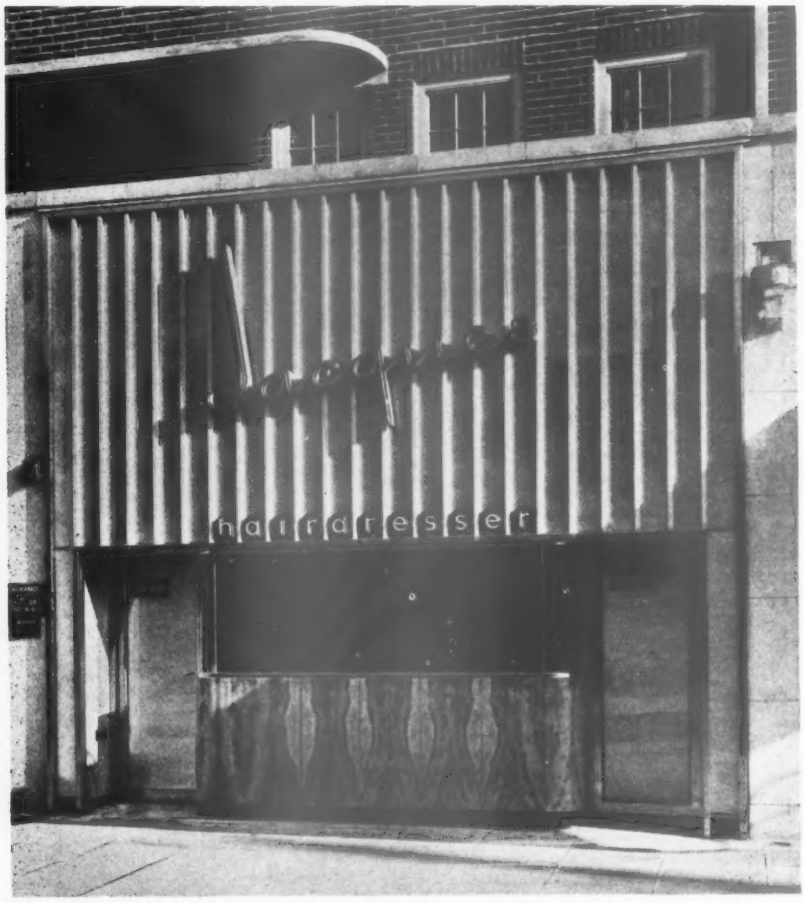
The photographs show: below, a row of seats: beneath each seat is a locker for books; right, one of the Rabbi's seats; and a view of the ceiling beneath the gallery. Above, typical part longitudinal sectionshowing reinforcement to roof slab and tie beam.

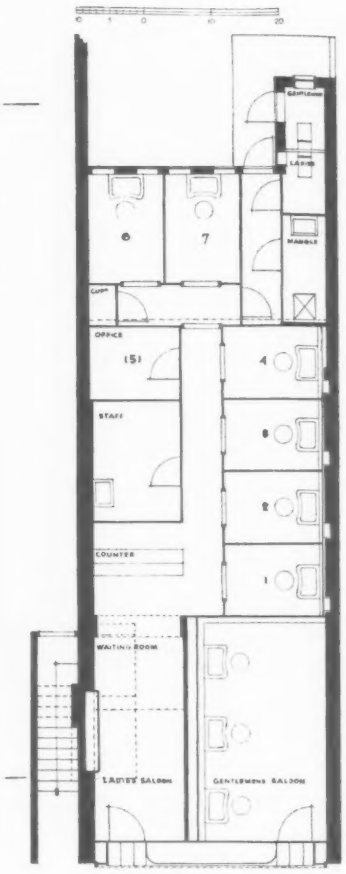
For list of general and sub-contractors, see page 515.



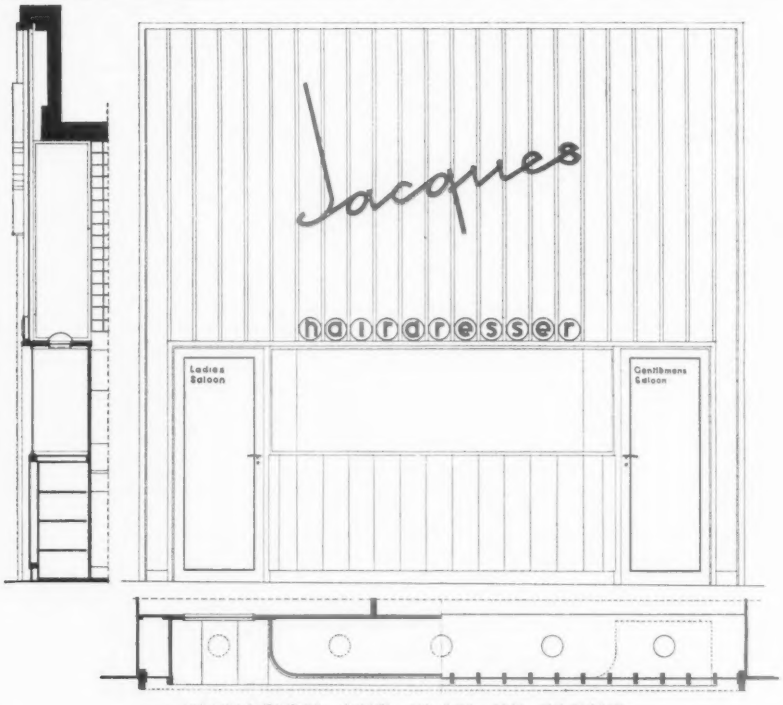


HAIRDRESSING SALOON, NORTH CHEAM, SURREY





PLAN



ELEVATION AND PLAN OF FRONT

CLIENT'S REQUIREMENTS—*Separate departments for ladies, containing seven private cubicles and waiting-room, and for gentlemen, containing three basins; both departments to have separate entrances from London Road; staff room, mangle room, and lavatory accommodation; and provision for display showcases, particularly in the ladies' waiting-room and cubicles.*

ELEVATIONAL TREATMENT—*Framework of shop and doors, silver bronze drawn on wood; upright beads, painted silver grey enamel; stall riser, sycamore onyx; floors to entrance lobbies, travertine; fascia, special glass, broken white colour; letters, "Jacques" lead-coated steel, painted yellow, with neon lighting in yellow. The discs bearing the letters "Hairdresser" are silver bronze, with steel coated superimposed letters and neon in intense blue. The letters on the doors are silver bronze on a red painted background; door handles are red composition.*

For list of general and sub-contractors see page 515.

DESIGNED BY WALTER H. MARMOREK

IN THAT CONTINGENCY

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

Dampness in Buildings

¶ *IN the last four issues of the Notes various aspects of the problem of dampness in buildings have been discussed. The present note deals with the only remaining aspect, which is that of condensation.*

(4) *Condensation.*

A very common cause of dampness in buildings is condensation. Many of the cases of dampness submitted to the Building Research Station, including cases supposed to be due to penetration, have been found to be due to this cause.

Dampness due to condensation is conveniently discussed under the following headings :—

(1) The Cause of Condensation.
(2) The Identification of Condensation.
(3) The Prevention and Cure of Condensation.

(1) *The Cause of Condensation.*

The earlier discussions of dampness in buildings were concerned with the penetration of moisture through the fabric, whether through walls, floors, or roofs. Condensation is the result of the deposition of moisture from the air inside the building. The physical facts underlying the appearance of condensation are simple. Air always contains a certain amount of water vapour. The amount it can hold depends on its temperature ; the higher the temperature the greater the amount. For example, 1,000 cu. ft. of air (i.e. the amount of air contained in a small room) can carry at 65° F. approximately 1 lb. of water vapour, but at 45° F. only half this amount. These figures relate to the condition in which the air is said to be saturated with water vapour. Usually it does not contain the full amount, and the actual water content expressed as a percentage of that necessary for complete saturation at the same temperature is known as the relative humidity of the air. It follows from what has been said that if air is cooled, a temperature will be reached at which the amount of water held as vapour is just sufficient for complete saturation and further cooling must result in deposition of moisture in liquid form. The temperature at which this occurs is known as the " dew point."

One may now proceed to consider how condensation may happen in buildings. In a heated building, in winter, the temperature at the internal surface of any outside wall is in general intermediate between the inside and outside air temperatures. So long as air is merely being drawn into the building and warmed, without the opportunity of taking up more water, no condensation can occur, for the dew point of the air is clearly not higher than the outside air temperature, and therefore well below the wall temperature. Usually, however, there are sources of moisture within the building, and the warmed air is able to increase its moisture content, with a corresponding rise in its dew point. If any wall surface within the building is below this dew point, condensation will occur upon it. The risk of condensation under such circumstances will depend on the structure of the building—for a wall of high thermal conductivity will always present a colder face to the air within the building than one which is well insulated—and also upon the amount of free water available. In unfavourable conditions the deposition of moisture may persist for long periods, and for this reason is called " permanent " condensation.

Let us now consider another set of conditions namely, when a spell of cold weather is succeeded by warmer and damper weather. Damp air from outside enters the building through the ordinary process of ventilation ; the fabric of the building is still relatively cold, however, and consequently moisture again makes its appearance on the inside surface. As soon as the fabric gets warmed up to the new prevailing temperature, however, this condensation will disappear, and for that reason it is conveniently described, in contradistinction to *permanent* condensation, as *temporary* condensation. It follows that the smaller the thermal capacity of the fabric the more readily it will get heated up, and the sooner will this temporary condensation disappear.

In practice, one of the greatest contributory causes of condensation in a building is moisture contained in its fabric. This not only tends to keep the inside air damp, but also increases both the thermal conductivity and the thermal capacity of the fabric. Both these effects tend to increase the likelihood of condensation. Moisture in the structure may be due to penetration (from which it follows that any steps taken to prevent penetration to the fabric also aid in avoiding condensation troubles), or the moisture in the building may be that which was introduced during construction (from which it follows that a building which is incompletely dried-out is more liable to condensation).

(2) *Identification of Condensation.*

The weather conditions at the time provide useful clues in determining whether dampness observed is due to condensation or penetration. Dampness which occurs only after a sudden rise in temperature, especially in winter, is almost certain to be due to condensation, as also is that which could be shown to occur only when the air is very humid. Dampness due to *condensation* may also be distinguished from that due to penetration in that it may become evident before or immediately following the commencement of rain or when no rain falls at all, whereas dampness due to *penetration* only shows after the rain has been falling for some time. When the conditions inside a building or part of it are abnormally damp, as in laundries, bathrooms or kitchens, condensation should always be the first cause of dampness to be suspected. Condensation does not usually occur in living rooms or other rooms adequately heated, and in unheated rooms is more likely on the external walls, although partition walls may not be free from it. Buildings which are not in constant occupation, for example week-end or summer cottages, and where, therefore, the fabric tends to get cold, are usually very liable to condensation troubles.

There are two other indications useful in deciding the origin of dampness. Condensation usually occurs on the whole of a wall surface, while dampness due to penetration is often patchy, particularly in its initial stages. It should be remembered, however, that condensation may be occurring over the whole of the wall surface, but may only manifest itself in patches due to some local conditions in the wall, such as the texture of the surface. The other important difference between condensation and penetration is that, usually, condensation is only superficial. The wall behind the surface may be quite dry, while in cases of penetration the wall gets damp right through. It will be realized that dampness due to penetration generally takes a considerable time to dissipate by internal heating, whereas that due to condensation may be disposed of in an hour or so, as it is only superficial.

(3) *The Prevention and Cure of Condensation.*

It will be obvious that adequate heating of buildings is an important safeguard against condensation. Equally, good ventilation plays its part in the case of permanent condensation, but not in that of temporary condensation, for the reason that the latter, as stated, is due to humid air from outside getting into the building, and cooled by a relatively cold fabric, so that shutting windows, etc., rather than opening them is the course to adopt in that case. However, these measures do not deal with the trouble at the root. The best and most permanent method of preventing condensation is to decrease the thermal conductivity of the fabric, which inhibits *permanent* condensation, and also to provide an internal lining of low thermal capacity which will tend to avoid *temporary* condensation. Both these objectives can be attained at one and the same time. For walls a useful practice is the " strapping " method referred to previously under " Internal Treatments of General Damp Penetration." Good thermal insulation can be obtained by fixing corkboard or fibre-board to, say, ¾ in. battens plugged to the walls (all timber should, of course, be treated with a non-staining preservative), thus adding the thermal insulation of the air-space to that of the board used. With regard to roofs, adequate thermal insulation can be obtained by the use of fibre-board, corkboard, or a slag wool or glass silk blanket incorporated in the ceiling. The air-space in a pitched roof, especially if sealed, provides good thermal insulation, and it should be remembered that flat roofs should have adequate thermal insulation to compensate for the loss of the air space in the pitched roof. Usually, this will have to be provided by the use of materials as mentioned above, incorporated specifically for this purpose. It will be obvious that to provide thermal insulation in this way is not only useful in preventing condensation, but also in reducing the costs of heating, and that, though it entails certain additional initial charges, thermal insulation in most cases provides a permanent safeguard against condensation, and it is not a recurrent charge such as is the cost of heating to remove it.

Windows present a particular problem. Although the condensation which appears on windows is often a temporary phenomenon, it is actually a very good example of " permanent condensation " in the sense previously defined in this note. Temporary condensation is not likely to occur on windows because of the small thermal capacity of the glass. They are, however, the most likely parts of the fabric on which permanent condensation will form because of their low thermal insulation. Double glazing will, of course, to a large extent, prevent the trouble, but the expense is rarely considered justified, since dampness is less objectionable on windows because they are not permanently affected by it as may be decorations. Moisture formed either evaporates in due course or flows to the bottom of the window, where a condensation groove with adequate weep holes may be constructed to receive it, thereby avoiding the accumulation of water on the window board or its overflow on to the decorations below the window. The proper use of condensation groove with weep holes is usually illustrated admirably in the windows of railway carriages.

A form of dampness due to condensation which is often supposed to be due to penetration concerns chimney breasts at ceiling level on top floors of houses. Penetration due to defective chimney gutters and flashings is commonly supposed to provide an obvious explanation, but several cases of this type investigated by the Station show that in fact penetration was not the primary cause, though it may have been a contributory one. The primary cause was the condensation of flue gases, usually from a slow combustion stove which the flue behind the chimney breast served. This condensed moisture

finds its way through the fabric to appear on the inside. Parenthetically, it may be stated, however, that in such cases dampness is usually the least serious of the effects. An offensive smell, the staining of the decorations, or possibly attack of the brickwork or mortar, are usually more serious effects of condensation from this cause. The only remedy that can be recommended is to rebuild the flue stack with an impervious acid-resisting flue-lining, such as glazed stoneware drain pipes. The pipes should be fixed with socket upwards, and provision for removing the condensed moisture at the lower end of the flue is desirable.

Reference may also be made to the use of absorbent linings. Recommendations are made from time to time advising the provision of an absorbent surface as a cure for condensation. Actually, however, they do not provide any cure. What they do, rather, is to absorb the condensed moisture and prevent it from becoming manifest. If the causes of condensation persist, there will come a time when the absorbent surface becomes fully saturated, and then it no longer functions in that way. However, provided these facts are recognized, absorbent linings can serve quite a useful function. For example, when the condensation is of the temporary kind, or when circumstances conducive to permanent condensation are of an intermittent kind, the appearance of dampness on the surface is either delayed or prevented. An absorbent plaster is useful in absorbing condensation, but it should be remembered that its usefulness may be impaired if it is covered by impermeable decorations such as paint or some "petrifying" liquids. Practically all impervious surfaces which may be suggested for use internally in order to prevent dampness due to penetration should be avoided because, while preventing penetration, they are likely to make more apparent dampness due to condensation. An absorbent lining paper on an absorbent plaster finishing coat and absorbent plaster undercoat can be said to be the most useful surface for minimising the effects of condensation. Most of the fibre-boards and corkboards employed for insulation are also useful. Such non-absorbent surfaces as glass, glazed wall tiles, impervious paints, non-absorbent plasters are, on the other hand, not likely to afford any relief in this respect.

Summary.

The causes of condensation, temporary and permanent, have been discussed. It has been shown that where condensation has been found liable to occur the best cure is to provide an internal lining which serves to lower the heat-conducting properties of the fabric, and also provides a surface of low thermal capacity which will readily adjust itself to changes of temperature. Heating, coupled with good ventilation in the case of permanent condensation, will serve to remove the dampness due to condensation. Absorbent surfaces have their uses in preventing the appearance of moisture, although they do not, in fact, prevent the actual condensation.

•

New Building in Cardiff

A visit was recently paid to the new buildings for the Welsh Board of Health in Cardiff by the Cardiff Civic Society, the Central Branch of the South Wales Institute of Architects, and the Welsh School of Architecture, Cardiff Technical College. This building, which was opened on St. David's Day, 1938, is the first Government building of its kind to be erected in Wales. In the absence of the architect, Mr. P. K. Hanton, O.B.E., F.R.I.B.A., of H.M. Office of Works, the party was conducted by Mr. W. T. Fraser, L.R.I.B.A.

CLUB HOUSE FOR YACHT

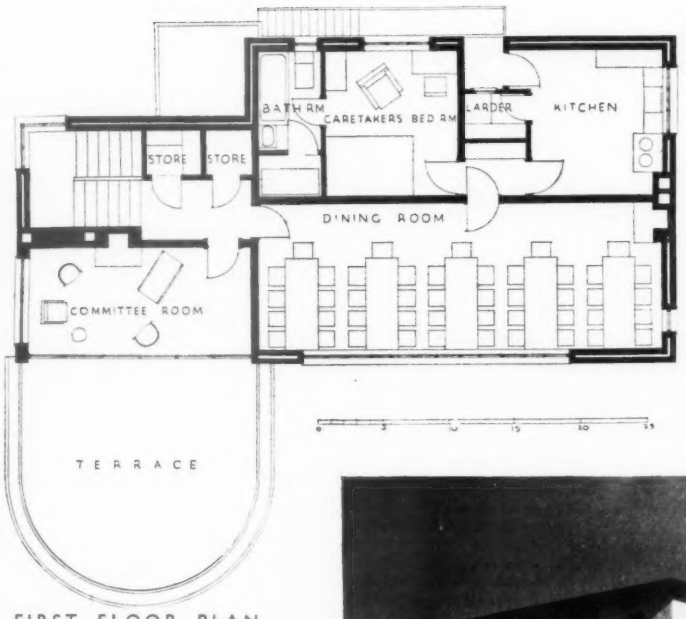
SITE—*A small piece of waste ground between the road and a sheltered bay at Killinchy, Co. Down, Northern Ireland. The club house, built for the Strangford Lough Yacht Club, is placed on the rocky seashore at the extreme north point of the site, providing the best view of the anchorage and racing courses. Access to the club house, which is almost surrounded by the sea at high tide, is from one corner of the building.*

PLAN—*The basement, reached by outside stairs, covered by a hatch, is used for storing rough and heavy gear, motoring chairs, etc., and contains the engine-room for the lighting. The committee room, on the first floor, can be converted into an open loggia by sliding back the folding doors opening on to the terrace overlooking the bay.*

The photographs show : above, a view from the north-east ; below, the original club-house, on the same site, burnt down in 1936. It was designed by Mr. Bell, the architect for the present building.

SITE PLAN

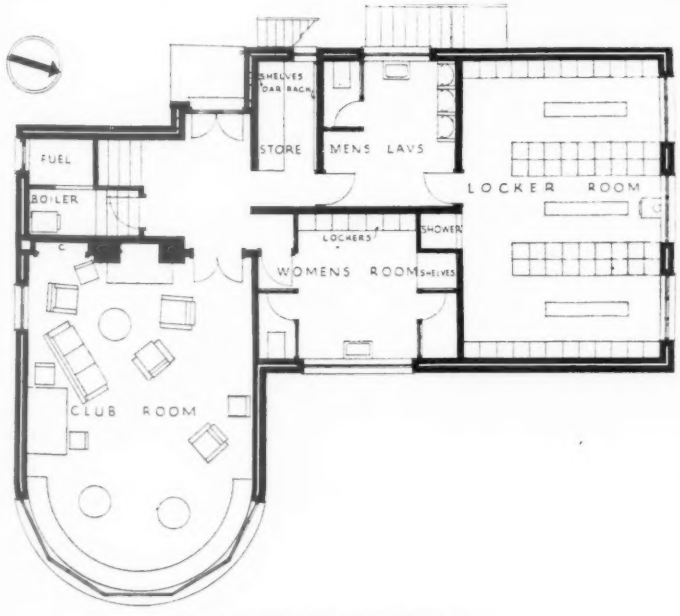
CLUB, KILLINCHY, CO. DOWN



FIRST FLOOR PLAN

DESIGNED BY G. PHILIP BELL

The photographs show: top, the clubroom; right, a general view from the south west.



GROUND FLOOR PLAN

CONSTRUCTION—*The foundations are 7 ft. below record high tide and just awash at poorest high tides. They are on solid rock and form part of the basement floor. Ground floor and basement floor and walls are constructed as a waterproofed reinforced concrete box, the concrete being carried up to the cill of the bay windows for protection, otherwise all walls above ground floor level are 11-ins. cavity, reinforced with expanded metal and rendered and roughcast with waterproof cement. Partitions are 4½ ins. brick; lintols waterproofed concrete, except round the bay window, where to save weight the lintol is of timber, covered with metal lathing and plaster; first floor and roof, wood joist and boarding; roof finished with composite roofing and bitumen macadam topping; windows, standard metal; sliding doors, galvanized metal; outside stairs, wood.*

EXTERNAL TREATMENT—*The concrete base is left untreated from the wood shuttering. The roughcast, windows, railings and down pipes are finished white; the main doors, fascias and gutters, bright orange; and the soffits to roof and porch and other woodwork buff.*

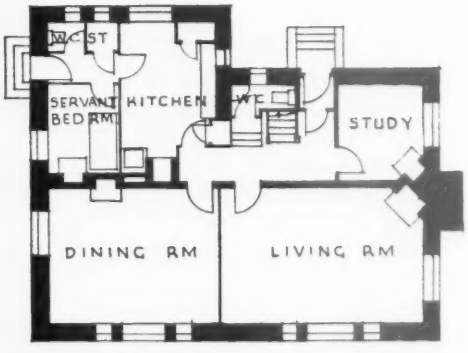
SERVICES—*In the clubroom, dining and committee rooms are open fires. A coke-burning boiler under the stairs provides hot water to the kitchen, lavatories and shower bath, and would serve a radiator system if required. Water supply is from a well; drainage by a septic tank.*

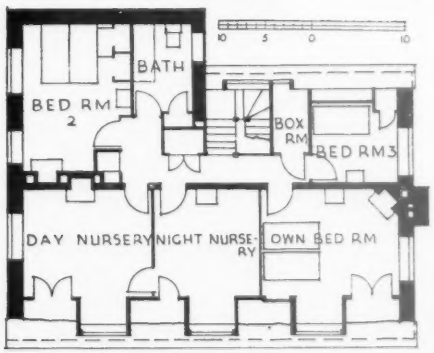
For list of general and sub-contractors see page 515.

HOUSE AT CHARD, DEVON

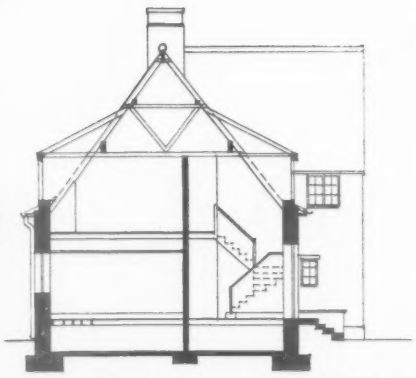
DESIGNED BY

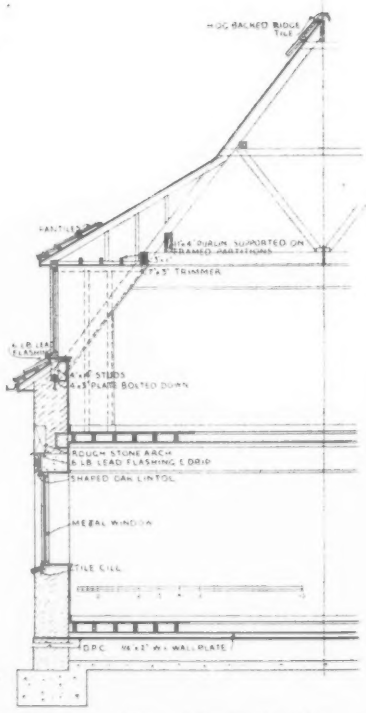
AILWYN BEST





GROUND AND FIRST FLOOR PLANS





SECTION AND HALF SECTION SHOWING STONE CONSTRUCTION

SITE—*Open site, approached by lane from main road.*

CONSTRUCTION AND EXTERNAL FINISHES—*Walls, rubble stone in cement mortar, 20 ins. thick ; roof, pantile, boarded and felted, on rafters; joisted floors; stud partitions, plastered; tiled floor on screed on concrete hardcore for kitchen and service.*
Metal windows in wood frames ; tile cills, oak lintols externally throughout (oak from old buildings on site, very hard) ; air vents made up of tile slips with wire mesh behind to stop mice ; chimneys finished with concrete caps and agricultural drainpipes as pots ; tile ornament to external stack.

INTERNAL FINISHES—*Rooms finished in hard plaster. Floors, Jarrah to hall, oak strip to living-rooms, tile to kitchen and service, others deal. Staircase, deal, wax polished, with oak handrail ; built-in furniture to kitchen in deal, painted white.*

SERVICES—*Heat storage cooker , small food lift from kitchen to day nursery on first floor ; central heating throughout from boiler and radiators ; coal fires in brick surrounds ; ordinary domestic type flues.*

COST—*Single contract : price £2,143 7s. ; final cost, after various extras ordered by client, £2,296 1s. 7d. Price per foot cube (contract), 1s. 2½d.*

The photographs are : left, the entrance front ; right, the garden front.

For list of general and sub-contractors, see page 515.

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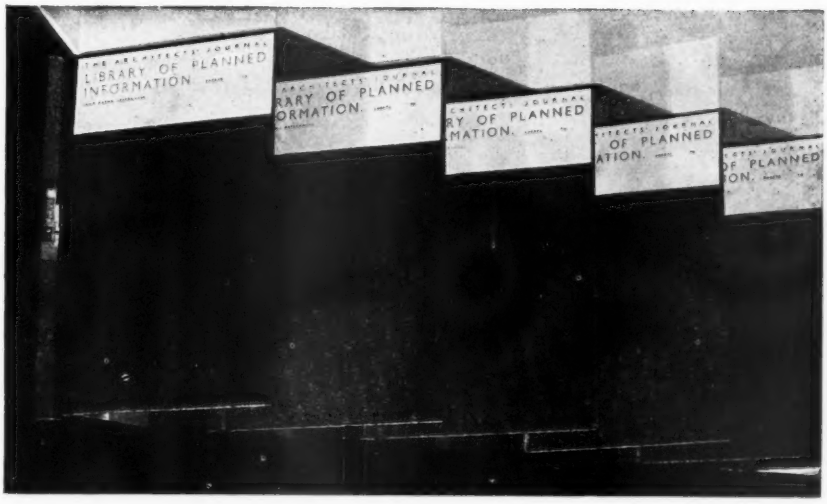
INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

611 Fire Protection and Insulation

612 Glass Masonry



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

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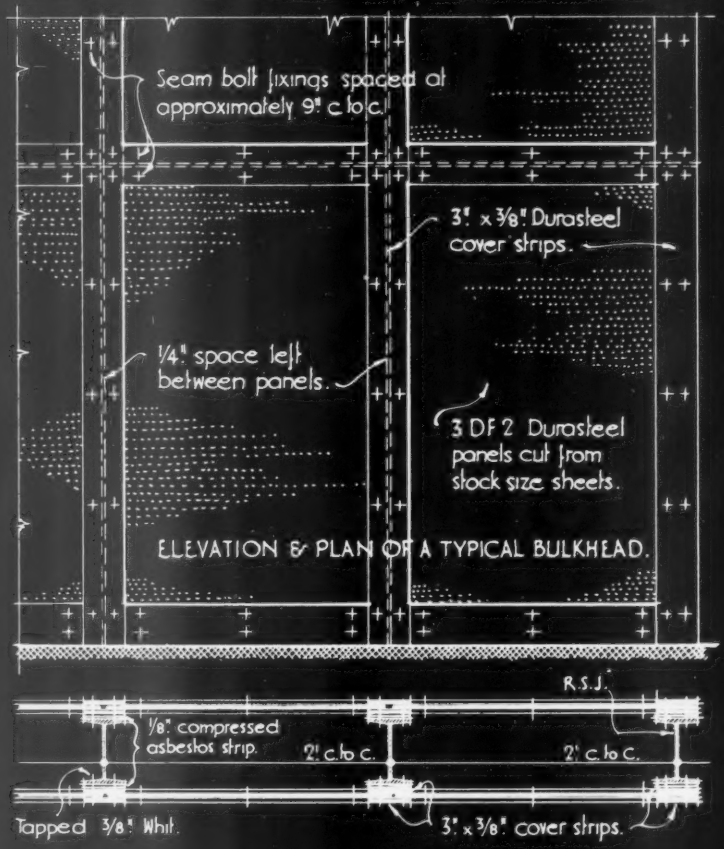
DURASTEEL 3 DF 2 STEEL-AND-ASBESTOS FIRE PROTECTION PANELLING.

SKETCH SHOWING 3-PLY CONSTRUCTION OF SHEETS. Not to scale.

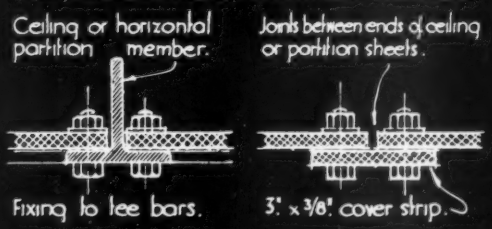
TABLE GIVING SIZES & WEIGHTS

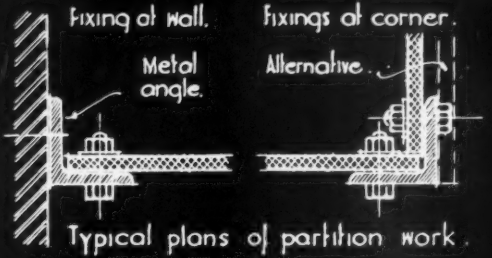
SIZE OF SHEET.	THICKNESS Ins.	Approx. weight per sheet.	Approx. weight per sq. ft.
nominal 6' x 2' 6"	3/8.	81 lbs.	5·4 lbs.
actual 5' 11½" x 2' 5½"	¼.	58 lbs.	3·9 lbs.
	1/8.	29 lbs.	1·9 lbs.
nominal 8' x 2' 6"	3/8.	108 lbs.	5·4 lbs.
actual 7' 11½" x 2' 5½"	¼.	77 lbs.	3·9 lbs.
	1/8.	39 lbs.	1·9 lbs.

DETAILS SHOWING TYPICAL METHODS OF ERECTING THE SHEETS IN TIMBER & STEEL STRUCTURES.

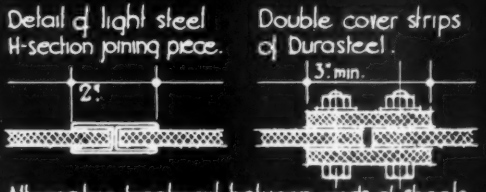


TYPICAL CEILING & PARTITION FIXINGS.



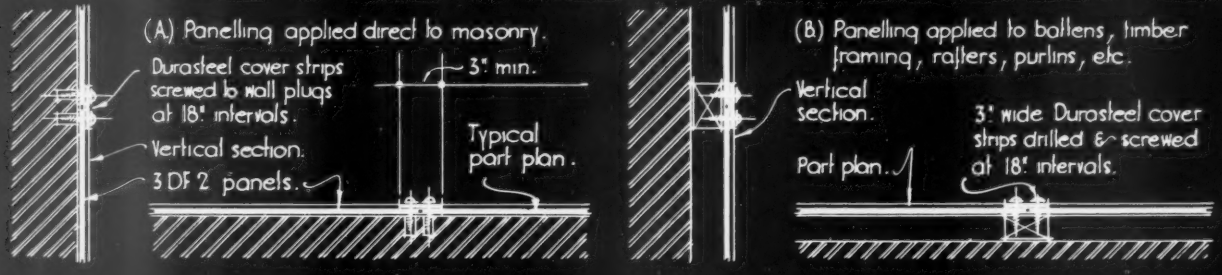


Typical plans of partition work.



Alternative treatment between ends of sheets of double-sided partition panelling.

TYPICAL METHODS OF FIXING THE PANELLING TO BRICK, STONE & CONCRETE WALLS.



Information from Durasteel Roofs Ltd.

INFORMATION SHEET: STEEL AND ASBESTOS FIRE PROTECTION PANELLING.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Oscar A. Barnett.

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INFORMATION SHEET

• 611 •

FIRE PROTECTION AND INSULATION

Product : Steel-and-asbestos Panelling

Description :

The Durasteel 3DF2 patent fire protection panelling illustrated on this Sheet is a form of steel and asbestos construction, and is designed both for interior and exterior use. Each panel is a composite flat sheet, consisting of two light-gauge steel facings keyed to a compressed asbestos-composition core. A pressure of over two tons to the square inch is used during manufacture, and the strength and fire resistance obtained in the final product enables the material to be used, where space and weight are limited, in place of brickwork or air-space fire-protecting construction.

Properties :

Sheets are available in stock lengths of 6 ft. and 8 ft. (nominal) by a standard width of 2 ft. 6 ins. (nominal) in $\frac{1}{8}$ in., $\frac{1}{4}$ in. and $\frac{3}{8}$ in. thicknesses of weights as tabulated on the front of this Sheet. The actual lengths of stock sheets should be taken as 5 ft. $11\frac{1}{2}$ ins. and 7 ft. $11\frac{1}{2}$ ins., respectively, and the maximum width of any panel cannot exceed 2 ft. $5\frac{1}{2}$ ins., but intermediate lengths can be cut to exact dimensions within these limits.

The sheets are capable of withstanding temperatures up to 1,000° C., without disintegration when exposed to direct flames.

The method of bonding the outer faces by means of regularly spaced indentations back and front, gives extra rigidity to the steel, and permits the erection of light, unbreakable partitions, without elaborate bracing. Such partitions allow easier removal than with heavier forms of fire-resisting structure.

Tests :

The heat transmission coefficient is 0.69 B.T.U.s per square foot per hour for 1° F. difference in temperature.

A bulkhead of the type detailed overleaf has been subjected to official test, and passed by the Fire Brigades Association.

Under various fire, water, explosion and chemical combustion tests, including Thermit and Electron incendiary agents, the material remains practically undamaged, and is suitable, therefore, for such construction as screening and partitioning to electric station plant, switchgear, cables, fire and oven doors, flame shields, machinery guards, etc. A further specialised application of the sheets is the protection of buildings and machinery from the risks of incendiary bombs.

Cutting :

The sheets may be cut to any shape and size to special order. Curved sheets can be supplied to the following minimum radii :—

Thickness	Minimum radius
$\frac{1}{8}$ in.	6 ins.
$\frac{1}{4}$ in.	1 ft.
$\frac{3}{8}$ in.	2 ft.

Where necessary, channel steel binding can be fitted to exposed edges.

Fixing :

The fixing and erecting details show various methods of securing and jointing the sheets. All thicknesses of panelling are readily drilled for the bolts and screws for angle iron or timber framing. The sheets may be butt-jointed behind cover strips, or brought together against T-iron.

In general panelling and partition work, the seam bolts along cover strips should be spaced at about 1 ft. 6 in. centres. The given example of bulkhead construction requires bolts at about 9 ins. centre to centre. In ceiling work, fixing bolts may be at approximately 12 in. centres.

Finishes :

Aluminium heat-resisting finish is recommended as standard for industrial uses, or galvanized steel faces for outdoor purposes. Other metal facings, such as copper (non-magnetic) and aluminium (for extreme lightness) can be manufactured to order.

Erection :

The manufacturers have a special department to deal with fire-protection schemes and air raid precautions construction. Estimates can be prepared to include for steelwork and erection, as well as the supply of the sheet material.

Manufacturers : Durasteel Roofs, Limited
Address : Oldfield Lane, Greenford, Middlesex
Telephone : Waxlow 1051/2

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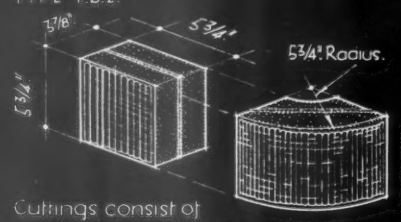
DIMENSIONS & CHARACTERISTICS OF THE 'INSULIGHT' GLASS MASONRY UNITS:

TYPE P.B.2.

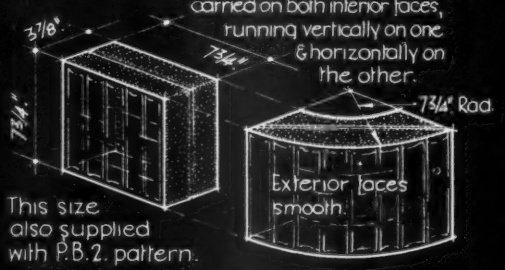


Cuttings consist of ½" convex ribs carried vertically on both exterior faces and horizontally on both interior faces.

ORDINARY AND CORNER BRICKS.

TYPE P.B.3.

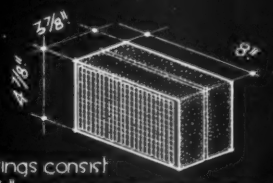
Cuttings consist of 1¼" concave ribs carried on both interior faces, running vertically on one & horizontally on the other.



This size also supplied with P.B.2. pattern.

ORDINARY AND CORNER BRICKS.

TYPE P.B.1.



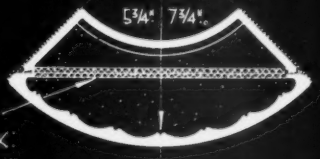
Cuttings consist of ¼" convex ribs carried vertically on both exterior faces & horizontally on both interior faces.

ORDINARY BRICKS.

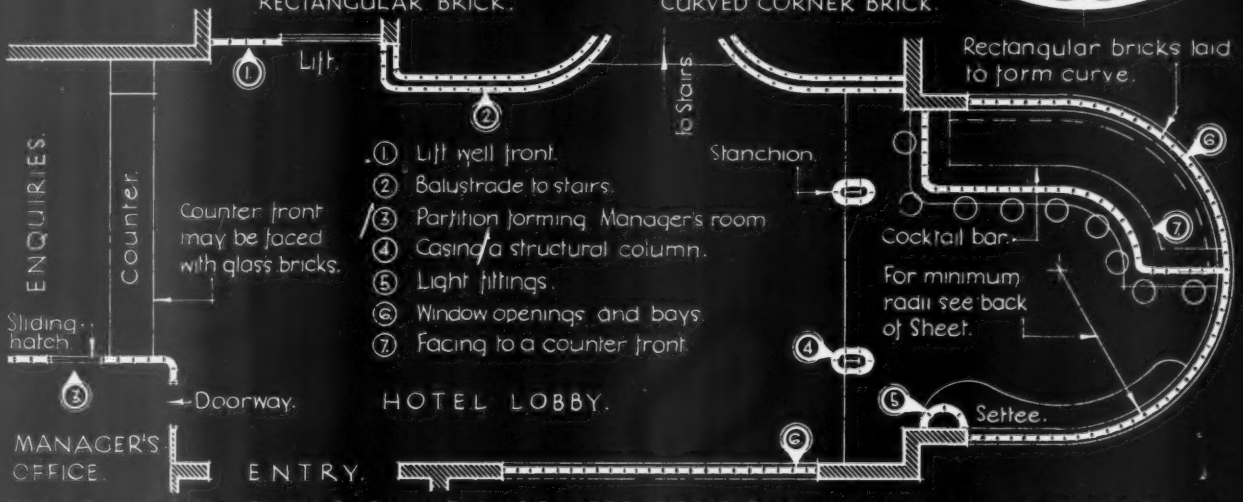
PLANS SHOWING STRUCTURE OF GLASS BRICKS:

Each brick is hollow, formed by welding rim to rim two pressed glass cofers. Edges sanded to form key.

RECTANGULAR BRICK.

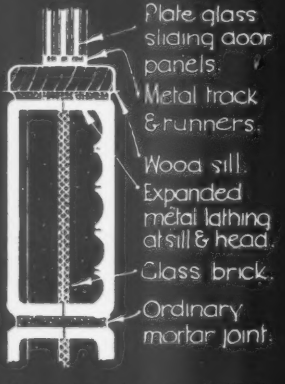


CURVED CORNER BRICK.

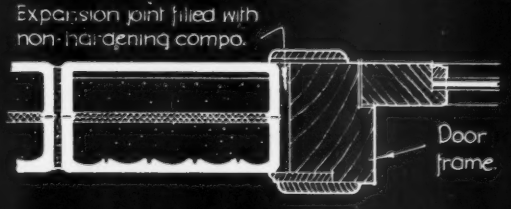


① Lift well front.
② Balustrade to stairs.
③ Partition forming Manager's room
④ Casing a structural column.
⑤ Light fittings.
⑥ Window openings and bays
⑦ Facing to a counter front.

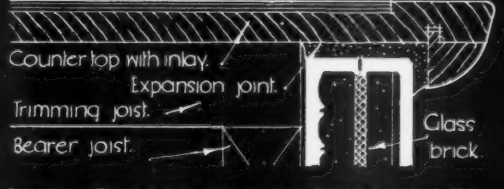
DIAGRAMMATIC PLAN SHOWING SUGGESTED POSITIONS AND TYPICAL USES OF GLASS BRICKS: ILLUSTRATION SHOWS ARRANGEMENT FOR AN HOTEL LOBBY. Scale ⅛" to 1'0"



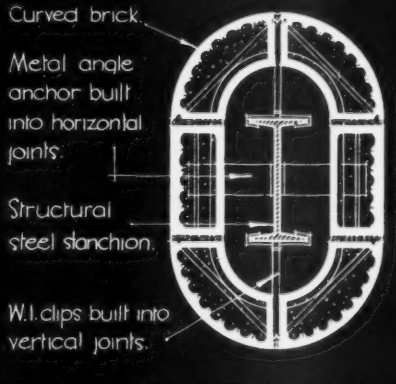
SECTION DETAIL THRO' SILL TO SLIDING HATCH
Scale: 2" to 1'0"



PLAN DETAIL OF JAMB TO DOOR OPENING. 2" to 1'0"



SECTION THRO' COCKTAIL BAR OR COUNTER TOP.



DETAIL PLAN OF COLUMN SHOWING TWO METHODS OF SUPPORTING GLASS BRICKS. 1" to 1'0"

SCALE DETAILS SHOWING JOINTING AND TREATMENT OF BRICKS AT ABUTMENTS & COLUMNS.

Information from Pugh Bros. Ltd.

INFORMATION SHEET: GLASS MASONRY UNIT CONSTRUCTION:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Miss A. Bayne

THE ARCHITECTS' JOURNAL.
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INFORMATION SHEET

• 612 •

GLASS MASONRY

Product : "Insulight" Glass Bricks

Description :

These are hollow translucent building blocks of glass manufactured in uniform sizes and shapes for forming partitions, walls, and for infilling, etc.

Each unit is formed by pressing together two glass coffers rim to rim, the joints being aluminium welded by a special process so that the hollow thus formed is a partial vacuum.

They are light in weight, may be easily and economically laid by any competent bricklayer or mason, and are suitable for functional uses as light transmitting walls of high thermal resistance, besides having considerable decorative possibilities.

Properties :

(a) *Strength.*—Insulight glass bricks are designed essentially as non-load bearing units, yet they possess sufficient compressive strength to carry their own weight to any practical height.

(b) *Light.*—The bricks are translucent (permitting a maximum transmission of light while effectively obscuring images).

(c) *Sound and Heat.*—Owing to the nature of their construction, Insulight glass brick walls are resistant to the transmission of sound ; their conductivity of heat is relatively low and their fire-resisting properties are greater than most other light-transmitting building materials.

(d) *Moisture Penetration and Condensation.*—Moisture can only penetrate a glass brick wall through the mortar joints, and the partial vacuum in the bricks prevents any possibility of condensation occurring inside the unit.

(e) *Cleanliness.*—The faces of Insulight glass brick walls can be easily cleaned. Their surface is hard, non-porous, smooth and highly resistant to corrosion.

Shapes and Sizes :

Glass bricks are supplied in unit shapes ; the ordinary rectangular brick may be obtained in three sizes :

1. Type No. P.B.1 size 8″ long × 4$\frac{7}{8}$″ high × 3$\frac{7}{8}$″ thick.
2. ,, ,, P.B.2. ,, 5$\frac{3}{4}$″ ,, × 5$\frac{3}{4}$″ ,, × 3$\frac{7}{8}$″ ,,
3. ,, ,, P.B.3 ,, 7$\frac{3}{4}$″ ,, × 7$\frac{3}{4}$″ ,, × 3$\frac{7}{8}$″ ,,

Curved right-angled corner bricks may be obtained to match both in size and in pattern types No. P.B.2 and No. P.B.3 and No. P.B.32.

The radius of the external face of the brick is 5$\frac{3}{4}$″ for the smaller brick and 7$\frac{3}{4}$″ for the larger.

(a) *Surface Cuttings.*—The glass brick units are supplied in three different pattern cuttings in the rectangular, and two in the curved corner bricks.

(1) Pattern No. 1 (used on the P.B.1 size only—for size see above) consists of $\frac{1}{4}$″ convex ribs carried vertically on both exterior faces and horizontally on both interior faces.

(2) Pattern No. 2 available in size P.B.2 and P.B.3 —the latter being known as P.B.32—consists of $\frac{1}{2}$″ convex ribs carried vertically on both exterior faces and horizontally on both interior faces.

(3) Pattern No. 3 (available in size P.B.3 only) consists of 1$\frac{1}{4}$″ concave cuttings carried on both interior faces, running vertically on one face and horizontally on the other. Both exterior faces are smooth.

(b) *Special Bricks.*—Special face cuttings and bricks of special sizes can be produced to order, provided that the quantity is sufficient to justify the cost of making the moulds.

(c) *Average Weight of Bricks :*

Type P.B.1	4$\frac{1}{2}$ lbs. each.
,, P.B.2	3$\frac{3}{4}$ lbs. each.
,, P.B.3 and P.B.32 ...	6$\frac{1}{2}$ lbs. each.
,, P.B.2 Corner Bricks	3$\frac{1}{2}$ lbs. each.
,, P.B.3 and P.B.32 Corner Bricks	7$\frac{3}{4}$ lbs. each.

Laying :

The glass brick, being light in weight and easily handled, may be quickly laid. They may be laid in similar methods to that of ordinary brickwork and should be set in cement mortar consisting preferably of one part cement, one part slaked lime and four parts sand proportioned by volume, mixed with only sufficient water to give a plastic, sticky mortar.

When building into a wall, the glass bricks with a pattern on the exterior face should be laid with the convex ribs running vertically ; so that they may be easily cleaned and do not collect unnecessary dust and dirt. From an architectural point of view the P.B.3 brick is also better set with the ribs running vertically on the exterior of a building.

The building-in faces of each glass brick are sanded to give a good key or grip for the mortar forming the joint.

(a) *Joints.*—The thickness of joints may vary slightly, but $\frac{1}{4}$″ is recommended.

All glass brick panels should be protected against taking any strains from the surrounding structure (as illustrated on the Sheet), and for this purpose a plastic caulking compound joint should be used at the top and both sides of every panel.

Walls and panels with curved surface can be built up in rectangular glass bricks.

Where both internal and external faces of the glass brick are exposed to view, the radius of the curve required for laying should not be less than 7′ for the 5$\frac{3}{4}$″ × 5$\frac{3}{4}$″ × 3$\frac{7}{8}$″ brick. This will give the vertical joints a thickness of little more than $\frac{1}{4}$″ on the outer face of the panel, with a fine neatly butted joint on the inner face.

For the larger size glass bricks the minimum radius should be increased to 9′ 6″.

Where the inner face only of a curved surface of panelling is exposed to view the brick can be laid to practically any radius.

(b) *Reinforcing.*—For general purposes reinforcing mesh should be built-in every 4th or 5th course. A thin expanded metal as used in the building trade is suitable and should be well built into structural masonry piers or walls.

For walls or panels that may be affected by wind pressure the amount of reinforcing may have to be increased.

(c) *Anchoring.*—Vertical reinforcement is generally necessary for panels exceeding 20 ft. in width ; this may be done by anchoring to a stiffening channel.

Where the glass bricks are to be built around frames and free standing columns they should be fixed by means of metal angles or straps built into the joints as illustrated.

(d) *Cleaning.*—The exposed surfaces of the glass brick walls should be cleaned immediately after completion by wiping down.

(e) *Replacement.*—Any damaged glass brick may be removed easily from the wall by being carefully broken out with a hammer.

The new brick is then buttered up with mortar, inserted in place and then pointed up.

The hygienic and light diffusing properties of Insulight glass bricks made them of special value for use in hospitals, dairies, bakeries, and breweries, factories, printing works, shops, schools, etc., where shadows are undesirable. Also for interior office partitions, borrowed lights, etc.

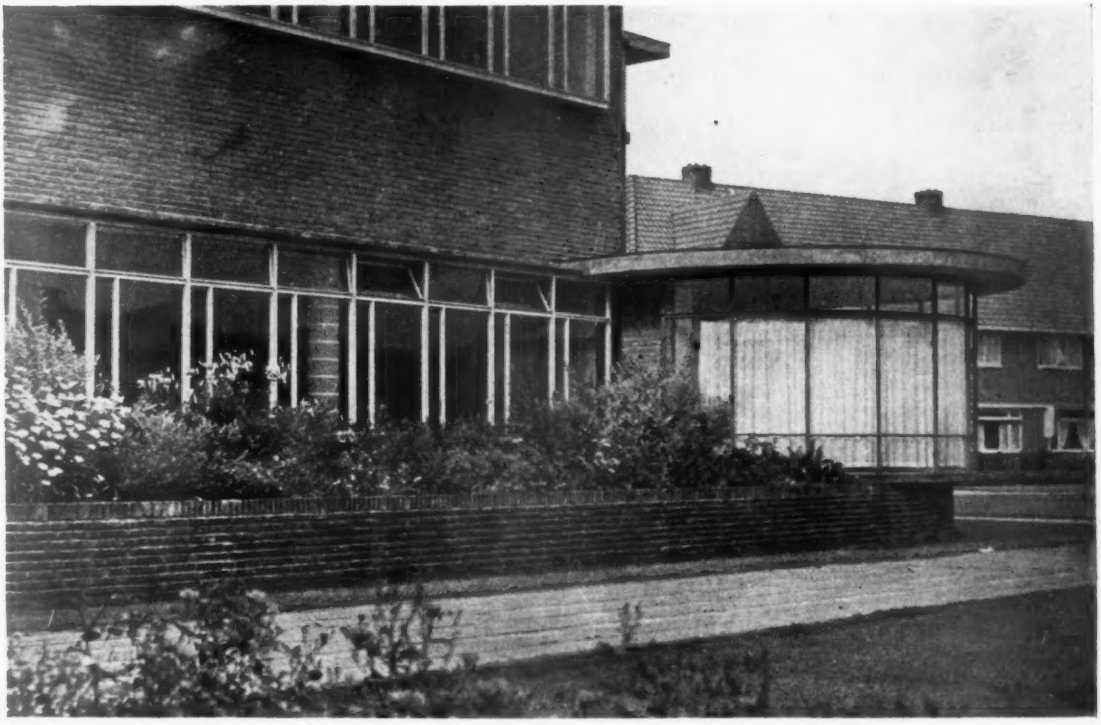
Distribution and Installation :

These glass bricks are manufactured by Messrs. Pilkington Brothers, Ltd., and are distributed and installed by Messrs. Pugh Brothers, Ltd., to whom enquiries should be made for further information if required.

Issued by : Pugh Bros., Ltd.
Address : 54 Compton Street, London, E.C.1
Telephone : Clerkenwell 3211

The Architects' Journal Library of Planning

Senior Schools



Projecting staff room unit in a good position for long-distance supervision. One of Dudok's schools in Holland.

PLAN UNITS : DINING AND STAFF ROOMS

PROVISION for meals of some kind for a proportion of children at Senior Schools is becoming common and will undoubtedly continue to become more so.

Local needs and the opinion of local education committees must control whether this feeding is merely free milk to some children or a substantial mid-day meal for a large proportion of them. It is therefore difficult at present to make any recommendations concerning accommodation which ought to be provided for meals.

In smaller rural schools at present a kitchen staffed by adults is sometimes provided; in larger rural schools the girls prepare the meals under the direction of the domestic science teachers, and also serve them in the school hall. In one such case the cross traffic by trolley looked clumsy, but the meal—costing 3d.—was excellent.

In a foreign school one wall of a domestic science room adjoins a large classroom and is fitted with a counter and hatch. Milk and light meals are served over the counter by the girls on the cafeteria system. The cafeteria system is often used in foreign schools, particularly, of course, in the country of its origin. It is a quick and economical method, perfectly satisfactory for Senior Schools, but not so satisfactory for Junior Schools.

Kitchens.—Opinion appears divided as to whether a separate kitchen should be provided for cooking the mid-day meal, although a scullery and extra storage will be necessary if 100 or so children stay to dinner. The Board of Education feel that if one domestic science kitchen is perpetually used for cooking dinner it will prevent its full use as an instruction room. The best arrangement would therefore be to plan the kitchen as an annexe to the domestic science rooms, so that girls can take part in the preparation of meals whenever it is considered desirable. The size and equipment of the kitchen depends so closely on the number of meals that arbitrary recommendations seem inadvisable.

Finishes.—For dining room floors linoleum is the most generally suitable. Walls should be washable but not necessarily gloss-painted. Ceilings, if they can be afforded should be acoustic tiles or other absorbent material; a considerable reduction of clatter can be so obtained. Colours can be bright.

Furniture.—Chairs should have low backs; tables should have linoleum tops and legs at extreme edge if they are to be used as units placed side by side. Tables for more than ten children are not advisable.

Staff Rooms

Important points for staff rooms are position and reasonable size. Head teachers' rooms are used for interviews, administrative work and study and the staff common rooms as lounges,

places in which to do work needing quiet—such as marking papers—and as luncheon rooms for those of the staff who do not go home at mid-day. For none of these purposes is it necessary for staff rooms to be in the middle of the school's circulation.

The rooms should be near the entrance used by parents and other visitors and on the occasions of school entertainments open to visitors it is convenient for staff rooms to be near the entrance and assembly halls. It is, however, very doubtful if these advantages are worth achieving at the price of grouping staff rooms and assembly hall in the centre of circulation, and thus exposing them to constant noise. The desirable planning would appear to be in the form of a self-contained administrative block to one side of the main entrance and removed from the noise of the school. This block should not overlook playgrounds at close range, but long-distance supervision of children's entrances and playgrounds is an advantage.

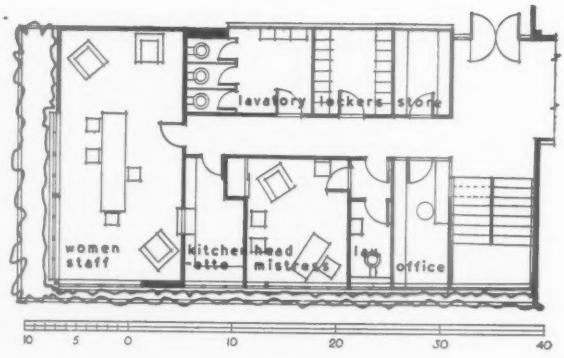
For a 3-stream boys' or girls' school the following accommodation is desirable :

Waiting room.—A small waiting room or space, about 60 sq. ft., near the main entrance hall. This may be placed as an annexe to the hall but should not expose visitors to the interest of any passing children.

Head teacher's room.—About 140 ft. super, and near the visitors' entrance, fitted with cupboard space for files and books. A hat and coat cupboard is desirable.

Head teacher's lavatory.—A w.c. and lavatory basin adjoining head teacher's room, but not directly communicating with it.

Office.—The amount of administrative work done by the head teacher varies. Sometimes in schools used for evening classes it is large enough to justify a secretary's office of about 70 ft. super, equipped for storing files. Where provided the office should be near the head teacher's room.



Sketch plan of staff unit in a girls' Senior School for about 240 children. The unit is intended to adjoin the main entrance. The use of the space marked " office " would vary. If the headmistress has much administrative work it might be used for a typist, filing and as a waiting room ; otherwise it might be a store. In a mixed school for 480, two slightly smaller units on two floors would cater for male and female staff, and a kitchenette need not be provided for the men.

Staff Coatroom.—A coatroom with separate lockers, pegs, etc., for a staff of 20. Sheet steel lockers of good appearance are now obtainable.

Staff Lavatory.—Containing 3 basins and 3 w.c.s. In the case of male staff a urinal may be substituted for one w.c.

Staff Room. — The Board of Education recommend an allowance of 30 sq. ft. per head for staff rooms. For a 3-stream school a large room is needed, not less than 500 sq. ft.

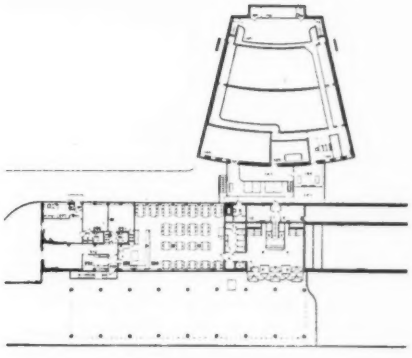
Kitchenette.—A small kitchenette with gas rings, small sink and cupboards for crockery should be provided off the staff room.

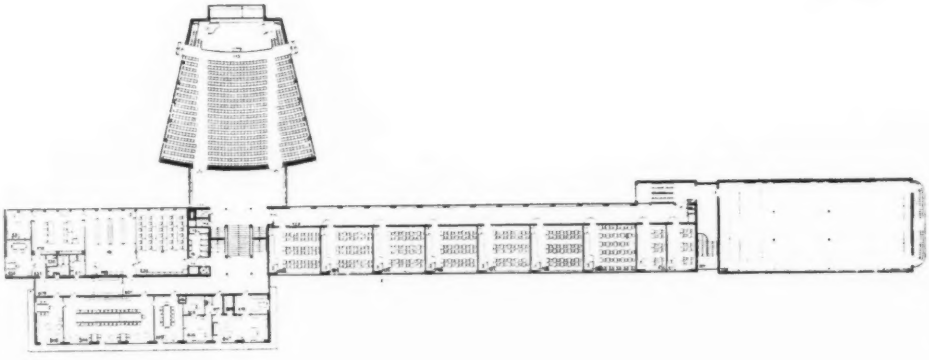
In the case of mixed schools accommodation needs to be duplicated for each sex and appropriately reduced in size except for the head teacher's room. In smaller mixed schools, a room for the headmaster, a smaller room for the headmistress, a joint staff room and separate lavatory and coatroom accommodation would be sufficient.

Typical classroom unit in a Scarborough school. Dining rooms, when combined with halls or other rooms, can have long tables made up of small units. Architects, Overfield & Alderson.

SCHOOLS

School for 800 girls at Stockholm. Though twice as large and twice as high as the recommended maxima for Senior Schools, this school is very cleanly planned and has its elements well disposed. Lower floor plan shows covered playground approach and entrance. Main floor plan shows classroom block in centre, special classrooms on left, gymnasium on right. Assembly hall seats 800, has a stepped floor and acoustic shape. With such large numbers, this is advisable (see Plan Units, Assembly Halls). Changing rooms are on floor below the gym. approached by stairs at end of room. On upper floors are practical rooms.





LOWER GROUND AND FIRST FLOOR PLANS

In such cases separate lavatories for the head teachers are not essential.

Finishes.—Lightness and brightness should be aimed at in the decorations and furniture of staff rooms. Head teachers' rooms may be justifiably a little academic in treatment, but the remaining accommodation can be cheerfully bold. Power to withstand hard wear is not very important in these rooms.

Storage

General storage accommodation can be dispersed through the building but one, or two, storerooms can usefully be placed in the administrative block where they can possibly form sound baffles. Such stores would be used for paper, books and other school materials and should be sufficient in number—their inadequacy is one of the most common complaints. A convenient size is 12 ft. by 5 or 6 ft.; they should be well-lighted, artificially or otherwise.

Apart from special stores adjoining practical rooms, a 3-stream school can well use six of these stores.

Cleaners' Cupboards

One cleaners' cupboard to every hundred feet of corridor is the minimum for practical convenience. A heavy sink at a suitable height for filling buckets and with edges protected, hot and cold water, storage for brooms, buckets and mops, and shelf space for polishes are needed. A convenient size is 6 ft. by 3 ft. A lock is required and inward-opening doors might be fitted with the usually annoying ball-catch.

The cleaners' cupboards can normally be grouped near lavatories, and must be well-ventilated.

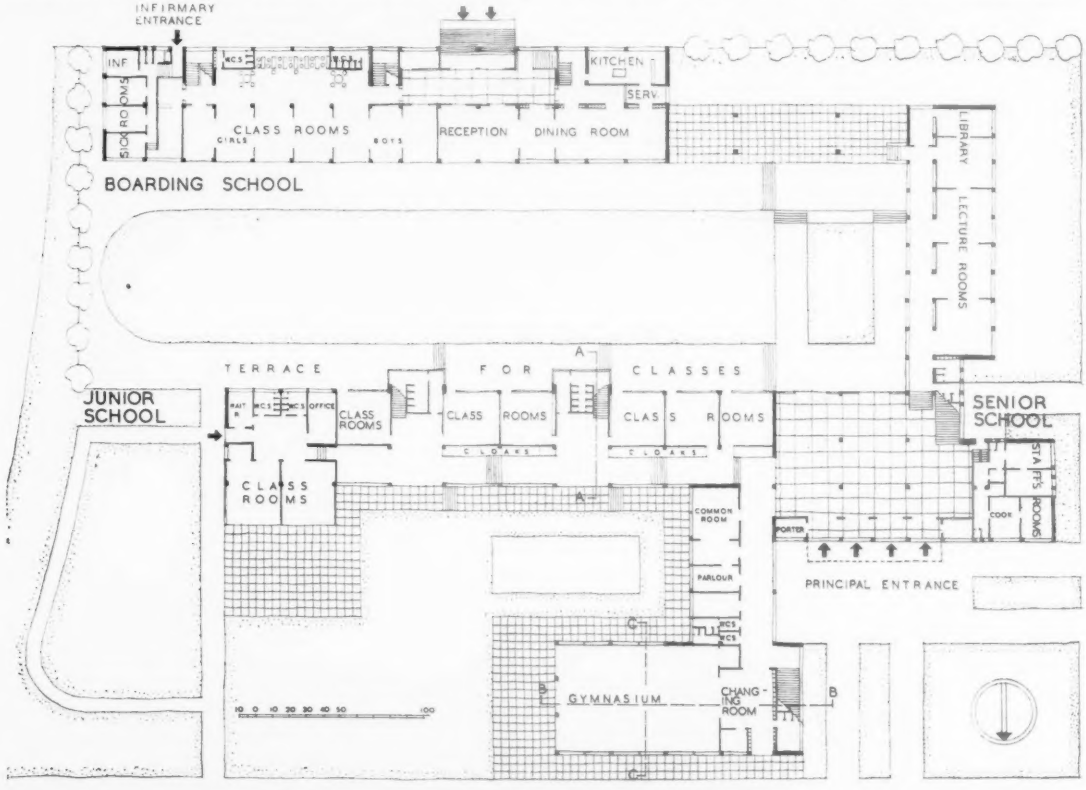
Medical Inspection Rooms

These rooms are often planned as part of the administration block and are sometimes used as libraries or additional staff accommodation. In theory this dual use is undesirable; but save in cases where the M.O. is paying special attention to a school it certainly appears wasteful to keep a room (which must be 20 ft. long for sight-testing) unused save for four or five days a term.

The authors have therefore suggested previously that in Senior Schools equipped with a gymnasium the instructor's room should be used for this purpose. If this is done washing and sanitary accommodation is adjacent, also a waiting space and first-aid cabinets.

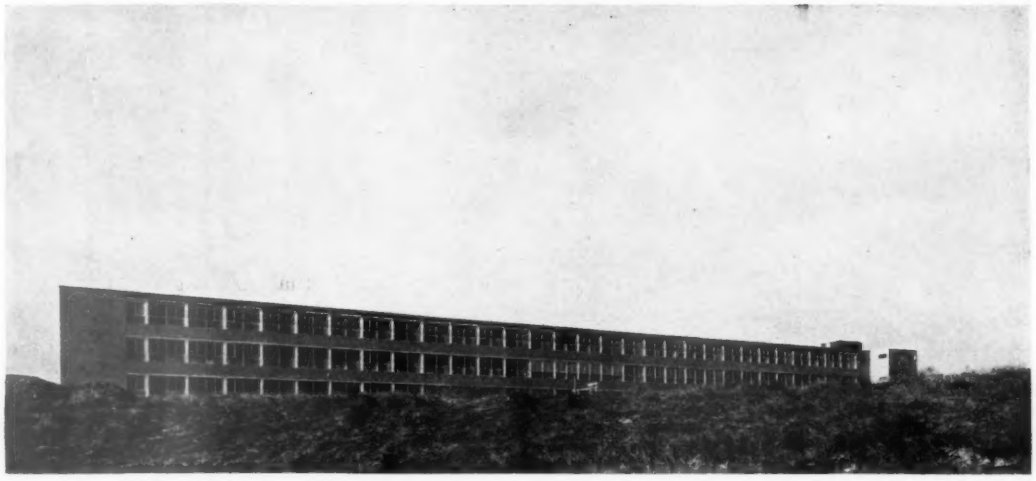
A lavatory basin with hot and cold water must be provided. It is also probable that the length of room required is obtained without difficulty.

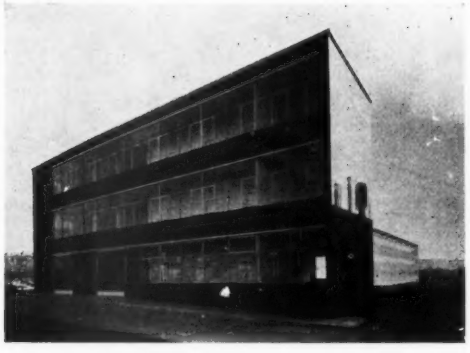
In schools without a gymnasium the staff common room seems preferable to the library for use for medical inspection. In this case a cupboard for records, dressings and lavatory basin should be planned opening off the room.

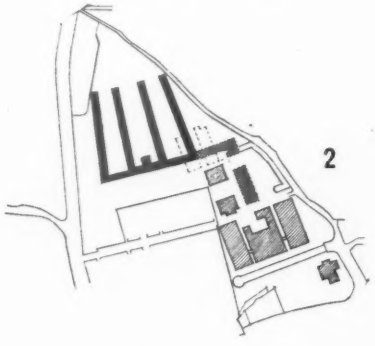


4 : School at Prague, interesting for its open planning and spacious entrance hall with all-opening glass walls, used for play in wet weather. Notice dispersed lavatory planning in main part of school. Architect: Jan Gillar.

RESEARCH LABORATORIES, BLACKLEY







The diagrams show : 1, the new block of research laboratories (shown in solid black) which has now been built ; 2, the future building programme (shown in black) : a range of laboratories based on the same unit. The existing service and administration buildings are shown hatched.

GENERAL PROBLEM — *This block of 21 laboratories represents the first unit in a long-term building scheme, which aims at providing up-to-date accommodation for research for the Dyestuffs Group of Imperial Chemical Industries.*

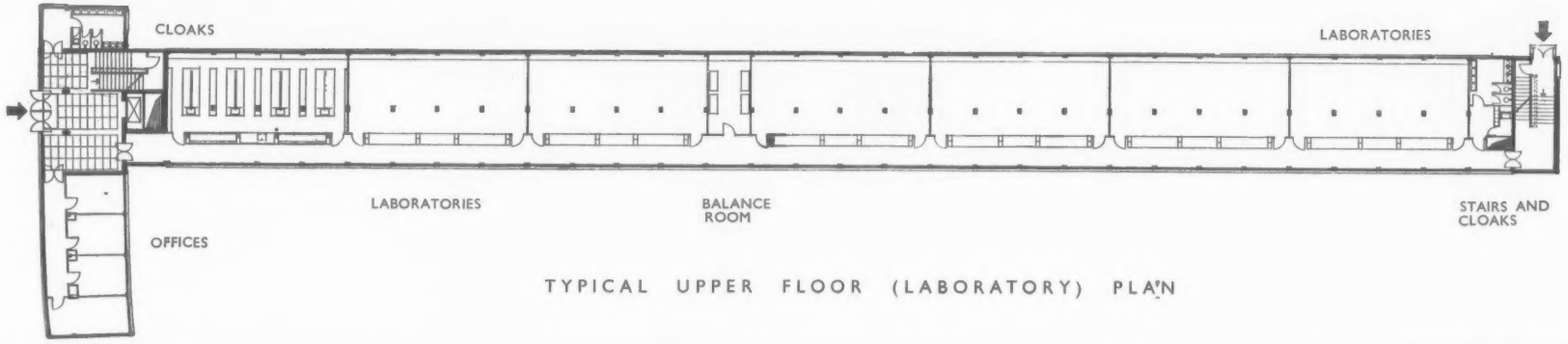
CONSTRUCTION—*Reinforced concrete frame, the outer walls of Accrington brick with an inner skin of partition block and an additional insulation of Heraklith to the plenum ducts ; windows are steel.*

The photographs show : top, looking from the east, showing the laboratory windows; above, two views of the research block; below, a view from one of the offices along the corridor façade of the laboratory block.

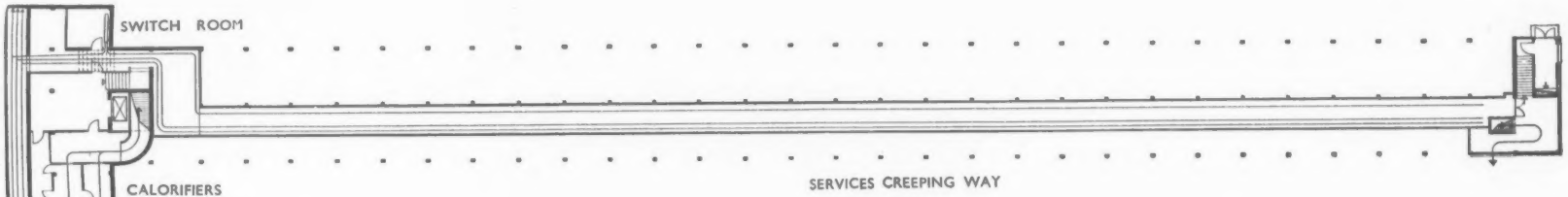
DESIGNED BY SERGE CHERMAYEFF

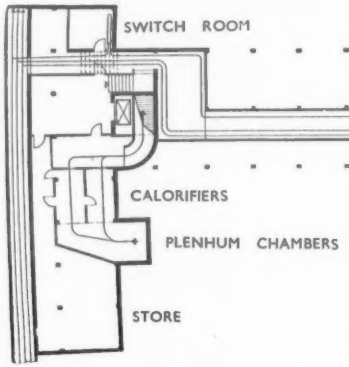
RESEARCH LABORATORIES, BLACKLEY, MANCHESTER

The photographs show : left, the exterior by night ; centre, the staircase ; right, an upper floor landing.



TYPICAL UPPER FLOOR (LABORATORY) PLAN

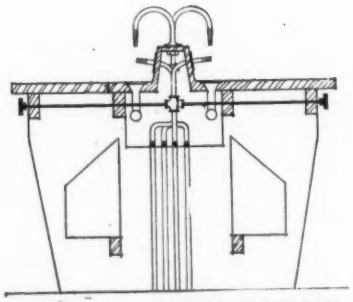




BASEMENT FLOOR PLAN

DESIGNED BY SERGE CHERMAYEFF

The photograph is of a typical two-chemist unit, looking towards a fume cupboard, on the left, and the laboratory wash-up.



STANDARD BENCH: SECTION

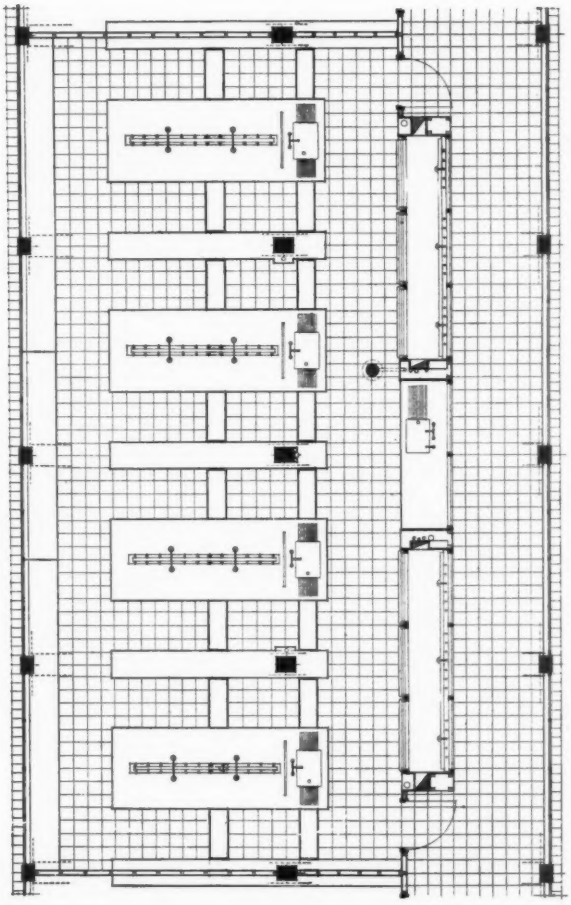
RESEARCH LABORATORIES, BLACKLEY

INTERNAL FINISH—*Flooring throughout the working space is of cork tile, laid in bitumen, and where paint has been used it is of an acid- and steam-resisting kind. The entrance hall is paved in terrazzo, and the stair wall fin and columns are tiled. Each laboratory floor is identifiable in a different range of colour for the entrances and the laboratory fitments are in variations of tone of the individual floor colour. All doors and windows in the staircase hall are dark brown with old bronze metalwork. The interior of the lift-cage is scarlet.*

SERVICES—*Automatically purified, warmed or cooled air is taken to each individual working space through ducts running the full length of the building over the corridor, the air being extracted below the fume benches, partly by means of an extract duct and partly by displacement under pressure from the incoming fresh supply. A system of high-velocity extract has been installed for each fume cupboard for light and heavy gases through an independent system of vertical ducts. The adoption of a structural unit and a uniform distribution of work benches throughout made it possible to provide a series of accessible service ducts capable of accommodating future extensions to every fume cupboard and laboratory in any given position throughout the length of the building. Shallow horizontal ducts, with removable covers, in the laboratory floors passing under the benches, carry all services to each individual chemist. Each bench unit is equipped with writing-desks under the windows and storage space between the benches, which at the same time act as screens to give privacy. The fume cupboards are glazed with Georgian wired safety glass, clear on the laboratory side and obscured on the corridor side. The controls are outside, but well set in to avoid accidental interference.*

The photographs show : above, the entrance hall on the ground floor ; left, an upper floor landing.

DESIGNED BY SERGE CHERMAYEFF



TYPICAL LABORATORY PLAN

The complete run of available working space is divided by a continuous run of fume cupboards and sinks into the laboratory working space to the east (photograph on right) and the corridor to the west, which acts as an insulator from the warmer westerly rays. For list of general and sub-contractors see page 515.

REGISTRATION BILL

COMMITTEE STAGE

A STANDING Committee of the House of Commons, on Thursday, March 10, began consideration of the Architects Registration Bill, which seeks to restrict the use of the name "architect" to registered architects, and to extend the time within which practising architects might apply for registration.

Sir Robert Young presided.

Mr. A. C. Bossom moved an amendment that clause 1 (use of the title "architect") should begin with the words "Subject to the provisions of this Act."

The effect of the drafting amendments, he added, would be to make clause 1 read as follows :

1. Subject to the provisions of this Act, a person shall not practise or carry on business under any name, style or title containing the word "architect" unless he is a person registered under the principal Act :

Provided that nothing in this section shall affect :

(*a*) the use of the designation "Naval architect" or "golf-course architect" ; or

(*b*) the validity of any building contract in customary form.

The amendments proposed, Mr. Bossom continued, would make provision for the case of the retired architect who would probably not want to be put to the trouble of going on paying the registration fee. The clause gave a man who had been a registered practising architect the right to call himself an architect after he had retired from practice.

Sir Robert Tasker asked permission to make a statement, which, he said, might shorten the proceedings. The Bill really revolved round the use of the term architect. Pronouncements on that matter had been made over a number of years by the most eminent men the country had ever produced. In 1891 there was a protest on the subject in *The Times* by men whose names must be well known. They objected to the proposal to make architecture a closed profession. They sent their protest to the Royal Institute of British Architects, and the names included various Royal Academicians. That protest was followed up by a protest against the idea of registration of the word architect by various gentlemen who were members of the R.I.B.A. and others who were not. There was then the greatest difference of opinion on the subject—as there was now. The objection to registration was held by a large number of men in the profession. One did not say that a person should not practise as a sculptor or a painter unless he had passed some examination. Architecture was a sister art. He did not believe that artistic qualification could be determined by the test of an examination. No man practising today who was keen on the work feared opposition or competition. They did not need to seek work ; they turned it away. He opposed the idea that any one body had the right to determine who should use the designation architect. There was no definition of the word. Who was to define it ?

The amendment was agreed to.

In the subsequent discussion on the other drafting amendments moved by Mr. Bossom, as mentioned above, Lieut.-Col. Sir Thomas Moore said that there was nothing new in the amendments. They were simply drawn up to make the intention of the clause clearer.

Mr. V. McEntee asked how the proposed amendments would affect officials of municipalities who did architectural work. Would the clause prevent them from doing that work ?

Mr. A. C. Bossom said there was nothing in the Bill or in the original Act to prevent anybody practising. The only thing the Bill set out to accomplish was the prohibition of the word architect. Anyone connected with local authorities could go ahead and do exactly as he was doing now, but he could not call himself an architect unless he was registered.

The amendments were agreed to.

Lieut.-Col. A. P. Heneage moved an amendment to add the following words to the clause :

"where at the date of the passing of this Act any person—

(i) holds in the service of a local authority an office by virtue of which he has the control and management of the architectural work of the local authority ; and

(ii) is a member of any of the following institutions, that is to say—

The Institution of Civil Engineers ;

The Institution of Structural Engineers ;

The Chartered Surveyors' Institution ; and

The Institution of Municipal and County Engineers ;

nothing in this section shall prevent the use of the word 'architect' in the description of that person as the holder of such an office in the service of that or any other local authority, if and so long as the local authority's servant or servants engaged under him for the purposes of such work is or include a person registered under the principal Act.

(2) In this section the expression 'local authority' means a local authority within the meaning of the Local Government Act, 1933, or the Local Government (Scotland) Act, 1929."

He said that it was an important amendment. There were in the employment of local authorities persons in various offices under the authority who were engaged in architectural duties. In some cases they called themselves "engineer and architect" or "surveyor and architect." The amendment was intended to safeguard the position in that connection. He desired to change the words "Local Government Act, 1933" in the amendment to read "Local Loans Act, 1875." The effect, he said, would be to widen the definition of local authorities.

The chairman ruled that the suggested alteration of the amendment should be considered on the report stage of the Bill.

Lt.-Col. Sir T. Moore, speaking to the amendment, said that the promoters of the Bill had had an opportunity of considering the matter. It affected the well-being and security and livelihood of excellent servants of local authorities. The promoters would accept it.

Mr. Geoffrey Lloyd, Under-Secretary, Home Office, said that they had had no time to examine all the implications of the amendment, but there was no objection to the general principle.

The amendment was agreed to.

On the motion of Mr. Bossom the following addition to the clause, consequential on the amendments already proposed by him, was agreed to :—

(2) For the words "Registered Architects" in subsection (3) of section three of the principal Act, and for the words "Registered Architect" in section seventeen of that Act, there shall be respectively substituted the word "Architects" and the word "Architect."

(3) Section ten of the principal Act shall cease to have effect.

(4) This section shall come into operation on the first day of August, 1940.

Sir R. Tasker moved that the date 1940 in the final sub-paragraph above should be altered to 1943. He said that if they were going to have a time inserted at all they should make the interval five years.

Sir Murdoch Macdonald, supporting the amendment, said they should bear in mind the case of a man who was today practising as an architect and had various business contracts.

Lieut.-Col. Sir T. Moore said that a somewhat misleading impression had been given of the effect of the amendment as proposed by Mr. Bossom. In the original Act two years was given as the period during which architects could become registered. In that two years about 9,000 came on to the register. Since then there had been another 3,000, so that today there were about 12,000 on the register. Now they were giving a further two years. Architects actually had seven years in which to register—or they would have had.

Sir R. Tasker said there were not 12,000 architects on the register.

Lieut.-Col. Sir T. Moore said that up to date 12,000 architects were on the register, and it was reasonable to suppose that there could not be very many more who wanted to come on to the register. To have a period of five years meant a postponement of the operation of the Bill. The promoters could only regard it as a wrecking amendment. The Bill was not intended to legislate for the distant future, but for the immediate present. The amendment should be rejected.

Sir R. Tasker's amendment of the date from 1940 to 1943 was defeated.

On the motion that the clause as amended stand part of the Bill.

Sir M. Macdonald referred to an amendment which he had tabled but which had not been called. The amendment read as follows :—

Nothing in the principal Act or this Act contained shall be construed so as to prevent a member of any of the bodies mentioned in the Schedule to this Act from performing any act or function or exercising any power which he might lawfully have performed or exercised if the principal Act or this Act had not been passed.

He said that if the amendment was not accepted the Committee would have put themselves in a ridiculous position. Outside of local authorities there were vast numbers of people in the City of London alone who were consulting engineers. They were called in when important works arose in connection with municipalities and local authorities. The committee were going to bar the consulting engineers being called in by local authorities to advise them with regard to works that such authorities carried out. If a local authority was putting in a pumping station and thought that it was beyond the capacity of the local engineer to undertake the work they asked some consulting engineer to do the work under the supervision of the local man or assist him. Under the Bill at present such an engineer would be debarred because he was not a servant of the local authority. He stood there representing 20,000 members of his profession who would be prejudicially affected if the Bill was passed in its present form. He moved that the clause as amended should not stand part of the Bill.

Mr. J. Chuter Ede said he would vote against the motion. They had not been given sufficient information as to what the business of an architect was. A great deal of the work that was at present legitimately done by engineers was being attempted to be brought within the exclusive sphere of the architects' profession quite needlessly and wrongly. He did not believe that an architect was the proper person to deal with the elevation of a bridge. He wanted to be assured that they were not going to find it ruled later by the courts that engineers were not concerned with the elevation of the structure for whose engineering strengths they were responsible. Hampton Court Bridge was designed by the county engineer and referred to a distinguished architect. He proposed to put at each end four kiosks which would add £8,000 to the cost of the bridge and which had nothing to do with the bridge as an engineering structure to carry traffic and which completely spoilt the whole approach to Hampton Court Palace. That palace was designed by a man whose work stood the test of time. Bridges and their elevations were engineering and not architectural work. There was at the present time a strong effort on the part of the architectural profession to say that no bridge was complete unless they had drawn some fees in connection with it. There was in the clause plenty of opportunities for the position to be made a great deal worse for local authorities and architects. The proper people to deal with engineering work were

engineers, and the belief that engineering work should be made pretty was wrong.

Mr. Ede, replying to various members, said that all the big bridges were referred to the Fine Arts Commission, and they insisted on the kind of thing he had described. It was a wicked waste of public money.

Lt.-Col. Sir T. Moore said there was nothing to prevent an engineer carrying out engineering work which he had been doing so long as he did not call himself an architect. The architect did not ask to call himself an engineer. If a man had practised under a local authority as an architect he could claim to go on the register. It was the title architect they were concerned about.

Sir R. Tasker said that the Bill would create a fine type of commercial traveller under the guise of architect. What was the magic about the word architect? They need not worry about a man using that word. They would not improve architecture that way. It was a subtle move on the part of one body to secure entire control of the profession. To suggest it in the name of the good of architects was all "my eye and Betty Martin."

The clause as amended was ordered to stand part of the Bill by 16 votes to 8.

On clause 2 (date of application for registration) three consequential and drafting amendments were agreed on to the motion of Mr. Bossom.

Mr. Bossom further moved the deletion of that part of the clause relating to appeals against refusal to grant registration and the substitution of the following subsection :—

> (2) Where, upon an application made under this section, the Council decide not to register the applicant under the principal Act, he may, within one month from the date on which notice of the decision was served on him under subsection (2) of section six of that Act, appeal to the Tribunal of Appeal constituted under the following provisions of this section (hereinafter referred to as "the Tribunal") ; and on any such appeal the Tribunal may give such directions in the matter as it thinks proper, and the decision of the Tribunal shall be final and conclusive.
>
> (3) The Tribunal shall consist of the following persons, not being members of the Council, that is to say :—
>
> A chairman appointed by the Lord Chancellor ;
>
> One person appointed by the Minister of Health ;
>
> One person appointed by the Department of Health for Scotland ;
>
> One person appointed by the Governor of Northern Ireland ;
>
> One person appointed by the President of the Law Society ;
>
> One person appointed by the Chairman of the General Council of Solicitors in Scotland ; and
>
> One person appointed by the President of the Incorporated Law Society of Northern Ireland.
>
> Provided that, unless and until this Act comes into operation in Northern Ireland, the members for the time being of the Tribunal shall not include any person appointed by the Governor of Northern Ireland or by the President of the Incorporated Law Society of Northern Ireland.
>
> (4) The Council shall pay to any member of the Tribunal such remuneration (if any), and such travelling and other allowances, as may be determined by the Lord Chancellor, and any expenses reasonably incurred by the Tribunal shall be defrayed by the Council.
>
> (5) Three shall be a quorum at any meeting of the Tribunal, and the Tribunal shall have power to act notwithstanding any vacancy among the members thereof ; and the procedure of the Tribunal shall be such as it may determine.

Mr. Bossom stated that approval had been received from the Lord Chancellor and the Minister of Health and the President of the Law Society to appoint members of the Tribunal if the Bill became law.

The amendment was agreed to.

On the motion that the clause as amended stand part of the Bill :

Mr. Muff said he was aghast at the idea that the Bill did not deal with examinations. He did not know a great deal about the architect's profession, but it had been stated by an hon. member in the House that if one paid three guineas one could become an architect. Before the committee parted with the clause he desired the promoters of the Bill to state how far it was true what was said by the hon. member for North St. Pancras (Mr. R. Grant-Ferris), that if one "planked down" three guineas one could be registered as an architect. He hoped there would be some standardization for entrance into the profession.

Sir R. Tasker said he was in consultation with the officials of the House on the question of bringing the statement referred to to the attention of the House. The statement was made by the hon. member for North St. Pancras in order to influence hon. members of the House. In it he said, referring to himself and his partner : ". . . A friend came to us and asked us if we had heard of the Incorporated Association of Architects and Surveyors. I said that we had not, and he said that it was a society which would admit us without an examination, that we could have a certificate to prove that we were members of it which we could hang up, and that in all probability, should the Act be passed, we should be protected. We paid something like three guineas and a certificate arrived which we put up, needless to say, in the most conspicuous place in the office."

Sir R. Tasker continued that the statement was an invention, but he did not think it was a matter which could be investigated by the Committee. If there were to be examinations for entrance, they should be of a national character and not confined to any one particular body. The only road to registration today was through the R.I.B.A.

The question of examinations was still under discussion when the Committee adjourned until March 15. On that day the Committee resumed consideration of the motion, which was adjourned at the previous sitting, that clause 2 (date of application for registration), as amended, should stand part of the Bill.

Mr. J. Chuter Ede said that the Committee now saw the clause in its amended form, and there were revealed fundamental alterations to the principal Act if the present Bill was ever enacted. A great deal had been said about the desirability of having some certificate of competency for persons who claimed to practice as architects. If the present Bill was enacted, it merely meant for some time to come the end of admission to the profession by examination. None of the people dealt with in the clause had to pass an examination. As to the proposed tribunal to hear appeals by persons aggrieved by the refusal of the council to enter their names on the register, none of the members had any competency to conduct an examination into a person's competency to act as an architect. When the original Act was passed, he supported it, as he believed it was an effort to ensure that persons claiming to be architects should be competent to act as such. None of the relevant part of the original Act had been operated successfully. The present Bill was an effort to keep the profession limited to a certain few people, and did nothing, as the promoters had promised, to see that the profession would be one competent to preserve the amenities of the country. If there was a division on the motion, he would vote against it.

Clause 2 was ordered to stand part of the Bill.

On clause 3 (which provides that the expression "principal Act" means the Architects (Registration) Act, 1931),

Mr. R. H. Morgan moved an amendment to add a provision that a person should not, for the purposes of the principal Act and the present one, be treated as not practising by reason only that he was in the employment of another person.

He said that the amendment was proposed at the request of the National Association of Local Government Officers, and was intended to cover officers working under local authorities. At present there was some doubt about the position, and the amendment made it clear that an existing practitioner employed by another person was not debarred from securing registration merely because he was not practising on his own account.

Mr. A. C. Bossom, speaking on behalf of the promoters of the Bill, said that they accepted the amendment. It would cover a borough engineer, for example, or any other public official who might do the necessary work for a small local authority.

The amendment was agreed to.

On the motion that the clause, as amended, stand part of the Bill,

Mr. D. L. Lipson said he wanted to be clear that, as well as public officials, the amendment agreed to would cover a person employed in the office by a private person.

Mr. Bossom said that that was so.

Mr. Ede asked whether the clause, as amended, covered a person employed by a firm who were not architects and where that person was doing architectural work in the office.

Mr. Bossom replied in the affirmative.

The clause, as amended, was ordered to stand part of the Bill.

Clause 4 (short title, construction and citation) and clause 5 (application to Northern Ireland) were ordered to stand part of the Bill.

Mr. A. C. Bossom moved the following new clause :

> If any person contravenes this Act he shall be liable, on summary conviction, to a fine not exceeding fifty pounds and to a further fine not exceeding ten pounds for every day on which the offence continues after conviction therefor :
>
> Provided that a person shall not be guilty of an offence by reason of the occurrence of such a contravention on any particular date, if he proves—
>
> (*a*) in a case where the contravention is occasioned by the fact that an application on the part of the defendant for registration under the principal Act has not been granted, that notice of the decision of the Council not to grant the application had not been duly served under subsection (2) of section six of the principal Act before the said date ; or
>
> (*b*) in a case where the contravention is occasioned by the removal of the defendant's name from the Register, that notice of the removal had not been duly served under section eight of the principal Act before the said date ; or
>
> (*c*) that at the said date—
>
> (i) the time for bringing any appeal under the principal Act or this Act against the said decision or removal, as the case may be, had not expired, or
>
> (ii) such an appeal had been duly brought and had not been determined.

Mr. Bossom said that the new clause was designed to take the place of clause 10 of the principal Act. That Act stated that a man who was convicted of an offence under the Act should be liable to a fine of a sum not exceeding £50 for the first offence and £100 for each subsequent offence. It was thought desirable that those provisions should be revised to provide for a fine not exceeding £50 for the first offence and a fine not exceeding £10 for every day on which the offence continued after conviction. It was considered that that would be better than having the large fine of £100 for each subsequent offence as in the original Act. There were also in the new clause certain provisions under which a person would not be guilty of an offence by reason of certain omissions, such as that notice of the decision of the Council not to grant an application had not been duly served by a certain date.

The new clause was agreed to and ordered to be added to the Bill.

On the motion that the Bill, as amended, be reported to the House,

Sir Murdoch Macdonald referred to a schedule he had desired to move should be added to the Bill relating to members of the Institutions of

Civil Engineers, Structural Engineers, and Municipal and County Engineers. The proposed schedule, he said, was part of an earlier amendment which he did not know had been ruled out of order.

The Chairman said that Sir M. Macdonald's proposed schedule and another schedule tabled by Sir Robert Tasker were out of order as they were consequential on earlier amendments which were out of order.

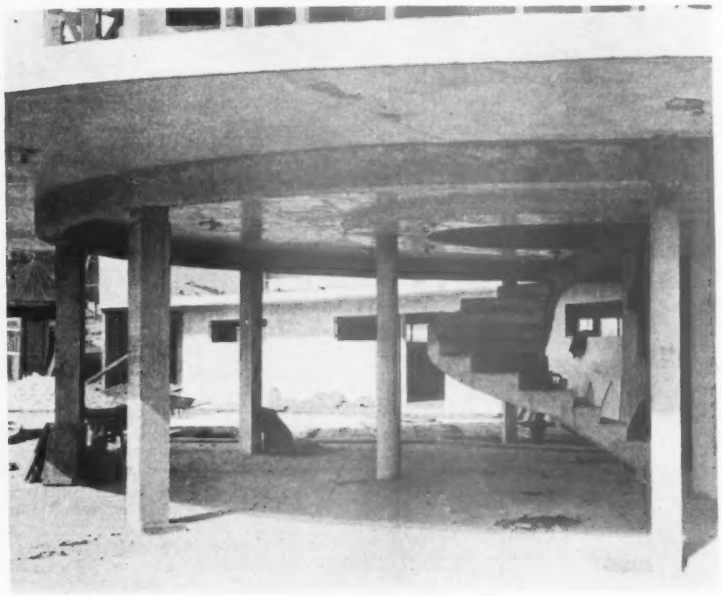
Sir Robert Tasker, opposing the motion that the Bill be reported to the House, said that the Committee were about to take a very grave step, the consequences of which would only be apparent to those who had spent the whole of their lives in practice as architects. The hon. member was proceeding to discuss the Bill when the Chairman said that the hon. member should not discuss the merits of the Bill but give reasons why it should not be reported to the House.

Sir R. Tasker proceeded but was again ruled out of order, the Chairman suggesting that he should wait until the third reading of the Bill before the House.

Sir R. Tasker said he desired to put the facts before the Committee.

The Chairman said that the House had given leave to introduce the Bill. Sir R. Tasker's remarks might be better made on the third reading.

The motion that the Bill, as amended, be reported to the House was carried by 27 votes to 3.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Anaesthetic Explosions

TWO very important papers were read last month before the Institution of Electrical Engineers by Dr. E. H. Rayner and Professor W. M. Thornton. Some years ago the Ministry of Health began to get worried about the danger of anæsthetic explosions in operating theatres, and a research committee was formed jointly with the Medical Research Council and the Home Office. The trouble seems to lie partly in the fact that although the ignition temperature of ether vapour is generally assumed to be about 180 degrees Centigrade it can fall as low as 100 degrees when contaminated with peroxides. For nose and throat operations small two- and six-volt surgical lamps are used, and these are nearly always overrun so as to give the maximum amount of light, and the glass of the bulbs may therefore reach a dangerously high temperature. While these questions are properly the concern of the medical profession and the electrical engineers, one or two points cropped up in the papers which are as much the concern of architects as anybody. While nearly all new hospitals have some form of air conditioning in their theatres, lack of humidity leads to troubles with static electricity, and current American practice now makes certain that the moisture content is adequate: since air conditioning for operating theatres more or less started in America it may be assumed that they know what they are about. The other point is that electric switches at floor level may be a very real danger, for ether has a high molecular weight, and, in the words of one of the speakers, "simply pours downhill." Generally speaking, switches should be three to four feet above floor level, for if the anæsthetic vapour is strong enough to explode at that level, the whole of the operating staff would be anæsthetized first. This suggested switch height should apply, by the way, not only to the actual operating theatre, but also to the anæsthetizing room, the surgeons' dressing room, sterilizing room, and quite probably the accident ward. It is also suggested that the usual fine stranded flex can be dangerous, since rough treatment can easily break a few strands, and this process can be continued until only one or two strands are left, resulting in a good deal of local overheating which may grow to incandescence when the flex is just on the point of parting. This again is not really the architects' business, but the point seems worth mentioning.

Plywood for Shuttering

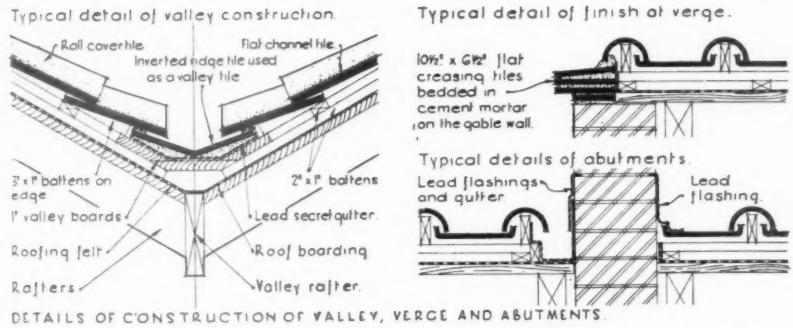
In spite of concrete's many virtues it is still open to doubt whether the problem of its external finish has yet been really solved. Renderings, thanks to the untiring energy of the Building Research Station, are beginning to be understood, and it now seems possible to apply a rendering which will stay put without cracking and crazing, though judging by the number of questions B.R.S. still seems to answer there are plenty of people who have trouble for one reason or another. Of the other forms of finish available, bush hammering is fairly expensive, and the attempt to apply some sort of pattern, either by fixing fillets to the shuttering so as to give a vertical ribbed effect or by doing the same thing horizontally to disguise the change in colour between different pours, is not always very effective. The alternative of leaving the concrete as it comes from the shuttering is still less satisfactory if anything like a reasonable-looking finish is desired, for board marks show very badly and the process of rubbing down and filling in takes a lot of time and can be very expensive. Various methods have been tried for getting over this difficulty, most of the hardboards being quite satisfactory when used as a lining for the shuttering, for they are obtainable in good large sizes and have a nice smooth face, and if they are greased or oiled before use they strip quite easily and can be used several times before they become too rough to give a smooth finish. For curved work of all kinds they are a great help, columns, spiral staircases or walls, for by its very nature ordinary board shuttering can only give a polygonal effect and not an attractive smooth curve.

•

As an alternative to hardboard Venesta are suggesting plywood as a form lining, and they are marketing it in a special grade known as Shuttaply, made of birch and $\frac{3}{16}$ in. thick, cemented with an insoluble resin glue which is unaffected by moisture and is immune from attack by mould. The faces of the Shuttaply are also treated with the same material so as to give a smooth and hard-wearing working surface. With straightforward building construction from fifteen to twenty casts may be taken from the same sheet, and when its life is finished it can still be used for odd jobs such as subflooring, backings or for general protective work. Sizes are 5 ft. by 4 ft. and 6 ft. by 3 ft. In use on the job, the carpenters' work is simplified, for it is unnecessary to fit the form boards close together; in fact in light work they can with advantage be spaced out, for the Shuttaply is strong enough to remain flat under a reasonable load. The sheets are butted with a $\frac{1}{16}$-in. allowance for movement, and are pinned to the form boards with $\frac{7}{8}$ or 1-in. nails which will pull out quite easily from the boards. The photograph on this page is an example of the type of surface left by Shuttaply and was taken during the construction of the Saltdean Swimming Pool.—(*Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.*)

A New Copying Service

How many firms of architects have their own machinery for taking prints? I cannot think of any who do not adopt the usual method of sending their work out to the nearest drawing office supply firm. Save in an exceptionally large office the cost of the necessary copying machinery is far too high to be worth considering, but a new copying service has just been started by Ruthurstat, Ltd., who have evolved a process rather like



DETAILS OF CONSTRUCTION OF VALLEY, VERGE AND ABUTMENTS

From Wheatly's catalogue. See note below.

ordinary photographic printing, though it has the advantage that you can get prints from two-sided originals, whether they are transparent, opaque, or on thick card. The process does not allow for any magnification or reduction in size, but merely as a copying service it seems worth a trial, for specifications and bills of quantities are often wanted in a hurry and if they have to be re-typed there is always the trouble of checking them to make certain that the typist hasn't made a mistake—a long and dreary job which none the less has to be done by some fairly responsible person. With drawings it is possible to get a presentable result from almost anything, but the most interesting point is that from blue prints, old tracings or pencil drawings on detail paper it is possible to make substitute tracings from which an unlimited supply of further blue or dye line prints can be made. This should save a lot of hard work making linen tracings in the office. If anybody has a lot of work to do the machines are, of course, for sale; but from the architect's point of view there is nothing between an intermediate model with a copying capacity of 20 by 26 in., a little on the small side, and the large model taking sheets up to 40 by 30 in., rather larger than the average architect would need most of the time, and probably too expensive (£78 10s.) as I suggested before.—(*Ruthurstat, Ltd., Astor House, Aldwych, London, W.C.2.*)

Tile Data

One of the better types of catalogue has just been issued by Wheatly & Co., and it deals, as one might expect, with roofing and quarry tiles, giving details not only of the sizes and shapes available, but also useful notes on methods of laying and upkeep for the quarry tiles. The roofing tile data is particularly good, for there are tables giving angles of hip and valley tiles for different roof pitches, lengths of rafters per foot run of span, and a series of recommendations for minimum pitch and lap for different types of exposure with sections showing the appropriate sub-roof construction. A very sound piece of work by a firm which has never been content just to make tiles and leave it at that, but has always taken the trouble to know about the best building practice as applied to its products and has done its best to make sure that they are properly used.—(*Wheatly & Co., Ltd., Springfield Tileries, Trent Vale, Stoke-on-Trent.*)

THE BUILDINGS ILLUSTRATED

SYNAGOGUE, PARKSIDE, DOLLIS HILL (pages 480, 489–491). The general contractors were Gray's Ferro-Concrete Co., Ltd., and the sub-contractors and suppliers included: Crittall Manufacturing Co., Ltd., metal windows; Joseph Chater and Sons, Ltd., sanitary fittings and plumbing; George Hammer & Co., Ltd., seating, doors and joinery; James Combe and Son, Ltd., heating and lighting; Euston Manufacturing Co., lighting fittings; Belgrave Electric Co., main lighting fittings and metal work; Morner Flooring Co., Ltd., wood block flooring; Duranbrite Flooring Co., Ltd., magnesite flooring; T. C. Harrison & Co., painting; B. and B. Plastering, Ltd., plastering; J. Samuel and Son, carved marble tablets; Cork Insulation Co., cork slabs.

SHOP, 389 LONDON ROAD, NORTH CHEAM (page 492). Architect: Walter H. Marmorek. The general contractors were: Henry Taylor (Epsom), Ltd., and the sub-contractors and suppliers included: E. Pollard & Co., shopfitters; James Clark and Son, Ltd., and Thermolux, glass; Anselm Odling and Sons, Ltd., marble; Elliott Madames & Co., neon and electrical work; G. W. Dawes, Ltd., sanitary equipment: Three Crown Joinery Works, furniture and panelling; Modern Spray Decorations, spray painting.

CLUBHOUSE FOR STRANGFORD LOUGH YACHT CLUB, WHITEROCK, KILLINCHY, CO. DOWN (pages 494-495). Architect: G. Philip Bell. The general contractors were Bell and Charters, and the principal sub-contractors and suppliers included: George M. Callender, Ltd., damp-courses (Ledkore); Expanded Metal Co., reinforced concrete and Exmet in brickwork; A. Kenneth and Sons, Ltd., bricks; Dennis & Co., tiles; Vulcanite, Ltd., special roofings; A. M. Macdougall and Son, wood-block flooring; Kerner-Greenwood & Co., Pudlow waterproofing materials; T. J. Gallagher, electric wiring; General Stampers (Welwyn), Ltd., door furniture; Crittall Manufacturing Co., casements; Le Bas Tube Co., metalwork (railings); A. N. Donovan, Ltd., flush doors and joinery.

HOUSE AT CHARD, DEVON (page 496). Architect: Ailwyn Best. The general contractors were Stansell and Son, and the sub-contractors and suppliers included: Colthurst Symonds, "Reynards" tiles; Andersons, roofing felts; Kerner Greenwood & Co., Ltd., Pudlo waterproofing materials; Ideal Boilers and Radiators, Ltd., central heating; Aga Heat, Ltd., cooker; F. J. Lock, electric light fixtures; Spiller and Webber, sanitary fittings; James Gibbons, door furniture; Crittall Manufacturing Co., Ltd., casements; Gardiner, food lift.

NEW RESEARCH LABORATORIES, BLACKLEY, MANCHESTER, 9 (pages 507-511). Architect: Serge Chermayeff, Quantity surveyor: Cyril Sweett; engineers, Samuely and Hamann. The general contractors were: Russell Building and Contracting Co., Ltd., and the principal sub-contractors and suppliers included: The Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; Carter & Co. (London), Ltd., quarry tile paving and vitreous tiling to fume cupboards, terrazzo flooring and staircases; Fram Reinforced Concrete Co., Ltd., cork tile pavings; J. D. Beardmore & Co., Ltd., general ironmongery and metal rubbish bins, metal ducts, staircase metal balustrading; Venesta, Ltd., Plymax desk screens and w.c. partitions; Williams and Williams, Ltd., metal windows; Dover Engineering Works, Ltd., metal duct covers; Marryat and Scott, Ltd., goods passenger lift installation; Roneo, Ltd., steel cloaks lockers; Samuel Platt, Ltd., laboratory stirring gear and shafting and meters; Malcolm and Allen, Ltd., general electrical installation; Troughton and Young, Ltd., electric light fittings; Herbert Terry and Sons, Ltd., electric light fittings; Gent & Co., Ltd., electric clocks; Wardle Engineering Co., Ltd., electric radiators; Hall and Keay, Ltd., air conditioning, heating and ventilation; J. G. Wagstaff, Ltd. (sub-contractor to Hall and Keay), hot water supply; J. A. McCrea and Sons, Ltd., plumbing (including water, gas, vacuum, compressed air and steam services to laboratories), glazing; Morrison, Ingram & Co., Ltd., sanitary fittings; Baird and Tatlock (London), Ltd., laboratory bench and fume cupboard fittings; Turners Asbestos Cement Co., asbestos heavy and light extract ducts; Lloyd's Sawmills and Tinker and Young, general joinery; Pel, Ltd., steel chairs; Tan-Sad Chair Co. (1931), Ltd., steel chairs; J. Avery & Co., light proof dark room blinds; Eric Munday, lettering; Accrington Brick and Tile Co., brick supplies; Nobel Chemical Finishes, Ltd., paint supplies; Fredk. Jackson & Co., Ltd., electric ovens; Greenwood's Ventilating Co., Ltd., ventilation grilles; Lloyd Boards, Ltd., wallboards; Honeywill and Stein, Ltd., roof insulation and Heraklith slab; James Clark and Son, Ltd., mirrors; Engineering Specialists, Ltd., special steam valves; G. A. Marchant, Ltd., special water valves; "Pioneer" I.C.I. Product, plaster supplies; Robert Adams, Ltd., fume cupboard sliding sash springs, Pullman balances supplied; W. J. Roberts and Son, Ltd., plastering and painting; G. V. D. Illuminators, Ltd., board room lighting.

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SOUTH WALES INSTITUTE OF ARCHITECTS

Floral gardens, instead of coal tips and pleasant walks around colliery surfaces in South Wales were suggested by Professor W. G. Holford, when addressing members of the South Wales Institute of Architects at the Engineers' Institute (Central Branch), Cardiff.

Professor Holford was speaking on planning a trading estate, and in referring to the special areas, said their greatest drawback was their derelict factories sites. Industrialists were reluctant to build new factories upon them, preferring virgin soil, and they had been known to utilise even perfectly good agricultural land.

Regarding the unsightly coal mining areas in South Wales, when one thought of the excellent ways in which they dealt with colliery refuse in the Ruhr Valley, Germany, he was not at all satisfied when our industrialists said there was no need for planning in industry. In many cases in Germany they returned slag into exhausted workings, thereby dispensing with it without causing eye-sores, and at the same time prevented subsidences. In other instances they disposed of it discriminately on the surface, and even made floral gardens and walks in the vicinity of the pit-head. Some of the coal mining areas in South Wales were terrible messes.

ANNOUNCEMENTS

Mr. H. R. Robinson, L.R.I.B.A., is to terminate his engagement as architect to the Home Brewery Company, Limited, of Daybrook, Notts, on March 26, after twelve years in their service, and is taking up an appointment as assistant architect and surveyor to the Stroud Brewery Company, Limited, Stroud, Gloucestershire.

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 February 24, 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.

NOTES ON PRICE CHANGES

The condition of the Timber market remains easier as stated last month, and prices of timber generally have fallen slightly.

The rates for labour in Scotland as published on February 24 will be increased by ½d. per hour for craftsmen and ¼d. per hour for labourers from April 1 next.

The other changes in the prices of this section are marked in the lists, and do not appear to be of any special significance.

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

★ *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.*

● *Items marked thus have risen in price since last quotation on February 24.*

✱ *Items marked thus have fallen in price since last quotation on February 24.*

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 Feb. 27, March 3, 10 and 17.***

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.

		Min. 80 ton freights F.A.S. Safe wharf in River Thames, 4 Tons and over	London area
Portland	per ton	42/–	38/–
Rapid hardening	per ton	48/–	44/–
Water repellent	per ton	72/–	68/–
Atlas White (1 barrel 376 lbs.)	per barrel	44/–	

		1 ton upwards
Colorcrete rapid hardening, Nos. 1 and 2	per ton	69/–
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
3/16″ 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	4/–
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, ⅝″ diameter and upwards, from London stocks	per ton	£15 10 0
Extras for :—		
9/16″ and ½″ diameter	per ton	10/–
7/16″ diameter	per ton	15/–
⅜″ diameter	per ton	20/–
5/16″ diameter	per ton	30/–
¼″ diameter	per ton	40/–
3/16″ 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	70/6
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 4/8 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	95/–
Hard stocks, seconds	per 1,000	88/–
Sand-faced, hand-made reds	per 1,000 from	115/–
Sand-faced, machine-made reds	per 1,000 from	110/–
Red rubbers (9½-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.

*** Items marked thus have fallen in price since February 24.**

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 6″ × 6″ Grating, painted ..	each	–/7½	1/3	2/6
Ordinary 6″ × 6″ 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	

• Items marked thus have risen in price since February 24.

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.	3 fts.
				each	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	—	—	4/2¾
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends ..	each	1/10½	2/9¾	5/0¾
Ditto, short	each	1/10½	2/9¾	—
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 sea 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	30/3	56/9
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.)	18/3

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′ 10¼″ ..	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/- 46½	366/- 30
Unselected greens (V.M.S.) ..	per 1,200 cwts.	672/- 55½	413/- 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	2/7¾
Slates :—	
15¾″ × 7¾″ 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	26 10 0	3/2¾
★4″ × 9″ ,, ...	26 10 0	3/2¾
3″ × 11″ ,, ...	24 10 0	2/11¾
2″ × 11″ ,, ...	24 10 0	2/11¾
★3″ × 9″ ,, ...	23 10 0	2/10¼
★2″ × 9″ ,, ...	24 0 0	2/11
★3″ × 8″ ,, ...	23 0 0	2/9½
★2″ × 8″ ,, ...	22 10 0	2/8¾
★3″ × 7″ ,, ...	22 10 0	2/8¾
2″ × 7″ ,, ...	22 10 0	2/8¾
4″ × 6″ ,, ...	25 0 0	3/0¼
★3″ × 6″ ,, ...	23 10 0	2/10¼
2″ × 6″ ,, ...	21 10 0	2/7¼
3″ × 5″ ,, ...	22 10 0	2/8¾
3″ × 4″ ,, ...	21 0 0	2/6½
★2″ × 5″ ,, ...	20 10 0	2/6
2″ × 4″ ,, ...	20 10 0	2/6
1½″ × 11″ ,, (20 ft. lengths and over)	per ft. run	-/5
1½″ × 9″ ,, (20 ft. lengths and over)	per ft. run	-/4
1½″ × 7″ ,, (20 ft. lengths and over)	per ft. run	-/2¾

Yellow Deal Battens

★ ¾″ × 1″ .. .. per 100 feet run	1/8
★ ¾″ × 1½″ .. .. per 100 feet run	2/6
★ ¾″ × 2″ .. .. per 100 feet run	3/6
★1″ × 2″ .. .. per 100 feet run	4/6
★1½″ × 2″ .. .. per 100 feet run	6/3

Weather Boarding

Deal :—	
¾″ × ¼″ × 6″ Feather edge .. .. .. per square	12/6
★¾″ × ¼″ × 4″ Feather edge .. .. per square	10/6
Western red cedar :—	
1″ × 6″ Rebated .. .. per square	35/-
11/16″ × 3/16″ × 6″ Feather edge .. .. .. per square	13/6
¾″ × ¼″ × 4″ Feather edge .. .. .. per square	12/6

Roof Boarding

Deal :—	
●¾″ × 6″ .. .. per square	18/6
1″ × 6″ .. .. per square	24/6

● Items marked thus have risen in price since February 24.

★ Items marked thus have fallen since February 24.

TO BE CONTINUED IN NEXT ISSUE