THE ARCHITECTS' JOURNAL

standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur.

No. 2896] [VOL. 112
THE ARCHITECTURAL PRESS
9, 11 *and* 13, *Queen Anne's Gate, Westminster, S.W.*1. *'Phone: Whitehall* 0611

Price 9d.
Registered as a Newspaper.

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1.	Mayfair 8641
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James's Square. S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers. 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association, 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing & Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Ruthlergen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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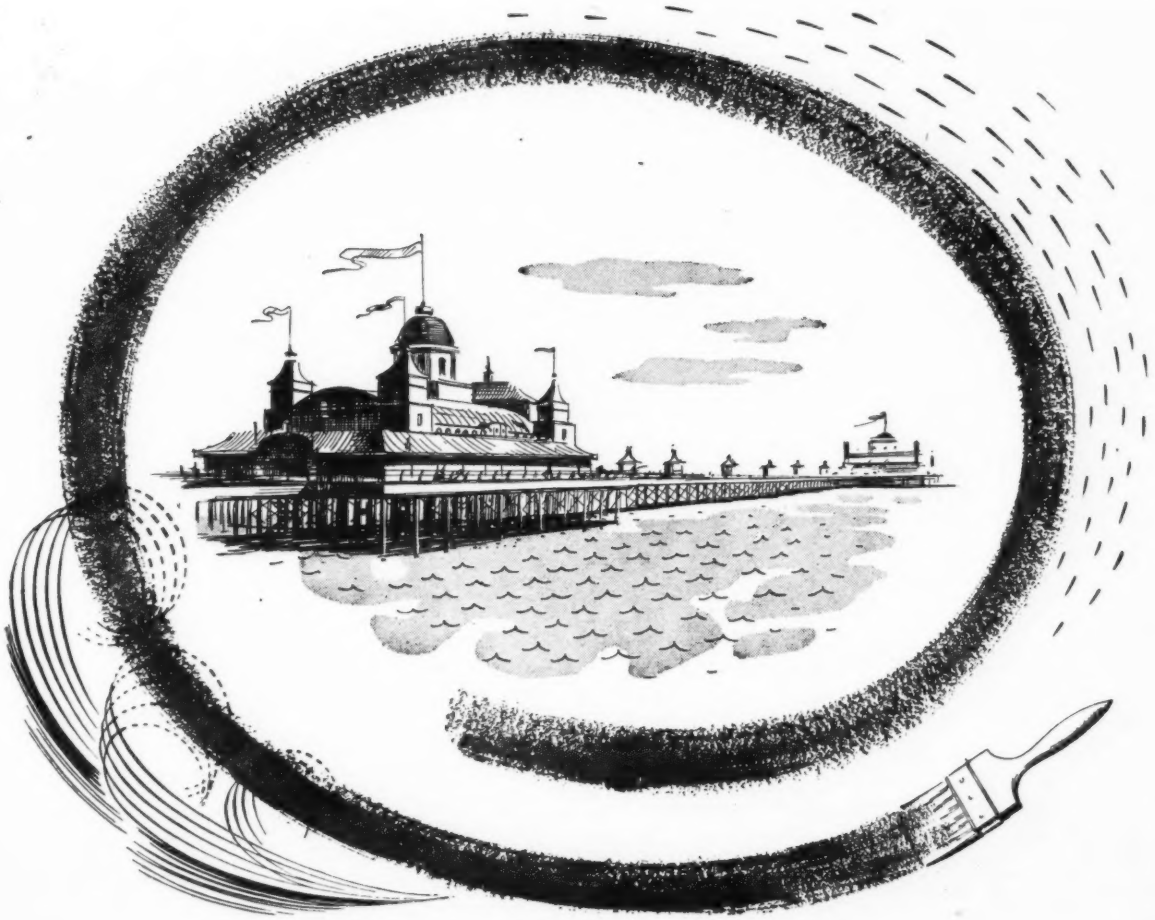


The paint must stand up to its job

If you are painting pier pavilions, or railway stations, or the interior of a brewery — in fact any job exposed to severe atmospheric conditions — Mander's Lacquer should be your choice of finish.

It gives a hard, brilliant film that is highly resistant to sea air, acidulous dirt or indoor condensation. Full stocks are available in twenty-eight shades at all our depots.

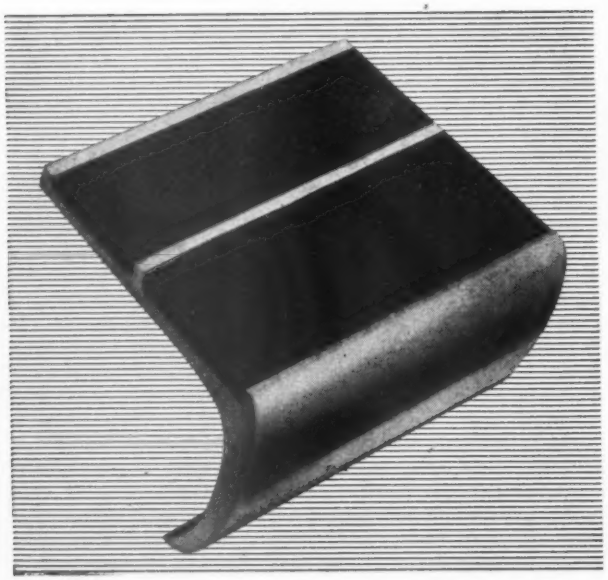
Mander's LACQUER

There's a Mander's paint for every job

MANDER BROTHERS LIMITED, WOLVERHAMPTON

For LASTING safety

and good appearance



Ferodo Stairtreads neatly solve the problem of making stairs really safe, and at the same time providing a smart, attractive appearance that will stand years of constant traffic.

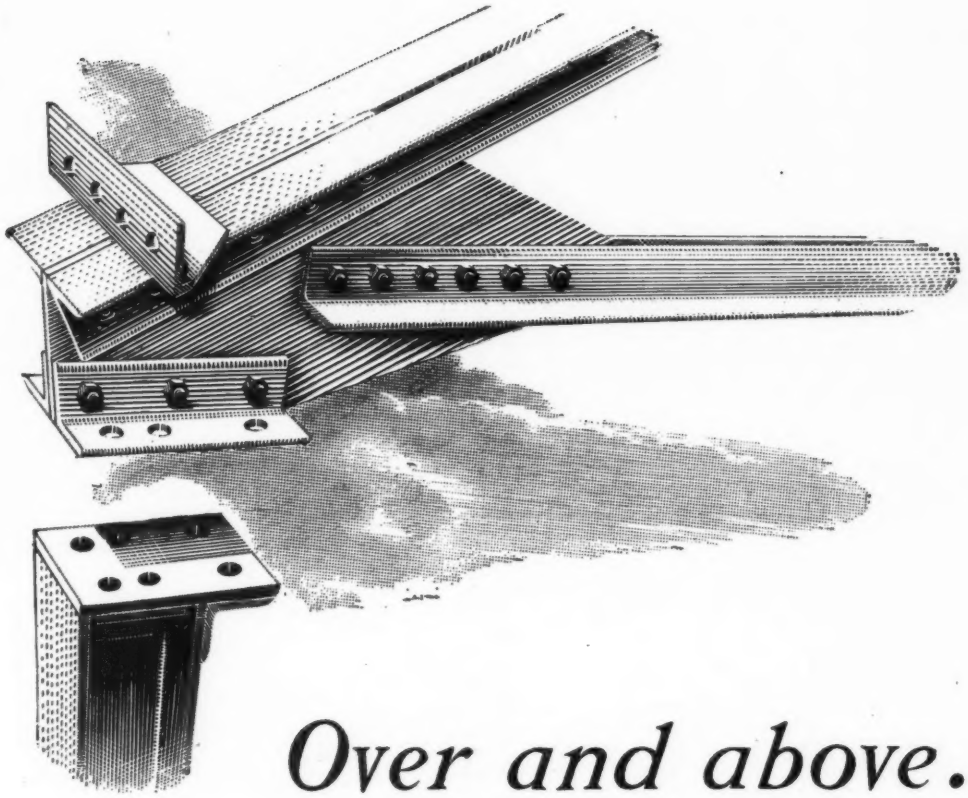
The inlaid strips of Ferodo fabric *cannot* wear slippery. They give a firm, safe tread even if shoes are wet, and seem to absorb endless wear without themselves wearing appreciably. The aluminium nosing clearly outlines each step.

These stairtreads are made in single and double channel types, and in several widths. Instead of Ferodo fabric, the inlaid strips may be of non-slip Ferodo composition: red, white, or grey. The treads are easily fitted, whether to new or existing stairs, and are easily kept clean. No other maintenance is needed.

Ferodo Stairtreads are earning good opinions in hotels, offices, stores, theatres — wherever traffic is heavy and safety important. The various models, including a plain steel-backed industrial type, are described and illustrated in our Catalogue No. 732KK, gladly sent on request.

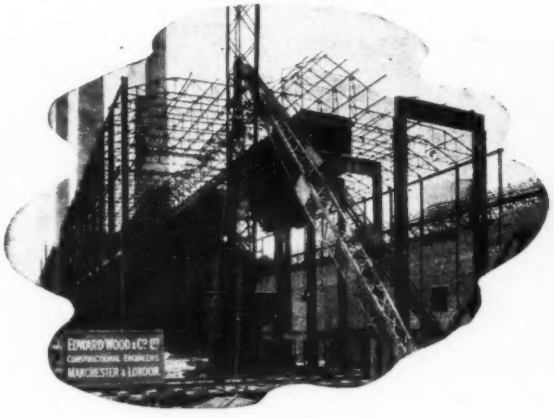
FERODO
STAIRTREADS

FERODO LIMITED, CHAPEL-EN-LE-FRITH
A Member of the Turner & Newall Organization



Over and above...

Over and above all, it's a matter of organisation. Every rivet or bolt position in a steel structure represents a potential delay, from the first stanchion to the last roof truss. Such delays are minimised in an organisation where resources are more than sufficient to ensure an even flow of work from start to finish. These resources exist very fully at our Trafford Park works and our advisory department is at your service.



EDWARD WOOD & CO LTD

Constructional Engineers

Regd. Office and Works:

MANCHESTER 17

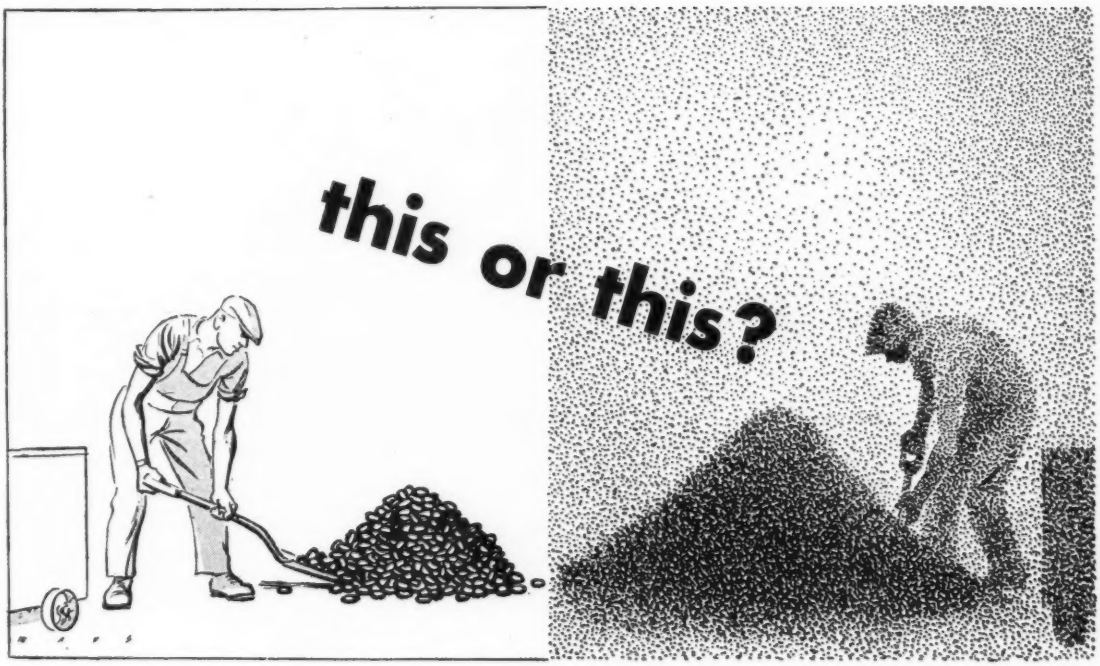
Tel.: TRAfford Park 2341 (10 lines)

London Office: **68 VICTORIA ST., S.W.1** *Tel.: VICtoria 1331-1332*

Technical Offices: **BIRMINGHAM, LOUGHBOROUGH**

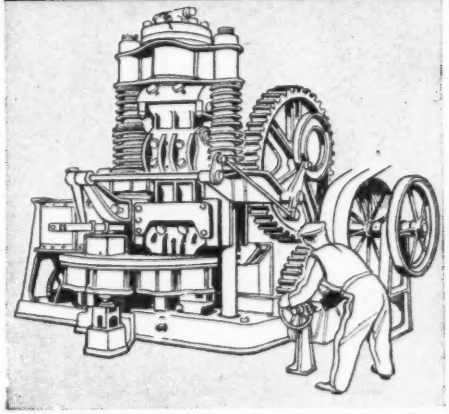
dmWD11

which is the easier to handle . . .



The briquetting of fine pulverent materials and the pressing into special shapes and forms, as a preliminary to other manufacturing processes, is now a matter of increasing importance. The 'Emperor' Press produces as many as 30 pressings per minute. In the manufacture of Coal Briquettes the output is as high as 25 tons per hour, and it is equally efficient in connection with the briquetting of iron, steel, brass, copper and aluminium borings and turnings. Full details are gladly supplied on request.

The 'Emperor' Press



Sutcliffe Speakman

Sutcliffe Speakman & Company, Ltd., Leigh, Lancashire
London Office: Godliman House, Godliman St., E.C.4
Telephone: CITY 2810

THE MOST SATISFACTORY FLOOR FOR NEW HOUSING TODAY

Armstrong's Accotile Flooring is laid throughout the five blocks of Forty Lane Flats, recently completed by Wembley Borough Council. The architects are Robert Atkinson & Partners, 13 Manchester Square, London, W.1, and the contractors William Old Ltd., 533 Pinner Road, North Harrow, Middlesex.

PRESENT-DAY conditions strictly limit the choice of flooring available for new housing. It must be inexpensive, yet satisfactory when laid direct on base concrete; it should be attractive in appearance; it must wear well, and be easily and cheaply maintained.

Armstrong's Accotile Flooring fulfils these needs perfectly, and offers other advantages as well.

WHAT IS ACCOTILE?

Armstrong's Accotile is a composition of inert asbestos fibres and ground rock fillers, fadeless mineral pigment, and asphalt or resin binders, supplied in accurately-cut tiles, border strips, etc. It was originally made by our American Company and is widely used in the U.S.A., where 20 years of successful experience have proved its merits. Since the war it has been manufactured in England at the Tyneside factory of the Armstrong Cork Company Ltd.

LAID DIRECT ON CONCRETE—NO DAMP-COURSE

Accotile can be quickly laid on any sub-floor—concrete, wood, or metal. It is especially suitable for use on concrete direct to earth since it is unaffected by alkaline moisture. Damp-proofing is not essential unless actual water pressure is suspected.

INEXPENSIVE

Accotile installed costs considerably less than good quality linoleum, and is competitive with any other flooring laid direct on concrete.

OUTSTANDINGLY DURABLE

Accotile withstands hard wear. It stands up to the hard usage frequently met with in Council property and will, in most cases, long outlast more expensive floors. Many local authorities have found repair costs, too, much reduced by Accotile installations. Accidental damage is easily and cheaply made good. Broken tiles are quickly replaced.

Accotile durability is proved. Accotile floors laid in England twelve years ago can be inspected. They are still in excellent condition.

DECORATIVE—UNLIMITED CHOICE OF DESIGN

With Accotile there is unlimited scope for decorative effect. The tiles are made in a wide range of plain and marbled colours and can be laid in any design. The colours are fast since they are an integral part of the tile.

EASILY MAINTAINED—NON-STAINING

Accotile is kept fresh and new-looking indefinitely by normal sweeping and washing, but may be polished if an extra high finish is desired. It offers good resistance to most acids and, being non-absorbent, does not stain. Even marks made by smouldering cigarettes are easily removed.

ALSO FOR SCHOOLS, HOSPITALS, PUBLIC BUILDINGS, AND COMMERCIAL PREMISES

ACCOTILE is quiet and comfortable to walk on, warm and non-slip. For schools, hospitals, and public buildings, Accotile flooring is economical both in first cost and in maintenance.

Armstrong's Top-set Coved Skirting, available in Pompeian Red and Plain Black, gives an added finish.

Business offices, shops, restaurants, and licensed premises, are among places that exploit to the full the advantages of Accotile. In existing buildings, it is laid in a matter of hours and can be used immediately, so that occupation of the room is disturbed for the minimum time.

INSTALLATION

To ensure satisfaction, Accotile is laid only by skilled personnel trained in Armstrong's Laying School, where particular attention is paid to workmanship and the correct method of setting out.

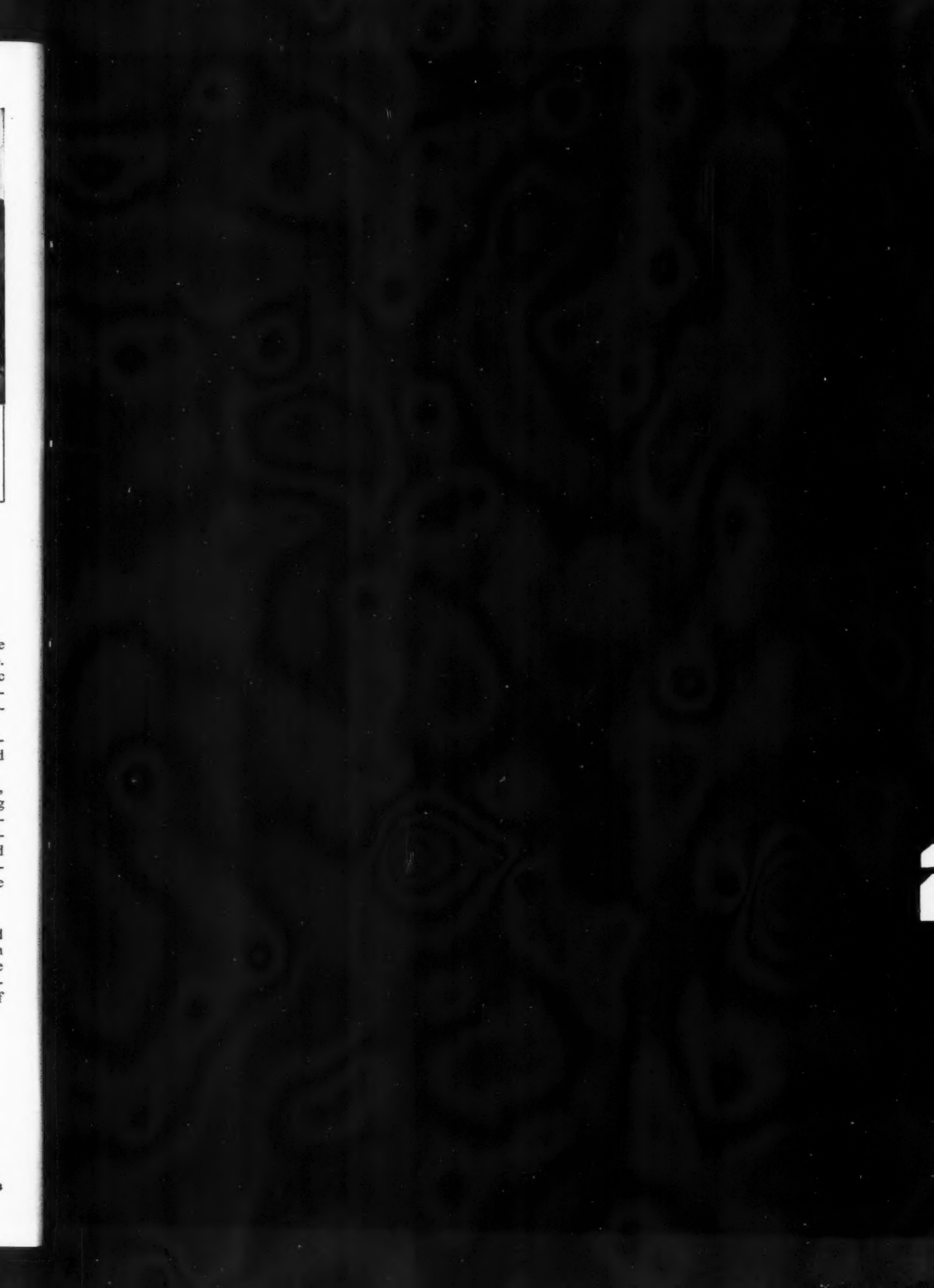
ARMSTRONG'S ACCOTILE* FLOORING

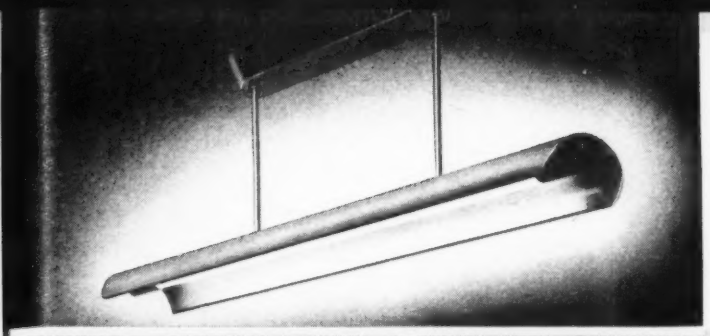
THE LOW-COST FLOOR WITH THE LUXURY LOOK

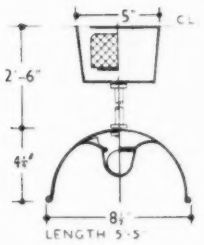
ARMSTRONG CORK COMPANY LIMITED, FLOORING DEPARTMENT
IMPERIAL BUILDINGS, 56 KINGSWAY, LONDON W.C.2. TELEPHONE: CHANCERY 6281

SCOTTISH BRANCH: 5 OSWALD STREET, GLASGOW C.1 • TELEPHONE: CENTRAL 5703

★British Registered Trade Mark 663698. Armstrong Cork Co. Ltd., Registered Users



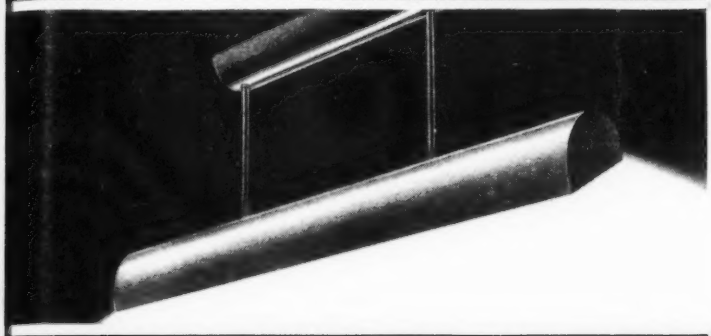


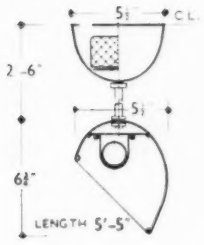


DIRECT

Finish: Stove Enamelled Off White.

Lamps: One—5ft 80w Tubula Fluorescent.

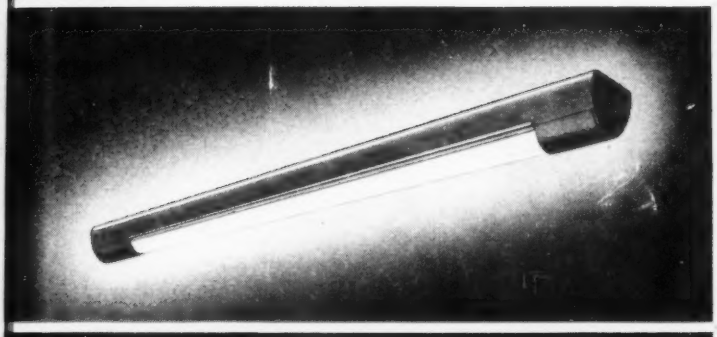


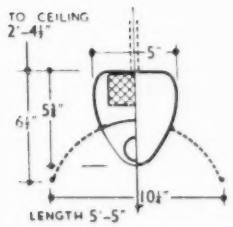


ANGLE DIRECT

Finish: Stove Enamelled Of White.

Lamps: One—5 ft 80w Tubula Fluorescent.



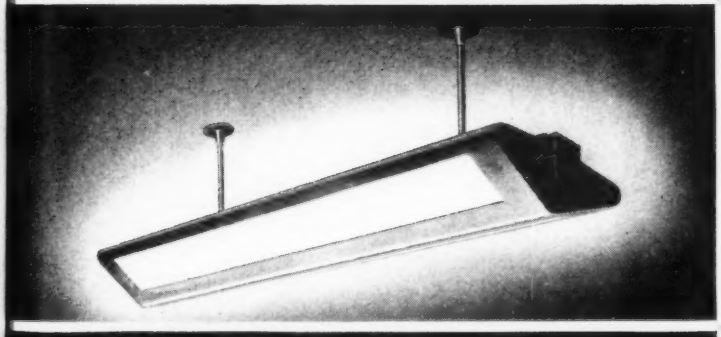


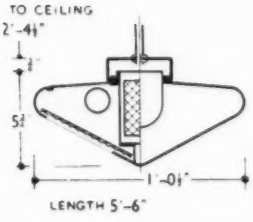
DIRECT

Finish: Stove Enamelled O White.

Lamps: One—5 ft. 80w Tubul Fluorescent.

Add the following letters to catalog number: S—Small Reflector, L—Lar Reflector, C—Ceiling Fitting, P—Pendar

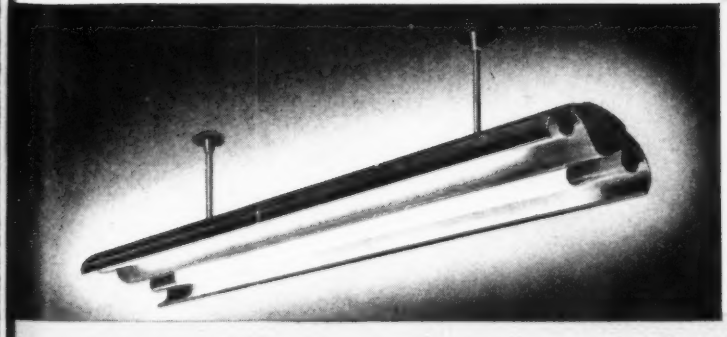


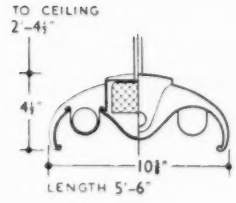


GENERAL

Finish: Stove Enamelled O White. End Pieces Duck E Blue, Reeded and Clear Glas Chromium Suspensions.

Lamps: Two—5 ft 80w Tubul Fluorescent.





DIRECT

Finish: Reflector and Suspe sions. Stove Enamelled O White. End Pieces Duck E Blue. Chromium End Stuc

Lamps: Two 5 ft 80w Tubul Fluorescent.

These are some of our TUBALUX fluorescent fittings which are now available. There is a large variety in stock, which we invite you to inspect at the Lighting Centre.

THE LIGHTING CENTRE, 143, KNIGHTSBRIDGE, LONDON, S.W.1 *Telephone:* KENSINGTON 7457 (15 lines).

This hand
may now carry germs enough to strike down a whole community with food poisoning.

Hot water for health

The Food and Drugs Act requires hot water to be available for personal toilet in every commercial establishment where food is handled.

The best source of hot water is one of the Ascot Instantaneous Gas Water Heaters. They are economical and easy to install. There is a model for every need. Inquire at your nearest gas showroom or from:—

These unretouched photographs are of cultures prepared by a Public Health Laboratory making independent scientific investigations into causes of epidemic outbreaks.

The germ-laden finger-prints of a hand not washed after a visit to the toilet.

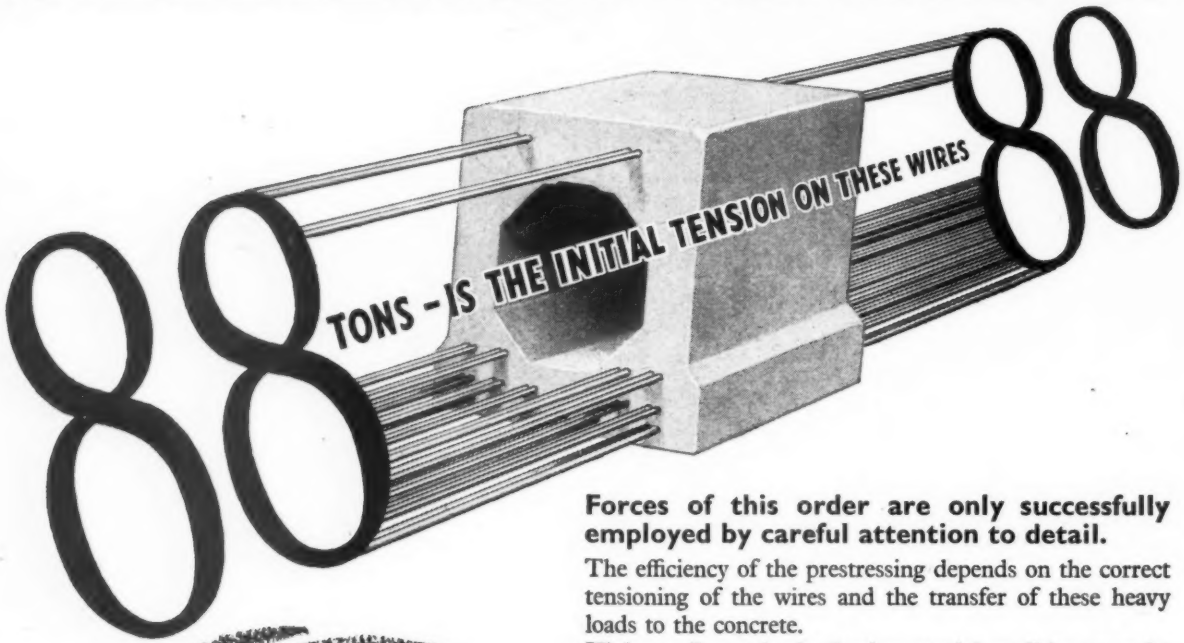
This seemed a clean hand, but it had picked up many germs in the daily round.

Prints of a hand which had just previously been washed with hot water and soap.

Ascot Gas Water Heaters Ltd.
43 PARK STREET, LONDON, W.1.
and at BELFAST · BIRMINGHAM · BOURNEMOUTH · GLASGOW and MANCHESTER.

ASCOT

DOW-MAC FOR PRESTRESSED CONCRETE



CONTROLLED FORCES

Forces of this order are only successfully employed by careful attention to detail.

The efficiency of the prestressing depends on the correct tensioning of the wires and the transfer of these heavy loads to the concrete.

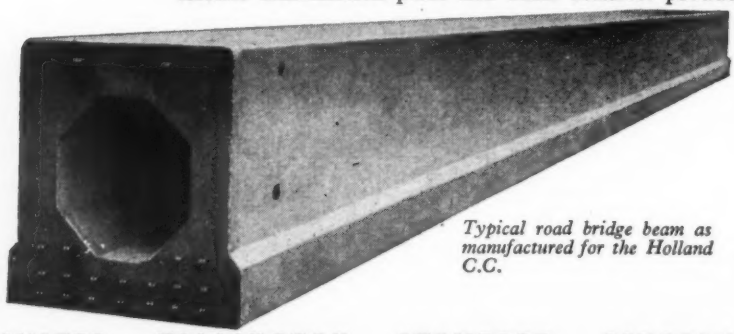
High tensile steel wire having special qualities must be employed for prestressing.

The concrete must be of highest grade, made to rigid specification and subject to closest control.

The moulds must be made to close limits to ensure that the concrete units are true to dimensions.

These operations demand experience, skill and close supervision. All are provided by the Dow-Mac organisation, who will be pleased to advise on your specific requirements for prestressed concrete railway sleepers, roof and floor beams, bridge beams, piles, walings, electric transmission poles and other concrete products.

DOWSETT GROUP — DOW-MAC



Typical road bridge beam as manufactured for the Holland C.C.

DM-4

DOW-MAC (PRODUCTS) LIMITED, TALLINGTON, STAMFORD, LINCOLNSHIRE

TELEPHONE: PETERBOROUGH 4501 (8 lines)

Structural Steelwork by . . . Cargo Fleet

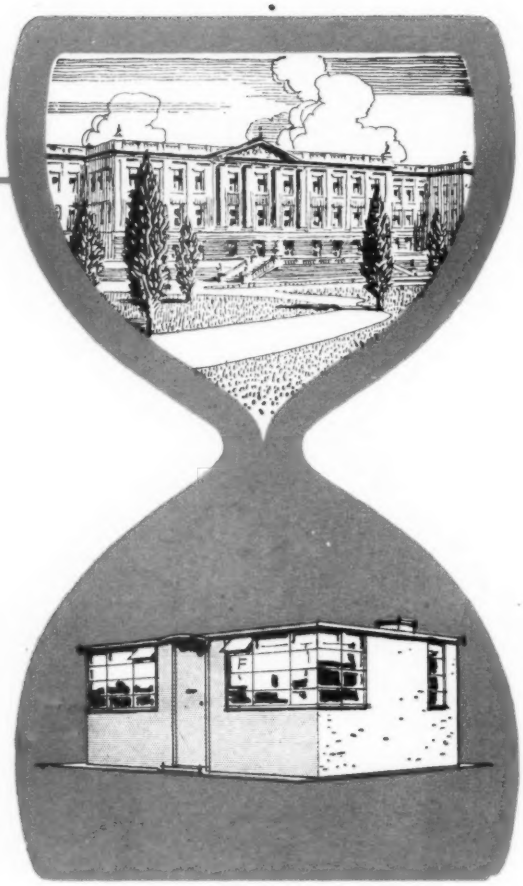
NEW PASSENGER TERMINAL
OCEAN DOCK—SOUTHAMPTON.
Interior view at first floor level
showing Welded Portal Frame Construction.

STEELMAKERS & CONSTRUCTIONAL ENGINEERS

CARGO FLEET IRON CO. LTD.,
MIDDLESBROUGH,
STOCKTON-ON-TEES & LONDON.

The new Terminal Station at Southampton is yet another important contract for which we have been privileged to design, fabricate and erect Structural Steelwork — in this instance 2400 tons of Steel.

Constructional Department: Malleable Works,
STOCKTON-ON-TEES.
Telephone: Stockton-on-Tees 66117.



Mansion

or

MASS PRODUCTION

With Dockers Paints, Lacquers and Varnishes, there is a product for every purpose.

Whatever the need, there is always a Docker Finish that has been " made for the job."

HERMATOR

Super Gloss Paint decorates, protects and preserves under the most arduous conditions. For interior decoration of the highest quality, specify MUROLEUM Flat Oil Paint.

DOCKER BROTHERS

Makers of Paints, Lacquers and Varnishes for every purpose

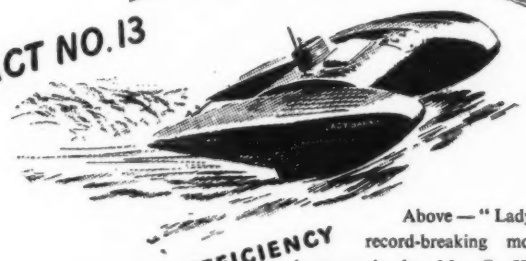
LADYWOOD · BIRMINGHAM · 16

A LITTLE BEETLE AND SOME BRIGHT IDEAS

No. 4 in a series of factual announcements

Beetle Adhesive is the modern medium used today in the age-old craft of sticking wood to wood. Although there are many adhesives there is no type which economically combines with the same efficiency the strength, durability and water-resistant properties required in so many different wood-working applications. Beetle Adhesive is available in close-contact and gap-filling forms for use with either hot or cold pressing methods. Write for booklet giving full particulars.

FACT NO. 13



MODEL OF EFFICIENCY

Above — "Lady Babs II", record-breaking model speed-boat made by Mr. G. H. Stone, Sunbury, who holds the British and European records at 70.8 m.p.h. Mr. Stone uses Beetle Adhesive in the construction of all his models. He writes of a boat which capsized at 58 m.p.h. "... the top skin was sheered through but the glue joints which are not even screwed did not break. This is a wonderful testimony for your Beetle Adhesives".

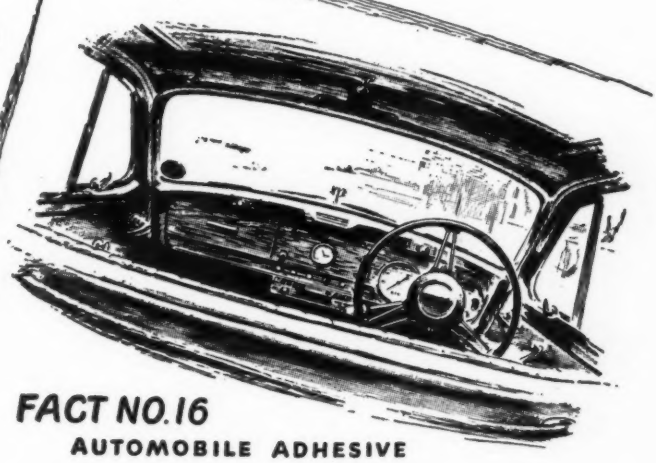
FACT NO. 14 ONE TRUE FISHING STORY

Milwards of Redditch use Beetle Adhesive for manufacturing their laminated fishing rods. Beetle Adhesive was chosen for its strength and water-resistance.

FACT NO. 15

MAKING THEIR HAIR STAND ON END

One of the lesser-known uses of Beetle Adhesives is for fixing the bristles of polishing wheels or brushes. Beetle Adhesives are used for this purpose by some of the best known manufacturers of industrial brushes.



FACT NO. 16

AUTOMOBILE ADHESIVE

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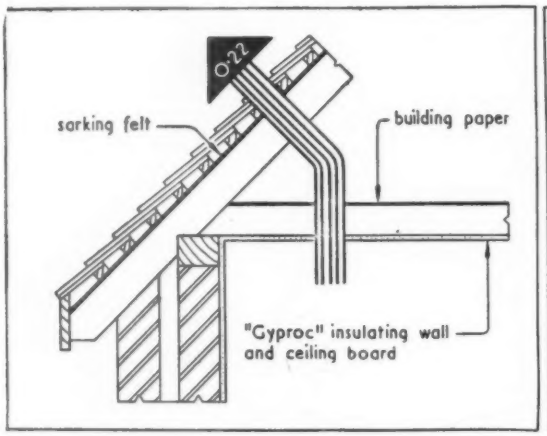

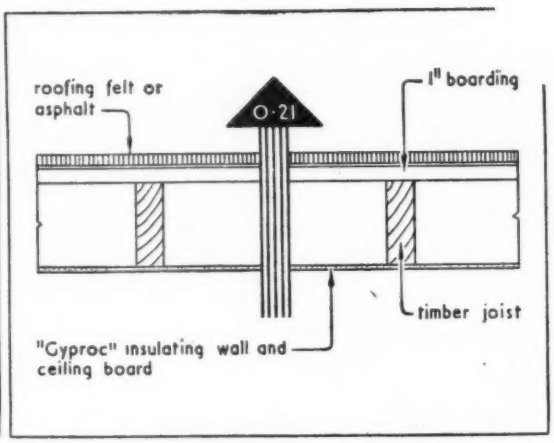

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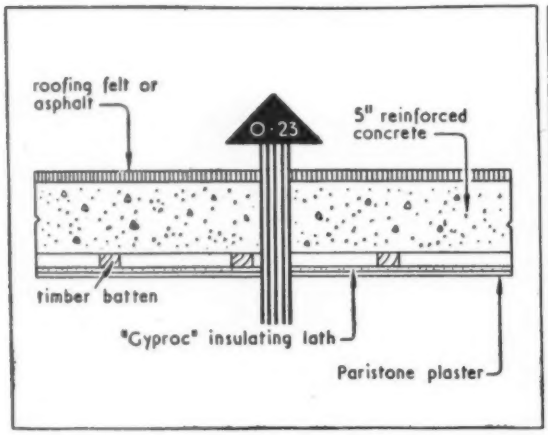

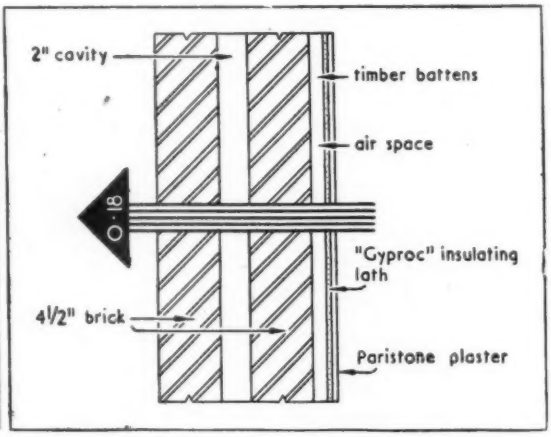

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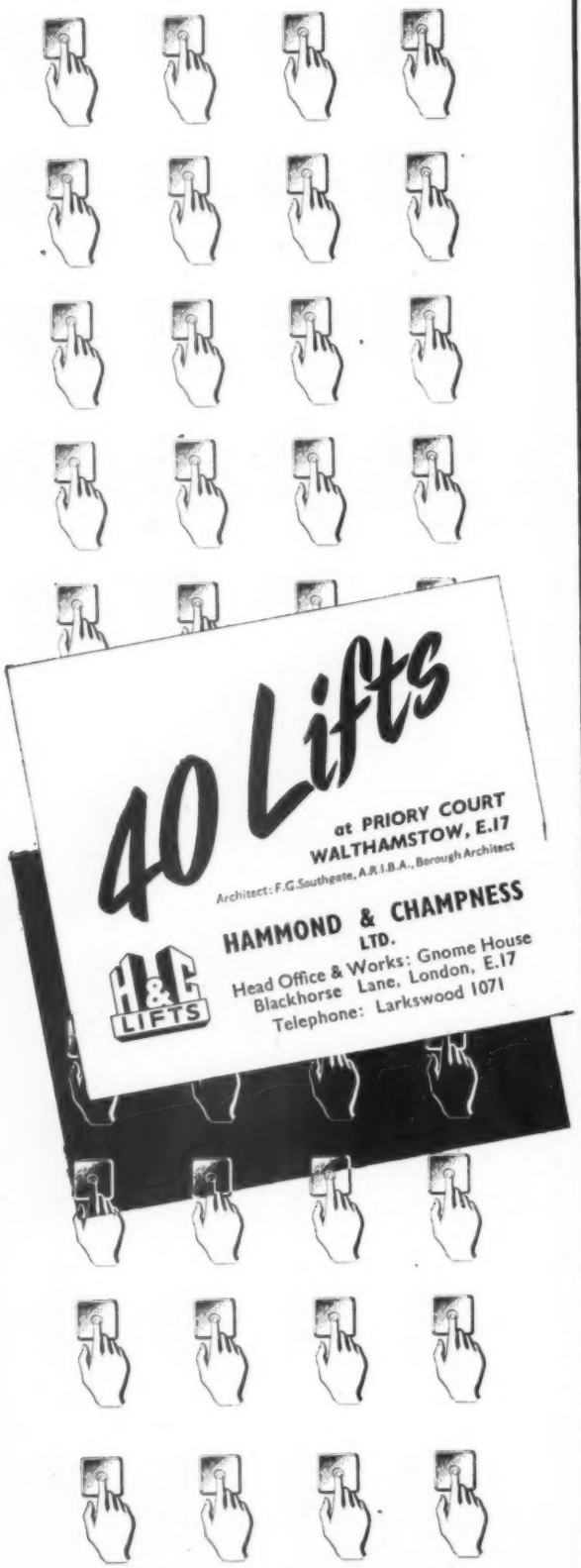

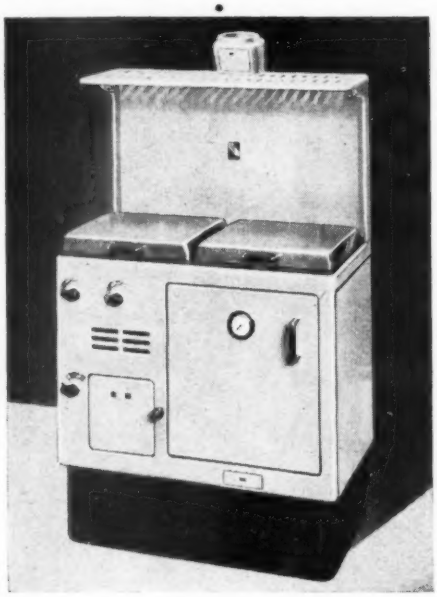

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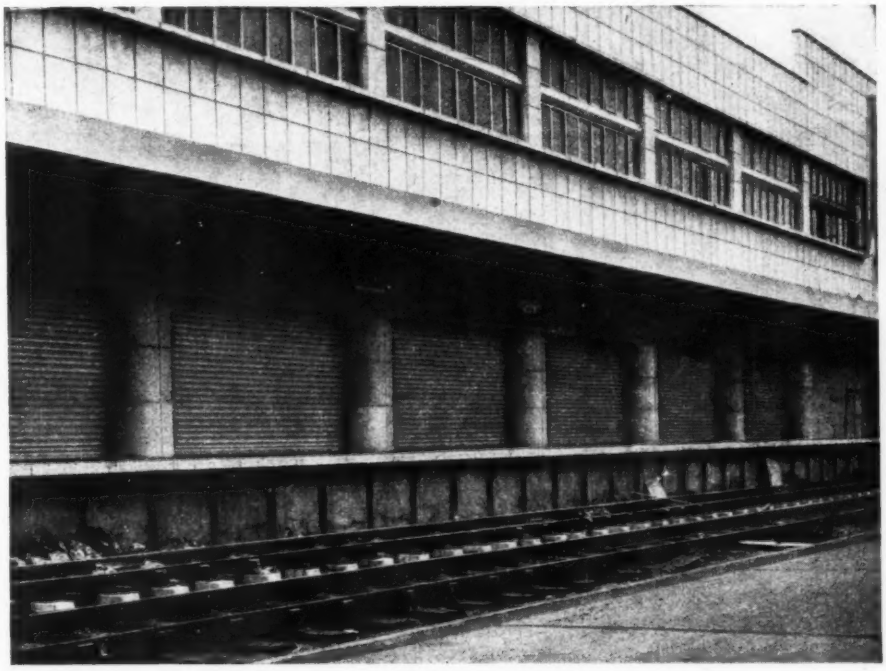

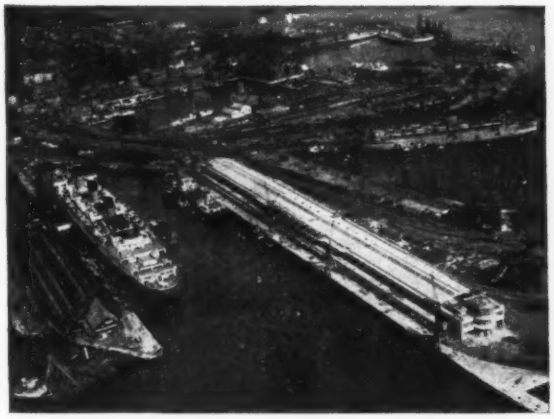

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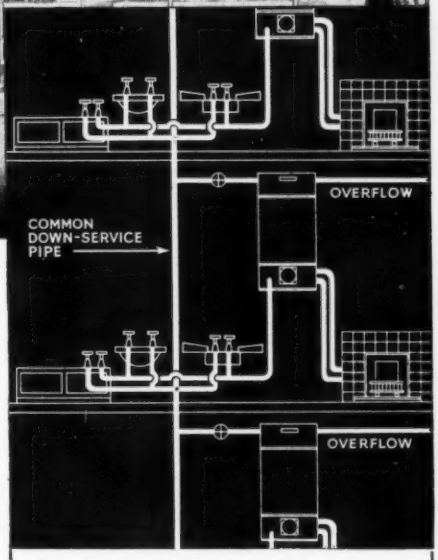

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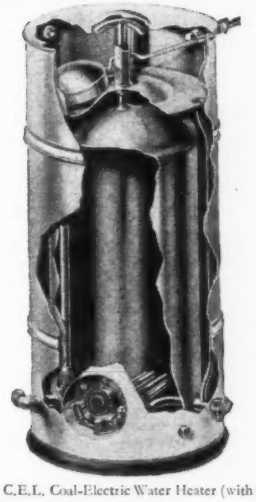

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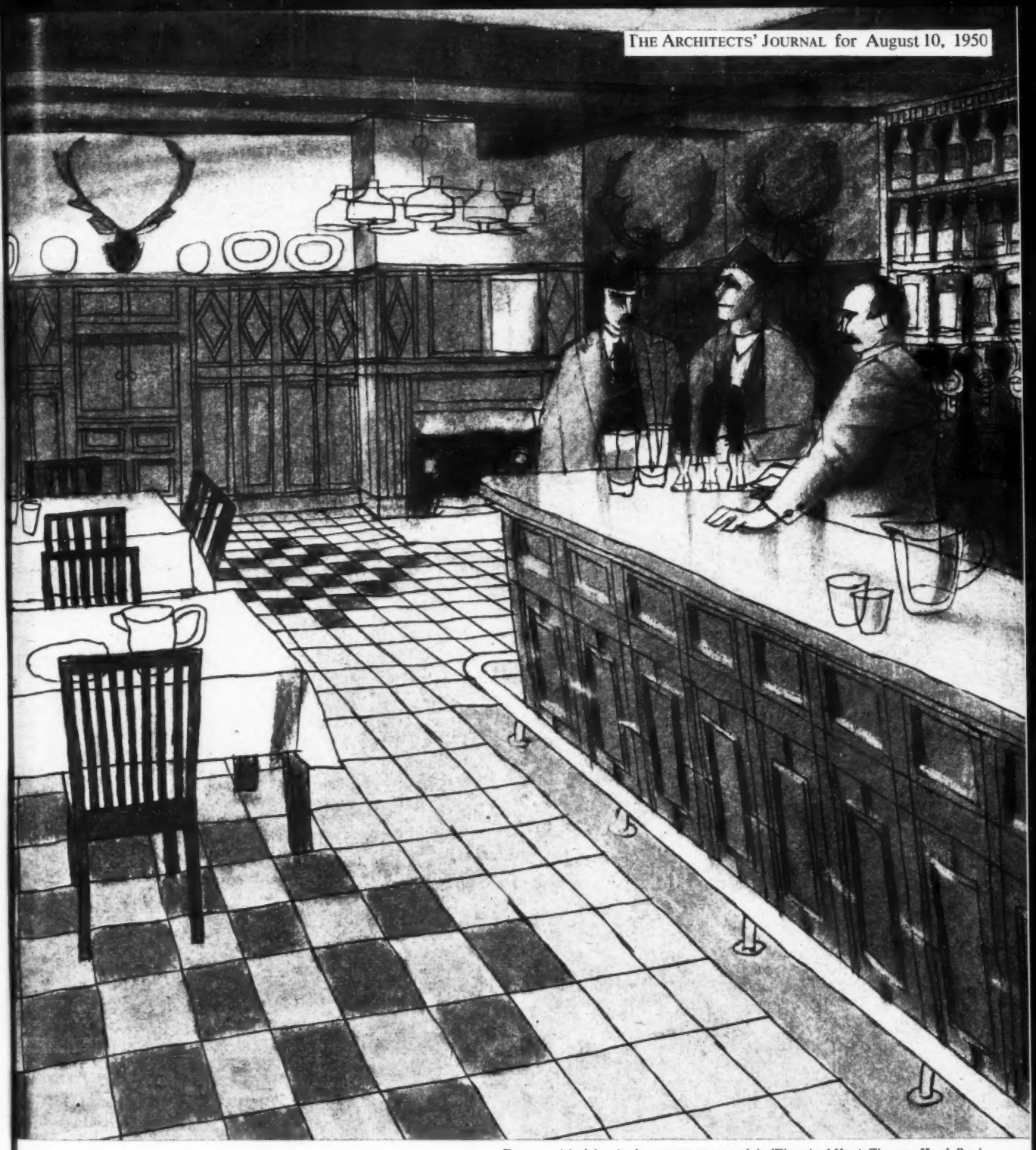

From an original drawing by GORDON CULLEN *of the Wheatsheaf Hotel, Thornton Heath Pond.*

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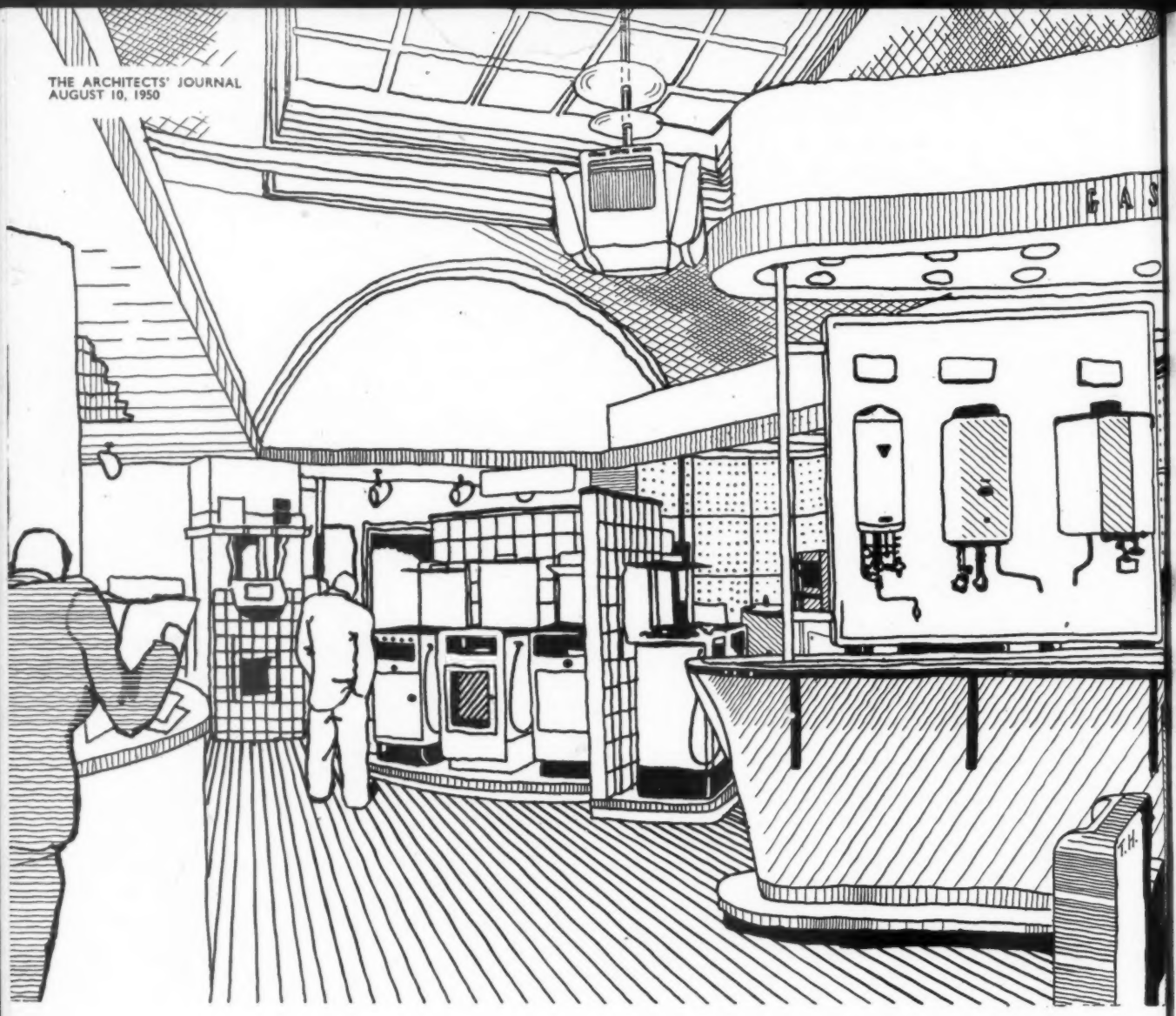

"GAS in the design for living"

UNDER THIS TITLE The Gas Council maintains, at the London Building Centre, a permanent exhibit the object of which is to provide a convenient centre to which architects, builders and housing authorities may come in order to keep abreast of the latest developments in gas services. The exhibit is largely devoted to the domestic uses of gas and coke, but also deals with large-scale catering equipment and other commercial and industrial appliances. A technical assistant is in attendance to give information and advice, and visits from individuals or organised parties will be welcomed (the latter preferably with prior notice).

This exhibit is one of many activities by which The Gas Council seeks to promote the efficiency of gas services for cooking, hot water, space heating and refrigeration. In all cases where the use of gas is envisaged early consultation with the local Gas Undertaking is advisable.

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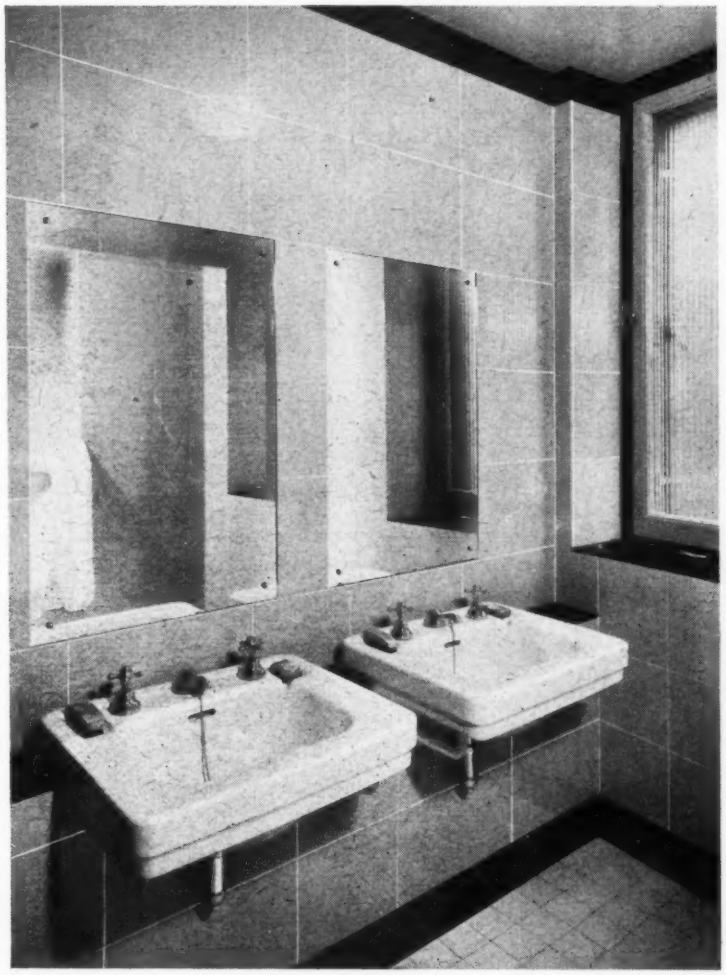

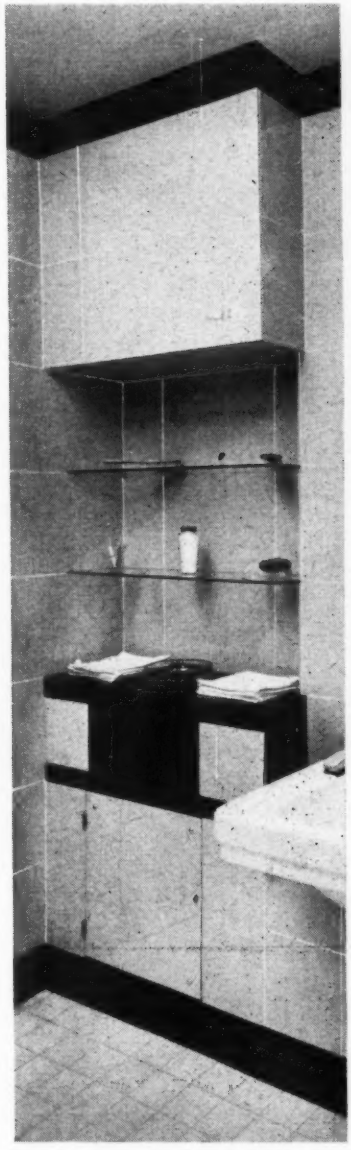

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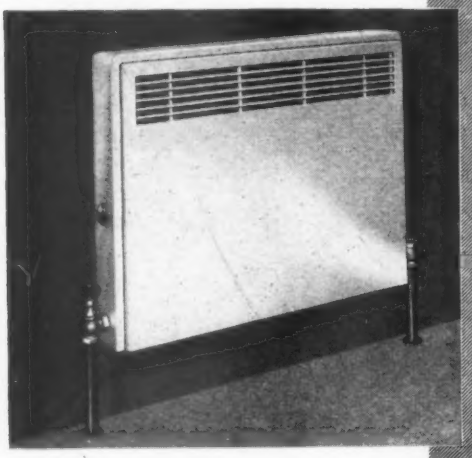

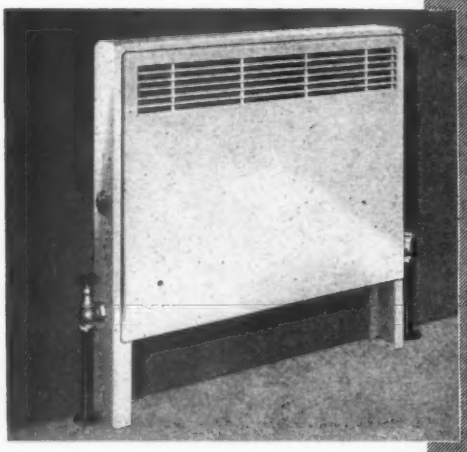

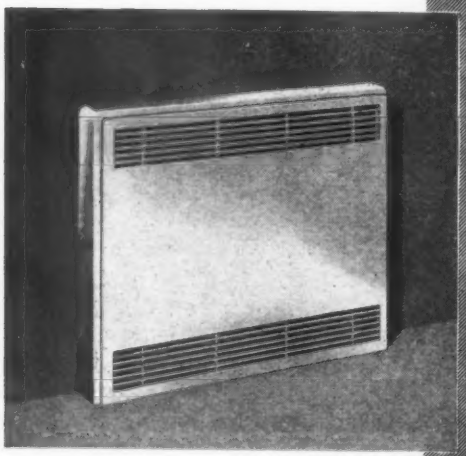

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THE ARCHITECTS' JOURNAL

No 2896 10 August 1950 VOL 112

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TOWNS MAY COME AND TOWNS MAY GO

"In view of the extensive exhaustion of pits in Central Fife it would hardly be necessary to carry on with the idea of a new town at Lochgelly." This astounding statement appeared in an official press handout following a discussion between Hector McNeil, Secretary of State for Scotland, and representatives of the planning authorities of Fife County, the National Coal Board and the Scottish Council (Development and Industry).

*

At least, it appears to me an astounding remark, but on second thoughts perhaps I am being just a little bit naïve. After all, I am practically certain the town has not been built. I am fairly sure that it has not been planned in detail—so what does just the disappearance of a name on paper matter? A few backs of envelopes may have been wasted; a junior town planner may be sobbing his heart out in one of officialdom's drearier attics; but otherwise what? Just one more pebble of incompetence has been dropped into the pool of planning to set up widening ripples of distrust and irritation. That is all.

*

"My poor fool," I can imagine the official saying to my cowering self, "how were we, determined on improving the lot of badly housed miners, to know that beneath our feet the coal was nearly exhausted?" Only, I suppose, by the same means by which they first discovered the stuff.

OPEN HOUSES

If the recommendations of the Gowers Committee are adopted, the showing of country houses to the public will become one of our major rural industries. But already it is quite a considerable one, and a foreigner who came to England for a month simply to look at country houses wouldn't have to waste much of his time.

*

Of course, it was the National Trust that started it all. But private owners are following suit in ever-increasing numbers. The *Burlington Magazine* has printed a list of 132 English country houses which are open; of these, sixty-two belong to the Trust and seventy to other owners.

*

Head of the county championship table, easily, is Kent—with thirteen open houses. Then comes Warwickshire with eight. The other day I paid my half-crown to see one of these—the huge Palladian pile of Stoneleigh Abbey. Lord Leigh, its owner, no longer lives in it, but great pains have been taken to avoid that museum atmosphere which can spoil the most beautiful house in such circumstances; for example, there are bowls of flowers in all the rooms. Well shown, My Lord, well shown!

CORRESPONDING MEMBERS

I have been sent this week's issue of *Soviet News*, which is published by the Press Department of the Soviet Embassy in London. On the front page is printed an "open letter" (quoted from *Soviet Art*) addressed by a number of prominent Russian architects to "Michael Waterhouse, President, and members of the Council of the Royal Institute of British Architects."

*

The letter begins by referring to the need for peace and the special reason architects have for desiring peace because of the destruction of buildings by war. It goes on: "Our alarm and indignation have increased now that hundreds of thousands of bombs have been unloaded by foreign aggressors on Korea, wiping peaceful towns and villages off the face of the earth, now that obscurantist atomaniacs call for the use against the Korean people of the atom bomb."

*

It then demands the prohibition of the atomic weapon and the declaration as a war criminal of the government which first uses that weapon, and says that thousands of architects and builders, including all the architects of the Soviet Union, have already signed the Stockholm Peace Appeal in which this demand is contained. It asks the RIBA Council and all members to do the same.

*

The letter is signed by A. G. Mordinov (president of the USSR Academy of Architecture), V. A. Vesnin (RIBA

Gold Medallist, 1945), K. S. Alabian, I. V. Zholtovsky, B. M. Iofan, N. A. Kolli, A. S. Nikolsky, G. A. Simonov, D. E. Arkin and A. G. Molokin. They mention that they are all honorary corresponding members of the RIBA.

*

I refer to it because I think it is a matter of some interest to architects that their profession should thus be publicly appealed to, and because of the odd fact of the letter being written, as it were, from within the membership of the RIBA. An "open letter," of course, is a mere journalistic convention and an answer is seldom expected. I don't suppose this one will get answered. I can guess what would happen if it was: the RIBA Council would resist the temptation to make the obvious comments; that peaceful intentions, like charity, should begin at home, and that ordinary people everywhere so clearly believe in peace that they don't have to sign documents to prove it. Instead, the Council would politely say that the RIBA was not concerned with politics. The senders would then protest that we are all involved with politics whether we like it or not, and so it would go on. We have heard this discussion before, and know how unprofitable it is.

*

But I am intrigued, as I have said, by this question of the honorary corresponding members. When I have come across the list of their names in the RIBA Kalendar I have often wondered just what they were supposed to do: how often they correspond and what they correspond about. Is this the only instance of their taking their status literally, or has the president a constant flow of letters from them from all parts of the world? Or perhaps he is supposed to write to them first.

HOME BUILDING

Dr. Dennis Chapman, who can usually be relied upon to be fairly provocative, has just produced a booklet called *People and Their Homes*.* To architects, of course, most of his arguments are a fairly familiar story, but the booklet is none the less worth more than a casual glance, particularly in the figures for the money spent by different income groups on furnishings. The percentage figures for 10 income groups are surprisingly close. The most money is spent on bedrooms; dining rooms and living rooms are about the same, and the kitchen rates about one-eighth to one-twentieth of the total expenditure. No doubt this is because most kitchens have cookers, sinks, and possibly a few cupboards, and there is not much to buy beyond equipment for cooking and eating.

*

It would be interesting to know what difference the current habit of built-in wardrobes for local authority housing has made, but the figures would not be easy to find. The really wounding thing is that, according to this booklet, nearly every income group seems to spend more than Astragal has ever been able to find in a single lump.

* Bureau of Current Affairs. No. 108. 9d.

The architects for these housing estates were included in the recently published list of those who are to receive medals and diplomas from the MOH for the best designed local authority urban and rural estates in England and Wales, submitted up to December of last year. The top photograph shows a scheme at Windmill Green, Ditchingham, which was designed by Tayler and Green for Loddon RDC, Norfolk. Below it is an estate at Forge Meadows, Headcorn, by Lawrence Farman and Partners for Hollingbourn RDC.

SIR T. G. JACKSON

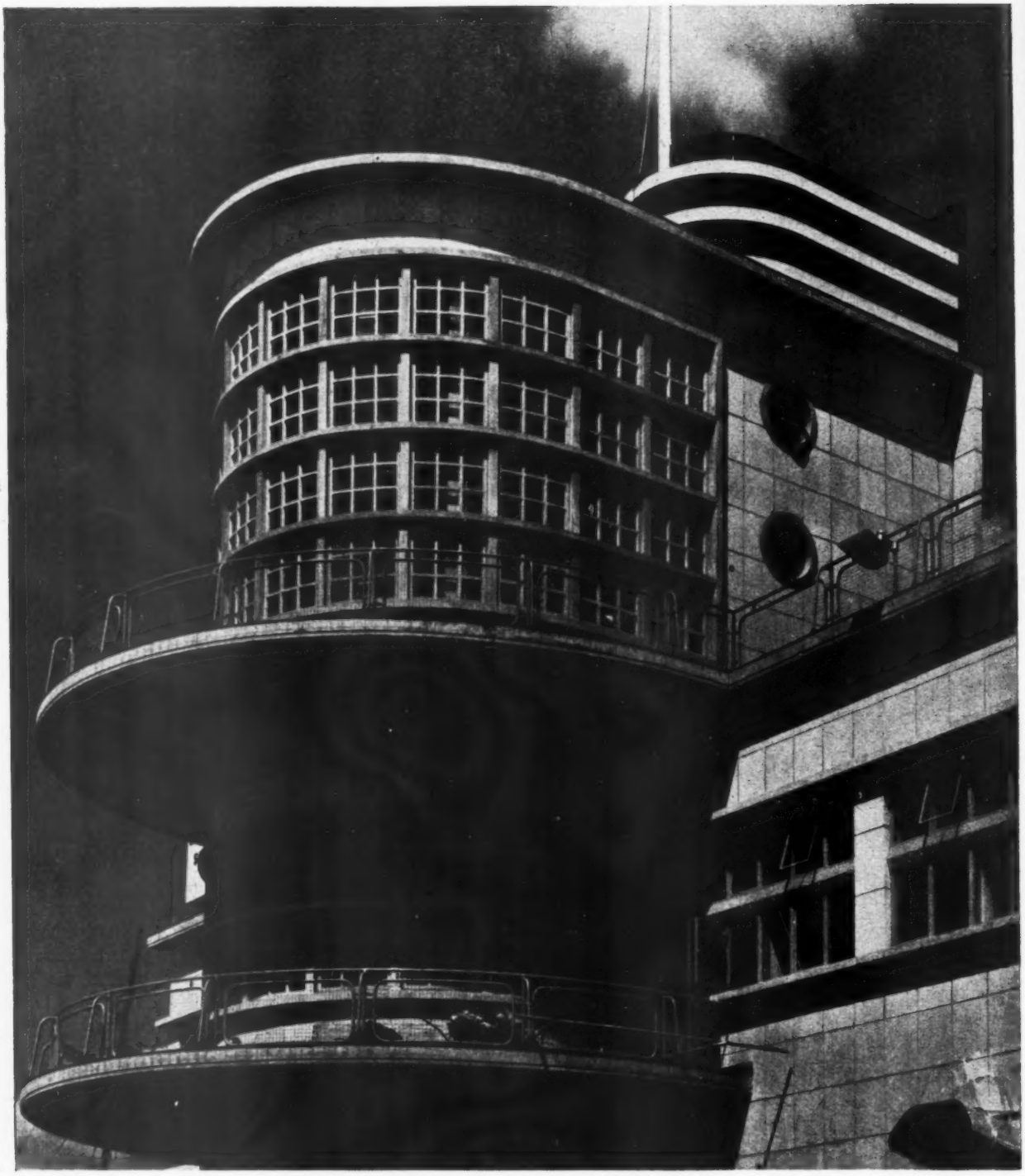
For architects of one generation, at least, the name of Sir T. G. Jackson has a large place in memories of early student days. These seem now to have been made up, when away from the drawing board, of measurings in country places (interrupted by glimpses of the vicar's daughter) and of compressing Jackson's histories into notebooks with the doubtful aid of many-coloured inks. Now we have his recollections* and a closer view of the once shadowy giant.

*

Giant he still remains, in range of interest and energy, though not (perhaps, merely not yet) as an architect. Jackson belonged to the select band of the Sir Walter Scott's, Sir John Rennie's and Winston Churchill's, whose energy was, or is, prodigious; and his was long continued. He was in St. Paul's, at 17 years of age, for the funeral of the Great

* Recollections of Thomas Graham Jackson: 1835-1924. Edited by Basil H. Jackson. Oxford University Press (Geoffrey Cumberlege). Price 25s.

Means of influencing the customer. An illustration from "People and Their Homes," by Dennis Chapman. (See Astragal's note.)



Introduction to English Architecture

From now on the above will be the first view a large number of visitors—especially American visitors—get of contemporary English architecture. It is the new Ocean Terminal at Southampton, opened last week by the Prime Minister. The design is by the successive docks engineers of the Southern Railway and of British Railways (Southern Region) with the assistance of the docks engineer's architectural staff. Being a building of considerable public importance, it is fully illustrated in this issue, though for the same reason its undistinguished architectural character, inside and out, is especially disappointing. In a leading article opposite, the fact is deplored that the opportunity was not taken by the Government (who now own the railways and Southampton docks) to ensure that the design was a first-rate advertisement of the best work done by contemporary British architects.

Duke and died in 1924 when the worshippers were gathering about the feet of Le Corbusier. In the long interval (or at least from the moment he learnt he had only got a 3rd Class Greats) he travelled, studied and practised architecture indefatigably—though he was 40 before he got any jobs worth mentioning.

*

It is odd that a man who had such great capacity and all the right ideas (as we see them) should have failed to produce buildings that stir the emotions. He believed in the small office, rebelled at once against copyism and mediævalism, was a follower of Morris and took immense pains to understand the techniques of the crafts of building and furnishing. Yet most of us are unmoved by his buildings. Perhaps he was too much the well-read man of action, too businesslike and too unemotional in his decisions.

A POSSIBLE ECONOMY

It has been suggested before on this page that if we must cut down expenditure on building and civil engineering, road improvement outside towns seems the most suitable subject for economy.

*

A recent journey from Newcastle-on-Tyne towards Carlisle along A69 strengthened my view that this is so. A big new road junction at the south end of the bridge at Corbridge has been admirably done; but was it really necessary just now? A few miles farther west one comes on a major work—a 3½-mile realignment of the road between Bardon Mill and Haltwhistle, including cut-and-fill on an *autobahn* scale.

*

I am told that the bulk of this work was done before the war. No doubt, as so much had been done, it was a great temptation to finish it. There may also have been local pools of unemployment or other good local reasons for these two works. But such excuses cannot exist everywhere, and when one sees how many improvements are needed in towns, one feels that most open-country works could wait.

ASTRAGAL

The Editors

REPRESENTATIVE ARCHITECTURE

IN spite of the large number of official bodies concerned with architecture and design there still seems to be no machinery for ensuring that proper architectural consideration shall be given to new buildings the good design of which is of national importance.

In last week's JOURNAL Astragal drew attention to the fact that the British Council has been allocated, as its new head office, one of the neo-Georgian style Lessor Scheme buildings, sponsored by the Ministry of Works, which have been so severely criticized lately. Yet surely the British Council, of all Government agencies, should operate from a building most carefully designed to give the many foreign visitors that call there a good impression of Britain's architectural alertness.

And now the new Southampton Ocean Terminal, which will give many visitors their first impression of British architecture, has been formally opened and has disclosed itself as a building no doubt well planned functionally but, to put it mildly, totally without architectural distinction. An important building, on which the best of the nation's resources in the way of art and architecture might well have been lavished, has in fact been designed under the supervision of a railway docks engineer.

The Prime Minister, in opening this building, spoke—as Ministers constantly do—of the importance and significance of the tourist industry. But what do such words mean when obvious opportunities of using it to show Britain to good advantage are repeatedly thrown away?

The Government pays lip service to good design through the agency of several bodies like the Council of Industrial Design and the Royal Fine Art Commission, but these are only advisory bodies who cannot insist on action being taken according to their ideas. The Government is also successfully promoting good design in connection with the 1951 Festival. But, pending a more enlightened policy and more imaginative leadership on the part of the Ministry of Works—the one existing Government department that could exercise some influence in this direction—it would surely be wise for the Government to set some individual or commission the task of foreseeing such opportunities and to give them the authority to see they are taken advantage of. It is tragic that the more completely the Government theoretically controls national undertakings, the more their architectural quality seems to rest on chance and *laisser-faire*.

Technical Editor

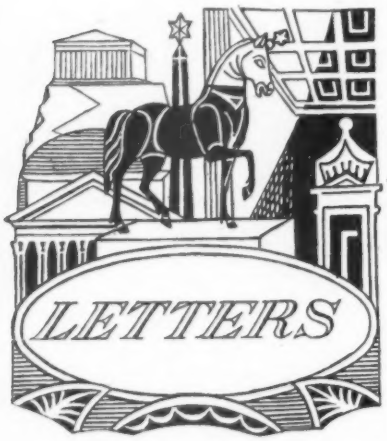
FALSE ECONOMIES

Some of the problems which F. J. Farmer raises on page 145, in "The Economics of Classroom Lighting," are a timely reminder that arbitrary cuts are not necessarily the best method of achieving economies in the building industry.

Mr. Farmer provides a good example of this. It appears that

the proposed reduction in the height of classrooms will necessitate the use of more expensive, or even specially designed, lighting fittings, in order to comply with the lighting regulations of the MOE and avoid excessive glare. This might considerably reduce the saving which the reduction in height is intended to effect.

This example indicates how carefully all the ramifications of a proposed cut should be considered and certainly reinforces the view that only painstaking research and the full exploitation of accumulated developments in building technique can make possible substantial economies in the industry.



K. L. Datta

A. F. Hare, A.R.I.B.A.

Housing for India

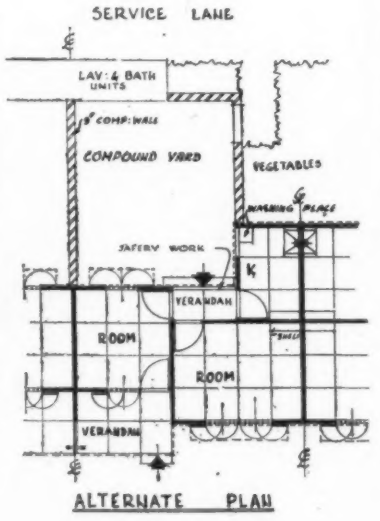
SIR,—I have gone through the note and carefully studied and examined the design of the prefabricated house for India, published in the December 15, 1949, issue of the JOURNAL.

The proposed houses are required for service in India. While appraising their real utility and value we must take into account the peculiar traditional needs of this country and the living conditions in their social context. As an instance, it may be pointed out the court-yard is the centre of almost all activities of home life in India; it provides a miniature domestic playground for the youngsters under care of the mother: India has no nurseries or creches which are common and essential feature in other Western countries. Many of your readers familiar with Indian conditions and a taste of the heat out here will recall that the court-yard also provides the much-coveted open outdoor sleeping accommodation during the torrid summer nights. The court-yard in the published design is only 9 ft. wide, whereas it should have been at least 16 ft. by 20 ft. to tolerably satisfy the latter requirement.

In this two-roomed house, the smaller room will be used as a sitting and retiring room for the guests. The bigger of the two is obviously meant for use as the main bedroom and for stowing luggage and oddments. In the proposed design, however, the advantage of an independent entrance for the bigger room, so indispensable here, has unfortunately been ignored, and the rooms cannot be used separately. Thus there is no privacy in home life.

The inside verandah, on the other hand, appears to offer very little utility; only one-third may be used as covered passage to the kitchen. It is also apparent, from the photograph published, that the lavatory unit is dangerously proximate to the kitchen in the same line. This would be repugnant from the Indian standpoint.

In the alternative design, which I enclose (see below), the following features should be noted:—(*a*) The big room may be placed length-wise, thereby augmenting the overall width of the house of one module (3 ft. 2 in.) and the positon of the rooms exchanged. (*b*) The covered area is reduced by about 10 sq. ft. The extra cost of inside verandah eave board, one post for roof support and 6 ft. runs of plinth are at once saved. An extra door, however, would be needed to render both the rooms independent. (*c*) The provision of 6 ft. runs of Jaffery work to internal verandah would easily place the kitchen and rooms under full control of the housewife. (*d*) The court-yard, in the alternative design suggested, is now of a compact rectangular shape with sufficient additional space available for the family's activities; leaving lavatory and bath unit projecting outside the main court-yard,



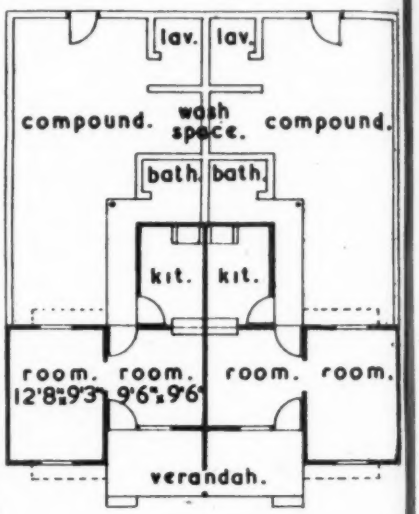
with the advantage of good exposure to sun and air, at a respectable distance from the sacred Indian kitchen. (*e*) Privacy, the essential feature of an Indian home, is ensured.

K. L. DATTA,

Bombay.

[A. F. Hare, who writes the following reply, adapted the prefabricated house referred to by Mr. Datta from the design made by Structural and Mechanical Development Engineers.—ED.]

SIR,—While I appreciate the interest and enthusiasm which prompted Mr. Datta's letter, he must realize that on projects of this scale all the points mentioned and, of course, many more have previously been considered in great detail by the authorities



in India, the sponsors and the architect. With more experience he will realize that rarely are such points "ignored," although the final plan may not be perfect from all aspects.

Of course, we agree as to the importance of the courtyard and are well acquainted with Indian conditions, but there is no ground for criticism here, it is simply that Mr. Datta has mis-read the plans. The courtyard provided is much wider than 9 ft. and the total area exceeds his minimum requirements (see plan above).

The disposition of rooms was considered from all aspects, and it was agreed that the larger room should be allocated to sleeping, and an external entrance is therefore not important, but it is the practice for many houses of this class to have the front and rear door in line. Study of many of the housing estates in South West India will prove this.

The criticism of the placing of the lavatory again illustrates the necessity of first getting one's facts right—the lavatory is not dangerously near the kitchen; as planned, the bath space is adjacent to the kitchen, then the washing space, and at the end of the courtyard the lavatory, approximately 16 ft. distance from the kitchen.

With this class of housing there is no water carried system, the object of the straight-line drainage is that waste water from kitchen, bath and wash space does provide a certain amount of flushing to the closet. It is also traditional to provide the washing space externally and not within the kitchen—surely, with his knowledge of local conditions, your correspondent cannot really expect clothes washing to be done in the corner of such a small kitchen.

It is most gratifying to see that, apart from the two major criticisms which resulted from misinterpretation of the plan as illustrated our proposals are so closely in line with Mr. Datta's views.

A. F. HARE.

London.

COMPETITION

Cathedral for Coventry

The Coventry Cathedral Reconstruction Committee invite architects who are British subjects practising in the United Kingdom, the British Commonwealth and Eire to submit designs in competition for a proposed new Cathedral, Chapel of Unity and Christian Service Centre to be erected on a site in the centre of Coventry.

The RIBA have nominated Sir Percy Thomas, Edward Maufe and Howard Robertson to act as assessors. Premiums of £2,000, £1,500 and £1,000 will be paid to the authors of the designs placed first, second and third respectively. The schedule of conditions and particulars of site, etc., will be ready for issue about the beginning of October. In the meantime, intending competitors should make application to Captain N. T. Thurston, secretary to the Reconstruction Committee, 22, Bayley Lane, Coventry, enclosing a deposit of two guineas, which will be returned upon receipt of a *bona fide* design or upon the return of the competition documents within one month of receipt of the answers to questions.

The latest date for application for the conditions is October 30, 1950, and the closing date for the receipt of designs, July 2, 1951.

MOTCP

Explanatory Texts for Planning

The first three explanatory texts to accompany maps in the 10 miles to one inch (1/625,000) series of planning maps produced by the Ordnance Survey Office have now been published. These texts have been prepared by the MOTCP and the Department of Health for Scotland. Great Britain is covered by two sheets; sheet one includes Scotland and Northern England, and sheet two the remainder of England and Wales. Land classifications, average rainfall and population are the subjects of these first texts, which help to make the maps fully intelligible to the layman.

One text shows how the agricultural land of the country has been divided into ten categories, ranging from first-class land, such as is largely used for intensive market gardening, to the poorest land—for example, saltings and rough marsh. The areas and percentages of each category of land in every county are given.

Lincolnshire is the county with the highest acreage (530,900) of first-class land, followed by Cambridgeshire (274,300), Lancashire (237,000), Norfolk (193,000) and Kent (175,400). Of the Scottish counties Angus (77,200), Berwick (68,700), Fife (59,800), and East Lothian (49,800) have the highest acreages of first-class land.

The rainfall map is based on averages over a period of 35 years, but it also gives information on variability of rainfall. Among other things the explanatory text indicates the significance of this variability from one year to another as well as from place to place.

Population maps, which will number eight in all, and of which six have already been published, show population densities, total changes and changes by migration. The text, in explaining the complications of preparing maps of population movement, stresses the care which must be exercised in drawing conclusions about internal migration.

The maps and explanatory texts can be obtained through Ordnance Survey Agents and many booksellers. The maps in most cases cost 5s. per sheet and the explanatory texts 9d.

Building of Cement Works Refused

Permission to erect a cement works and to win limestone and shale near the Pembrokeshire coast has been refused by Hugh Dalton, Minister of Town and Country Planning. The site proposed for these operations was at Lydstep, near Manorbier, Pembrokeshire, and two-thirds of the site would have fallen within the area of the National Park proposed by the Hobhouse Committee.

CID

Appeal to Manufacturers

The CID invites manufacturers who wish to be represented in the Festival of Britain exhibitions to submit details of goods they think suitable for inclusion. The council cannot guarantee that goods now received will be considered for exhibition, but every manufacturer whose product is of a high standard of quality will have a chance of showing his work in the form of photographs. Photographs and material should be addressed to the Chief Industrial Officer, CID, Tilbury House, Petty France, S.W.1.

SCOTLAND

Plea for Greater Scope for Housing Associations

Tom Fraser, MP., Joint Parliamentary Under Secretary of State for Scotland, heard representations recently in St. Andrew's House, Edinburgh, from the Scottish branch of the Federation of Housing Associations in favour of greater scope being given to housing associations in Scotland.

Mr. Fraser, while emphasizing that it was the government's intention that housing associations should continue to play their part in the housing schemes, said that in the meantime the government must continue to look to local authorities as the principal agent for the building of houses to let. The efforts of housing associations and private persons must be confined to priority cases in special categories.

The Secretary of State had defined these categories and a fair trial must be given to the present system. The whole question of restrictions on private building would continue to be kept under close review. While he recognized that housing associations were somewhat different from private enterprise any concessions to those associations would have to form part of a major change in government policy.

Until restrictions could be relaxed, housing associations could undertake building only for persons clearly falling within the priority groups.

EXHIBITION

British Plastics at Olympia

A British Plastics Exhibition and Convention will be held in London from June 6 to 16, 1951, within the period of the Festival of Britain. The exhibition, the first of its size and kind, will be held in the National Hall, Olympia and, while primarily for the trade, will be open also to the public. The exhibitors will be British and Commonwealth firms who produce, mould or fabricate plastics materials or supply raw materials or equipment to the plastics industry.

The Convention, which will run concurrently with the Exhibition, is being organized by a committee on which are represented the British Plastics Federation, the Plastics Institute and the Plastics and Polymer Group of the Society of Chemical Industry. Convention sessions will be in three categories: morning lectures for technicians in the plastics industry; afternoon technical or semi-technical lectures for the chemical and consumer industries generally, to which the public will also be admitted; and special sessions for the public, including women's organizations, on such subjects as the uses of plastics in the home.

PLANNING SCHOOL

New Diploma Course

The next session of the Diploma Course at the School of Planning and Research for Regional Development will begin on Monday, September 18, at 34, Gordon Square, W.C.1. Applications should be made to the secretary of the school.

RIBA

Maintenance Scholarships

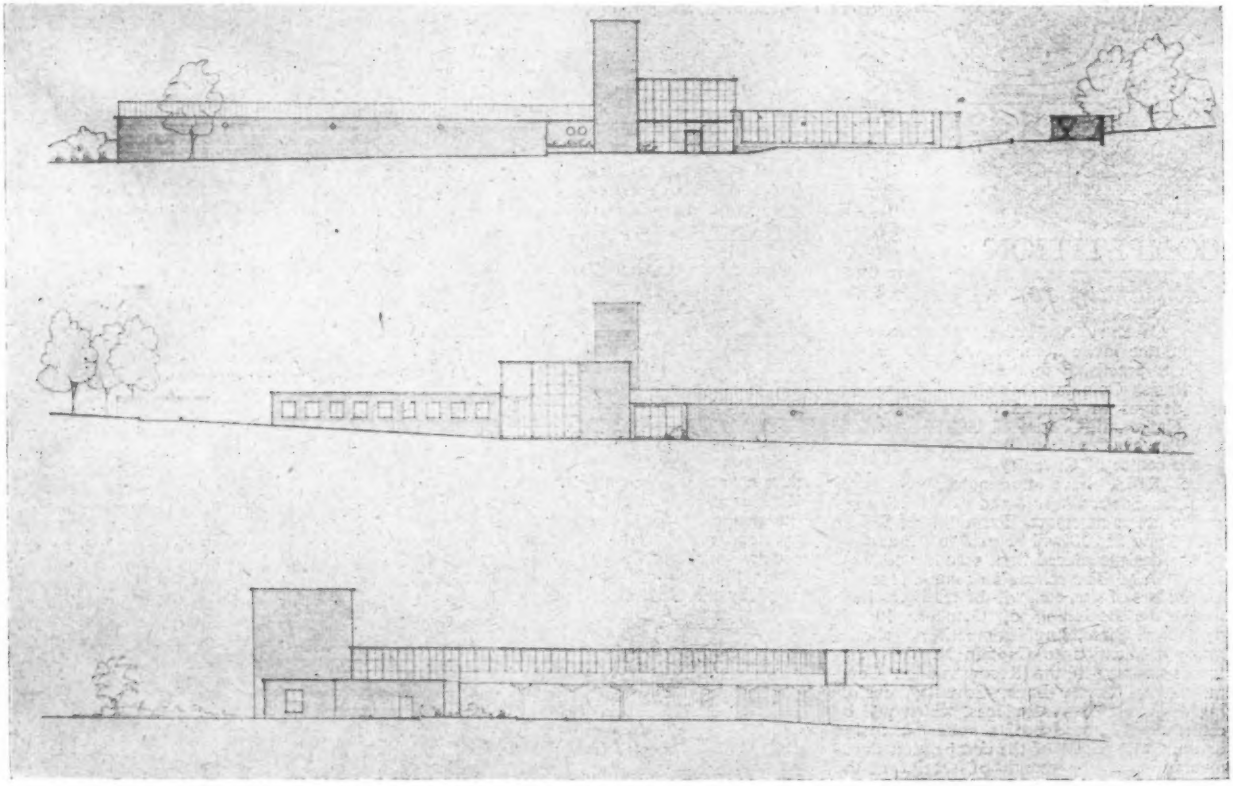
The RIBA announce that the following Maintenance Scholarships have been awarded for the year 1950-1951: The Ralph Knott Memorial Maintenance Scholarship of £45 to A. G. Diprose, of London; an RIBA 4th and 5th year Maintenance Scholarship of £60 to C. E. I. Nops, of Welling, Kent; an RIBA Howe Green 4th and 5th year Maintenance Scholarship of £40 to J. F. Vergette, of Swansea, South Wales; an RIBA Hartley Hogarth Maintenance Scholarship of £31 10s. to G. Hill, of Keighley, Yorks.

The Maintenance Scholarships previously awarded to the following candidates have been renewed: H. W. D. Burgess, Welsh School of Architecture, The Technical

NATIONAL EISTEDDFOD OF WALES COMPETITION

One of four competitions held recently by the Royal National Eisteddfod of Wales Arts and Crafts Committee was for a pithead baths and canteen. The winning entry, by F. G. Frizzell and A. A. Combe, The Patch, Crossways, Shenfield, Essex, who were awarded £50, is illustrated here. Following is the report of the adjudicators, Dr. T. Alwyn Lloyd and Lewis John :—" Twelve entries were received for a subject that has obvious importance in the South Wales coalfield. . . . The block plan shows the buildings well laid out in relation to levels, and internal circulation is excellent. Though the canteen is rather small, the kitchen arrangements are excellent. This competitor thought out his scheme thoroughly in relation to an adjoining colliery, with its raised access and exit ways. The elevations are pleasing and contemporary in character.

Top, south elevation ; centre, north elevation ; bottom, east elevation



College, Cardiff; J. M. Phillips, Bartlett School of Architecture, University of London; D. N. Sutcliffe, Department of Architecture, The Northern Polytechnic, London; J. B. Crowther, Welsh School of Architecture, The Technical College, Cardiff; and D. G. Potter, School of Architecture, The Polytechnic, Regent Street, London. All RIBA Houston Maintenance Scholarships of £125 per annum. H. R. Brady, Bartlett School of Architecture, University of London, the "Builder" Maintenance Scholarship of £68 per annum. Miss K. Sanders, Birmingham School of Architecture, AGBI Maintenance Scholarship of £98 per annum.

Intermediate Examinations

The RIBA Intermediate Examination was held in East Africa and Southern Rhodesia from May 12 to 18. The successful candidates are as follows:—O. Hawke (Salisbury); G. O. Miller (Uganda); N. R. Oldrieve (Salisbury); A. V. Trowbridge (Salisbury). These results are subject to the approval of history thesis or theses.

KENT

Tree Preservation

An order made by the Kent County Council to preserve three trees in the East Ashford Rural District has been confirmed by the Minister of Town and Country Planning and is now in force. The trees are considered to be of value to local amenity or of historical importance, and the order has been made to protect them against wanton felling.

The most interesting of the three trees is the "Law Giver Oak" at Bonnington, believed to be about 500 years old. According to Samuel Bagshaw's directory of Kent (1848), the ancient "Court Leete" used to meet under it to choose the "boars-holders" (or constables) for Bonnington and Hamme.

DIARY

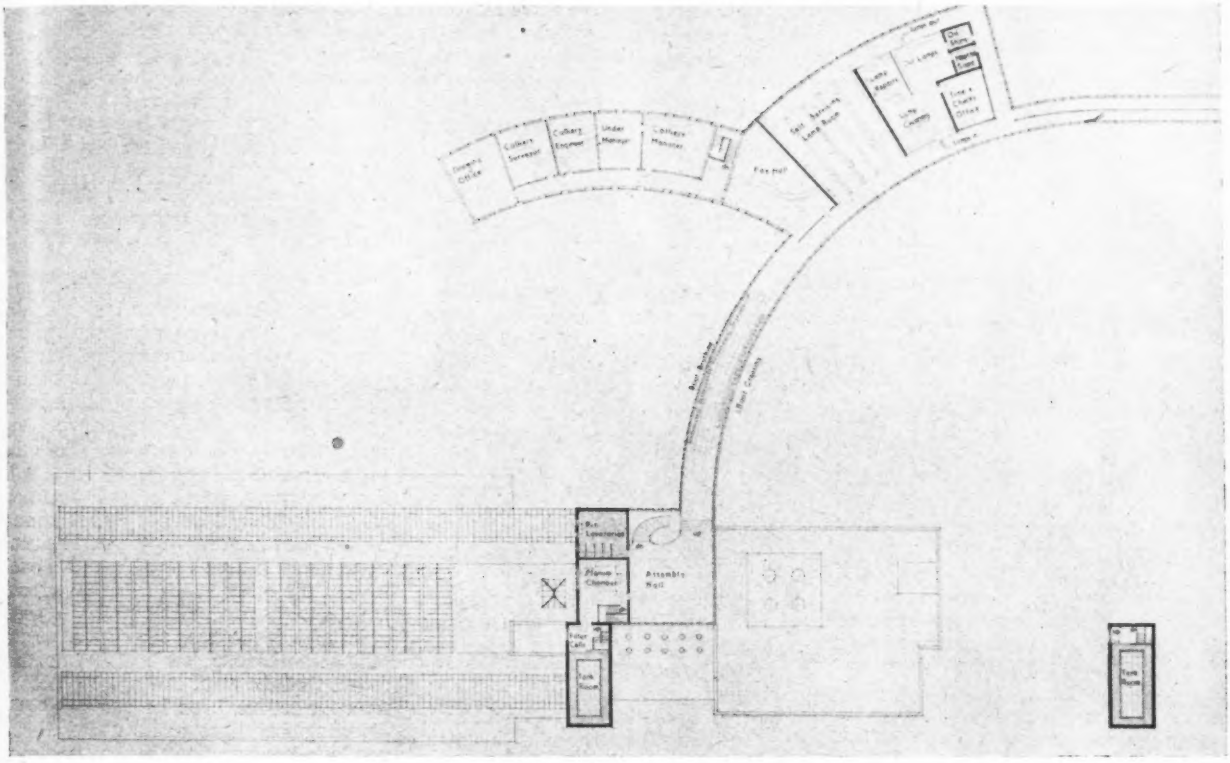
Exhibitions of Handpainted Tapestries and Small Sculpture. Colour, Design and Style Centre, 19, York Street, Manchester 2. (Sponsor, The Cotton Board).
UNTIL AUG. 19

Metropolitan Boroughs' Housing Schemes. Layouts, plans and photographs of recently completed housing schemes built for some of the Metropolitan Borough Councils. At 13, Suffolk Street, S.W.1. Daily 10 a.m.-5.30 p.m.; Saturdays, 10 a.m.-12 noon.
UNTIL SEPT. 15

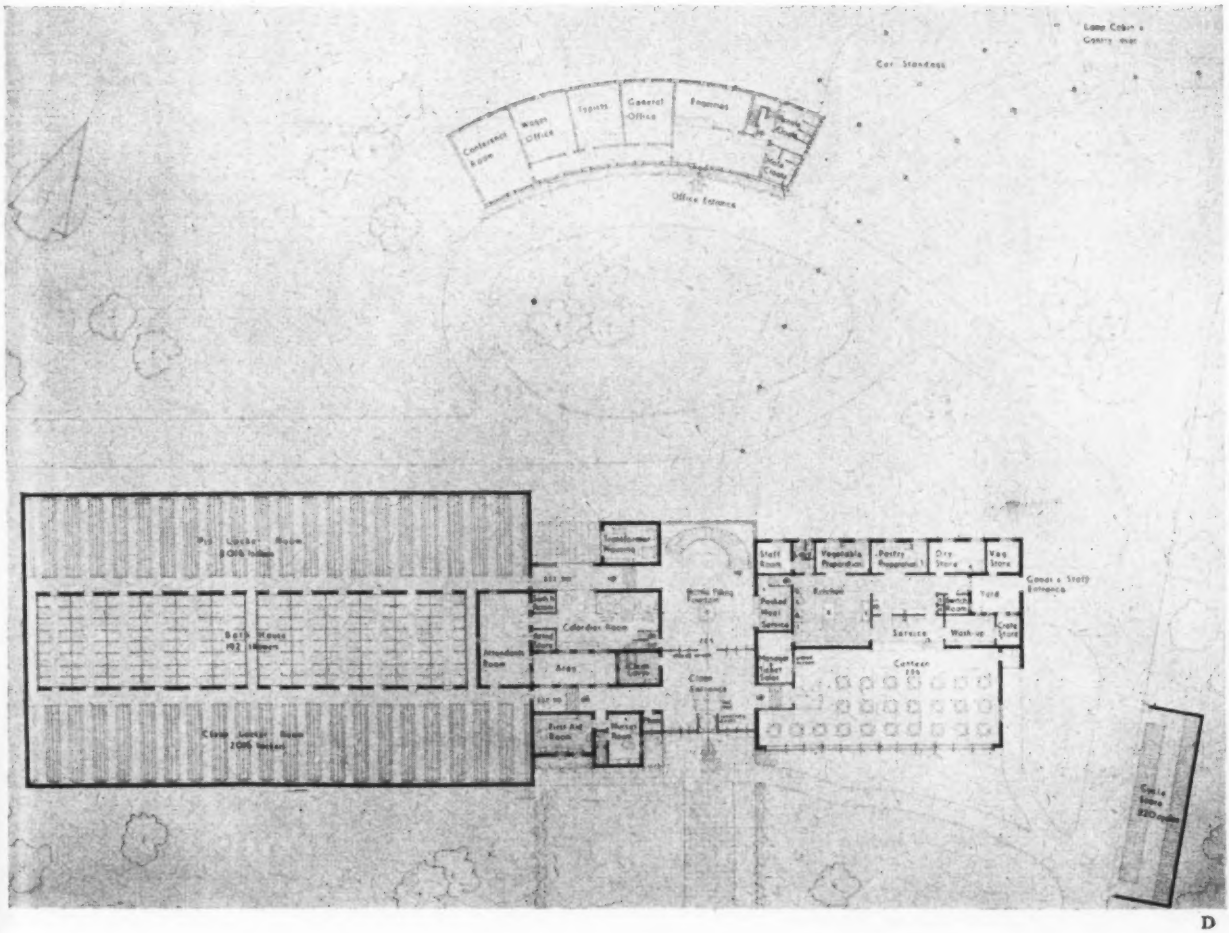
TDA Instructors Course. Cambridge.
AUG. 19-26

International Congress for Housing and Town Planning. At City University, Amsterdam. Enquiries to Singel, 453, Amsterdam, C.
AUGUST 27-SEPT. 2

FOR PITHEAD BATHS: PRIZE-WINNING DESIGN



Above, first and second floor plans. Below, ground floor plan.



D

At Arcon's invitation Felix Samuely, consulting engineer, has written the following article. The firm of Arcon endorses his views.

ARCON

The Architect and the Structural Engineer

There is no great difference between an engineer's work and the structural work that is carried out by the architect; in fact, working out the details for a door is as much engineering as working out the details for a steel truss. But during the last 200 years, certain parts of a building have altered in such a way that expert knowledge is required for working out their details, while door frames or systems of external windows still provide much the same problems as they did in the time of Christopher Wren, and are dealt with by the architect. To understand the intricacies of steelwork or of ventilating systems, the architect would have to undergo a much longer training. It is, therefore, on these specialized matters that the architect seeks the engineer's help.

The engineer's assistance is needed for work on nearly all buildings, with the possible exception of standard small houses or very small blocks of flats, which, with the present developments in fireplace heating, may necessitate the employment of a heating engineer.

In every instance the engineer's work comprises the following:—

(*a*) He will suggest a system. For instance, the structural engineer will suggest the materials and the type of structure to be used.

(*b*) He will work out this system in such a way that all the architectural dimensions are established, enabling the architect to incorporate the structure into his general and detailed building plans.

(*c*) He will determine the costs of the work he is doing, and also in some cases advise on the best contractor to carry out the work.

(*d*) He will detail the scheme so that it can be executed at the site.

(*e*) He will supervise the execution of the work, both at the site and in workshops.

The engineer can be one of the following:—(1) An independent specialist, with the status of a professional man (in other words, a man with no axe of his own to grind); (2) a person who, although independent as far as contractors are concerned, is associated with the architect and forms an integral part of his organization; (3) a person who is associated with a contractor and is part of the contractor's organization.

When comparing these possibilities, there is one general case to be taken into consideration. If it is quite clear that one particular method of building is to be carried out by only one specialist contractor, or if there is a limited number of proprietary methods suitable and the architect is capable of choosing the most applicable, then there can be no doubt that the contractor, or his employee, is the best engineer for the job. This situation arises frequently in mechanical engineering, but it is comparatively rare in the building trade. There is hardly a proprietary method that is so superior to any of its competitors that it can be accepted as the best solution, without a careful investigation. In fact, in the majority of cases, non-proprietary systems prove to be more economical. In addition, they have the advantage that they can be carried out by any contractor and competitive prices can be obtained. Here it is an advantage to have an independent expert to carry out the investigation and make the necessary decision.

The engineer must not be a specialist in any one material. He must be able to give unbiased advice on steelwork, reinforced concrete, brick, timber and aluminium and on any other materials or types of construction that might come along in time. This is one of his main points of superiority over a contractor who, even though he may have the best of intentions, cannot help being biased in favour of his own trade.

Once the material to be used has been decided upon, a contractor must be appointed or an engineer must give the architect all the necessary information for going to tender. In the case of steelwork, it is quite usual to ask a steelwork contractor to supply this information, which he will do "free of charge" before the tender inquiry is sent out. Of course, no work can be done "free of charge," and this expense must always be added to the tender price.

ADVANTAGE OF EMPLOYING INDEPENDENT ENGINEER

Furthermore, it is unlikely that the contractor can devote the same amount of time to the preliminary design as can an independent engineer, who is expressly engaged for the purpose. The independent professional engineer has the supreme desire to please his client, because his whole reputation depends on that. He can, therefore, be relied upon to produce the most economical job and to adapt his work as much as possible to architectural requirements.

It appears to be sensible to employ a consulting engineer wherever there is a structure, and also to seek his advice for accessories like heat insulation, etc. I have often been asked whether I can guarantee to save the fees my client pays out of the cost of the structure. While I believe that the employment of a consulting engineer results in overall economy, I do not like this question; a profession should have a definite basis and be accepted as a matter of routine.

The question of whether the consulting engineer should be in practice on his own, or be part of the architect's organization is, I think, merely a matter of opinion. The engineer in practice on his own has more varied experience, and this is of advantage in keeping him up to date. The engineer working for a limited number of architects will get to know their idiosyncrasies and will thereby increase his efficiency.

NEED FOR COLLABORATION

Whatever their practices may be, it is important that the architect and the engineer should work together at an early stage of any job so that the most satisfactory design can result from the interchange of ideas. I cannot help feeling that this early collaboration is really the most valuable part of the work. If it is done properly, much of the detailing work can often be delegated, sometimes to the contractor, with the engineer checking, and thus keeping control over it. On the other hand, it is often more satisfactory, particularly from a time point of view, to keep the structural detailing in the engineer's office, as this means that the work can proceed before the contract has been let.

No engineer likes to be asked about part of a construction; say, to design a skeleton frame without the floors, or to leave the design of the foundations to the architect. This is just as unsatisfactory to him as it would be to an architect to be asked to design a building on which the client wished to impose his own ideas.

The engineer likes to satisfy himself that the execution of the building is carried out in the best possible way. Although he cannot provide constant supervision, if anything goes wrong, even though it may not be his fault, it will harm his reputation.

In many cases the design and execution must be thought out simultaneously. It is not a good idea to design a framework, particularly if it is not in traditional materials, and to hope that the contractor will find a method of carrying it out. On the other hand, if the engineer has based his design on a certain idea, he must be able to ensure that this idea is carried out. This means that he must be given the necessary standing with the contractor.

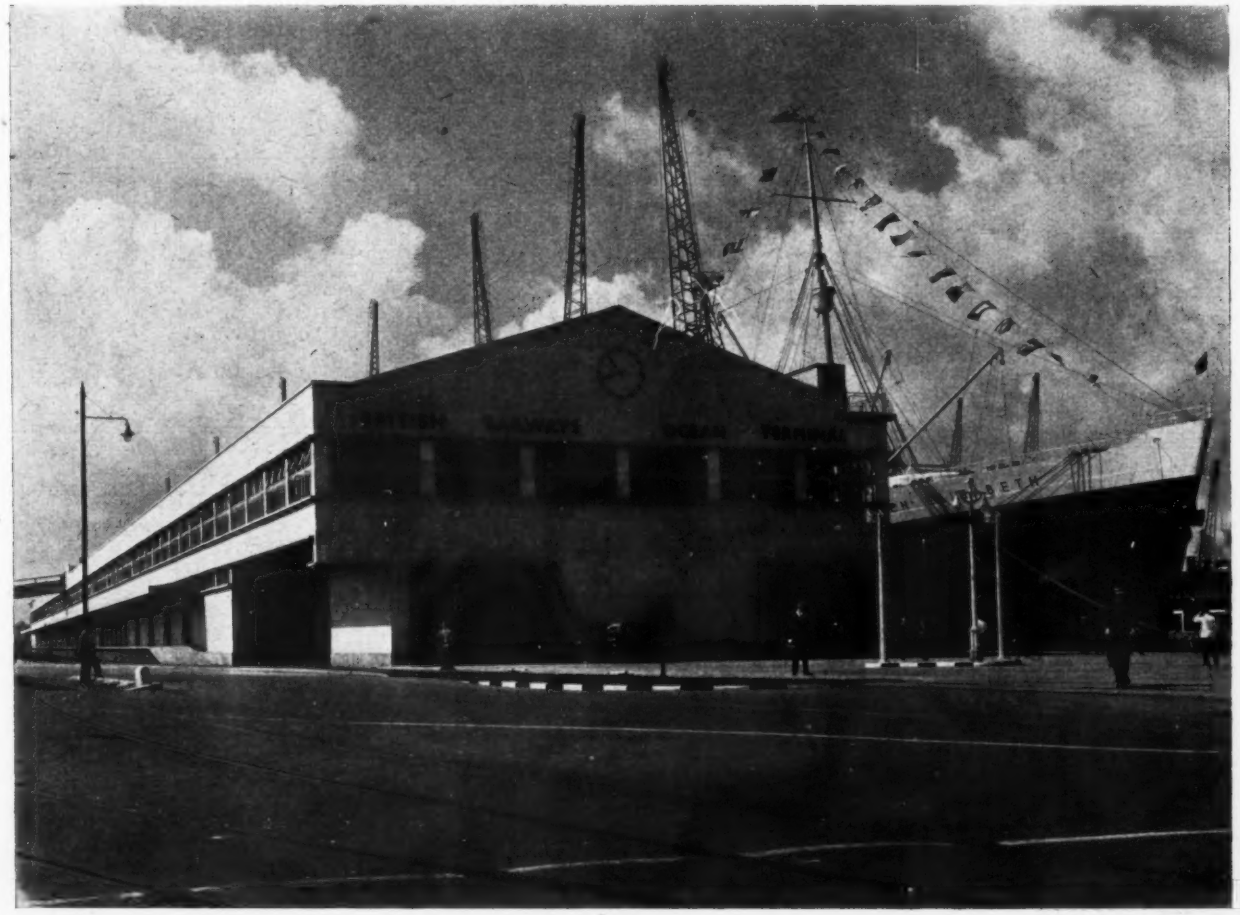
It often happens that an architect wishes to appoint a consulting engineer, but is in a quandary about his fees. If the client does not wish to pay the fees, it is often impossible for an engineer to be employed fully. However, it should be possible, even in these cases, for the architect to obtain the benefit of consultations in the early stages, on a special arrangement by which the engineer would be relieved of the detailing work. In fact, there are many consulting engineers who would prefer to widen their field of activity by doing more design and less detailing.

OCEAN TERMINAL

at OCEAN DOCK, SOUTHAMPTON
designed by J. H. JELLETT, Docks Engineer
Chief Assistant Architect: C. B. DROMGOOLE

The Ocean Terminal at Southampton Docks, owned by British Railways, was opened last week by the Prime Minister. It is a building which facilitates the embarkation and disembarkation of passengers travelling by the Cunard White Star ships, "Queen Mary" and "Queen Elizabeth." Passengers arriving at the terminal by road and rail, both of which extend into the building, reach the first floor by means of internal lifts and escalators where the customs and waiting halls are situated. Embarkation is from this level.

The Ocean Terminal from the north-east.

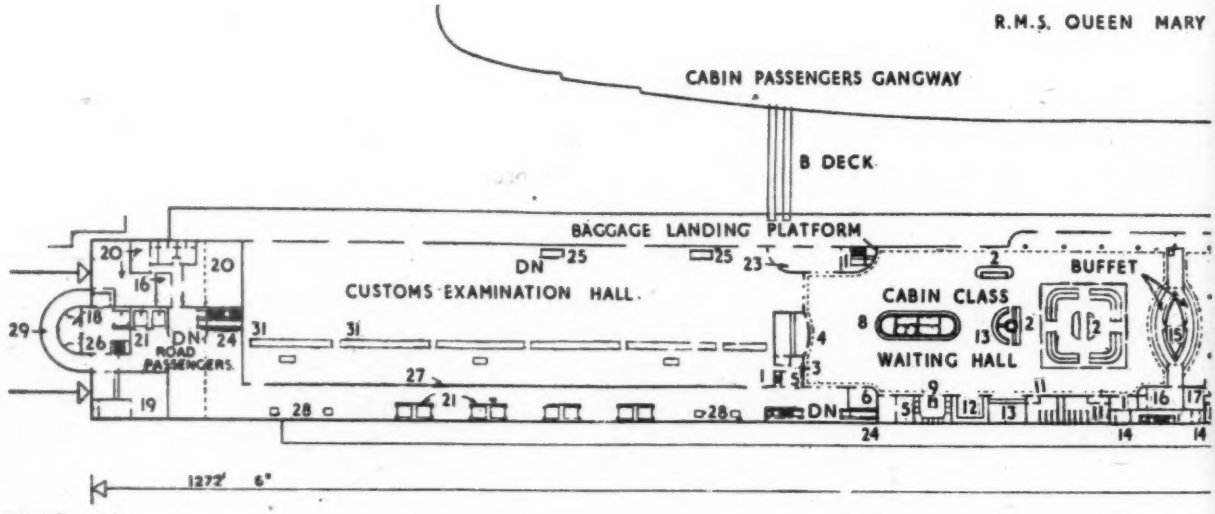


OCEAN TERMINAL

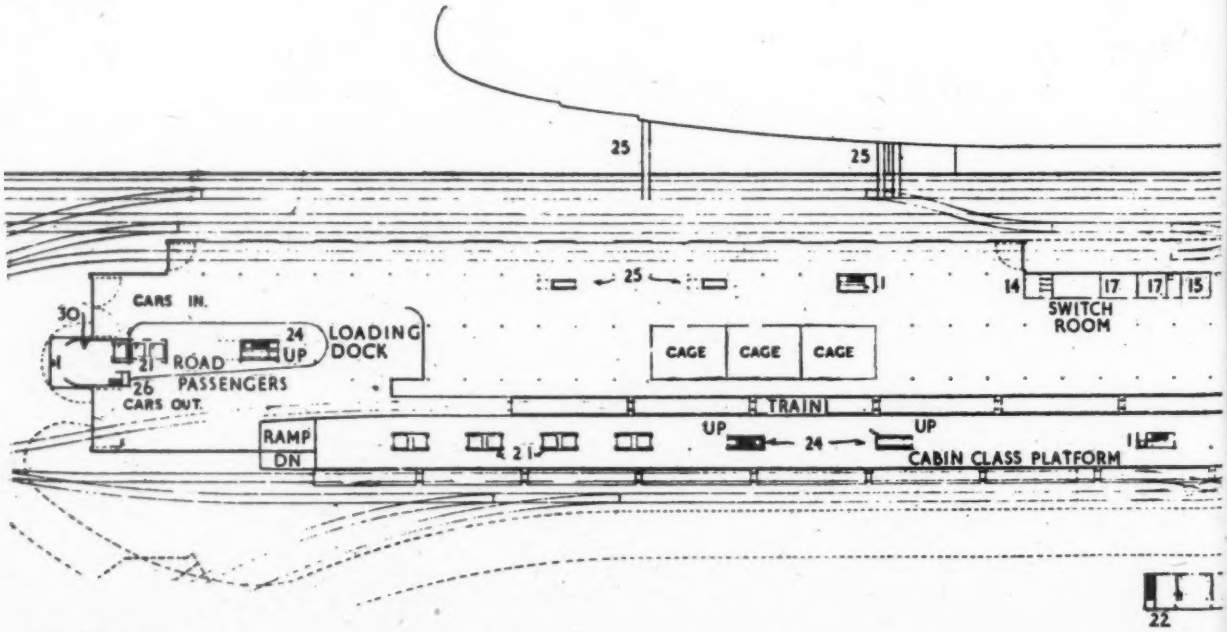
at OCEAN DOCK, SOUTHAMPTON
designed by J. H. JELLETT, Docks Engineer
Chief Assistant Architect : C. B. DROMGOOLE

1. STAFF STAIRS
2. SEATING
3. SEARCH ROOMS
4. IMMIGRATION OFFICER
5. STAFF ROOMS
6. CLOAKS
7. PRESS
8. INFORMATION, RAIL BOOKING OFFICE BUREAU DE CHANGE, AIR BOOKING, CABLES AND TELEGRAPHS, TRAVEL ASSOCIATION BUREAU
9. TELEPHONES
10. RECEPTION SUITE
11. TOILET
12. WRITING ROOM
13. SHOP
14. STAFF LAV.
15. STORE
16. KITCHEN
17. OFFICE
18. CUSTOMS WATCHER
19. CUSTOMS LANDING OFFICER
20. PREVENTIVE OFFICERS
21. ELEVATORS
22. ELECTRICITY SUB-STATION
23. VESTIBULE
24. ESCALATORS
25. BAGGAGE CONVEYOR
26. STAIRS
27. BARRIER
28. SCALES
29. BALCONY
30. BAGGAGE HALL
31. COUNTERS

CONSTRUCTION.—The building is steel framed and is supported on piled foundations, the majority of the piles penetrating about 35 ft. below ground level, where they rest on a bed of ballast overlying green sand. A certain number of piles struck soft spots in the formation and penetrated deeper than this, one reaching to 70 ft. below ground level. A total of 433 piles of 17½ in. diameter and 195 piles of 20 in. diameter were driven for the support of the building and the adjacent transformer house. The steel framework is disposed in a series of cross-sectional frames spaced at 20 ft. 2 in. throughout the length of the structure. The ground floor storey is of orthodox beam and column construction. At the centre of the building on the west side a longitudinal plate girder 6 ft. 3 in. deep and continuous over three spans of 80 ft. 8 in., 100 ft. 10 in. and 80 ft. 8 in. respectively, carries the external balcony over the scissors rail crossing whereby intermediate rail connection is provided between the rail tracks inside and outside the building. To allow the necessary



First floor plan



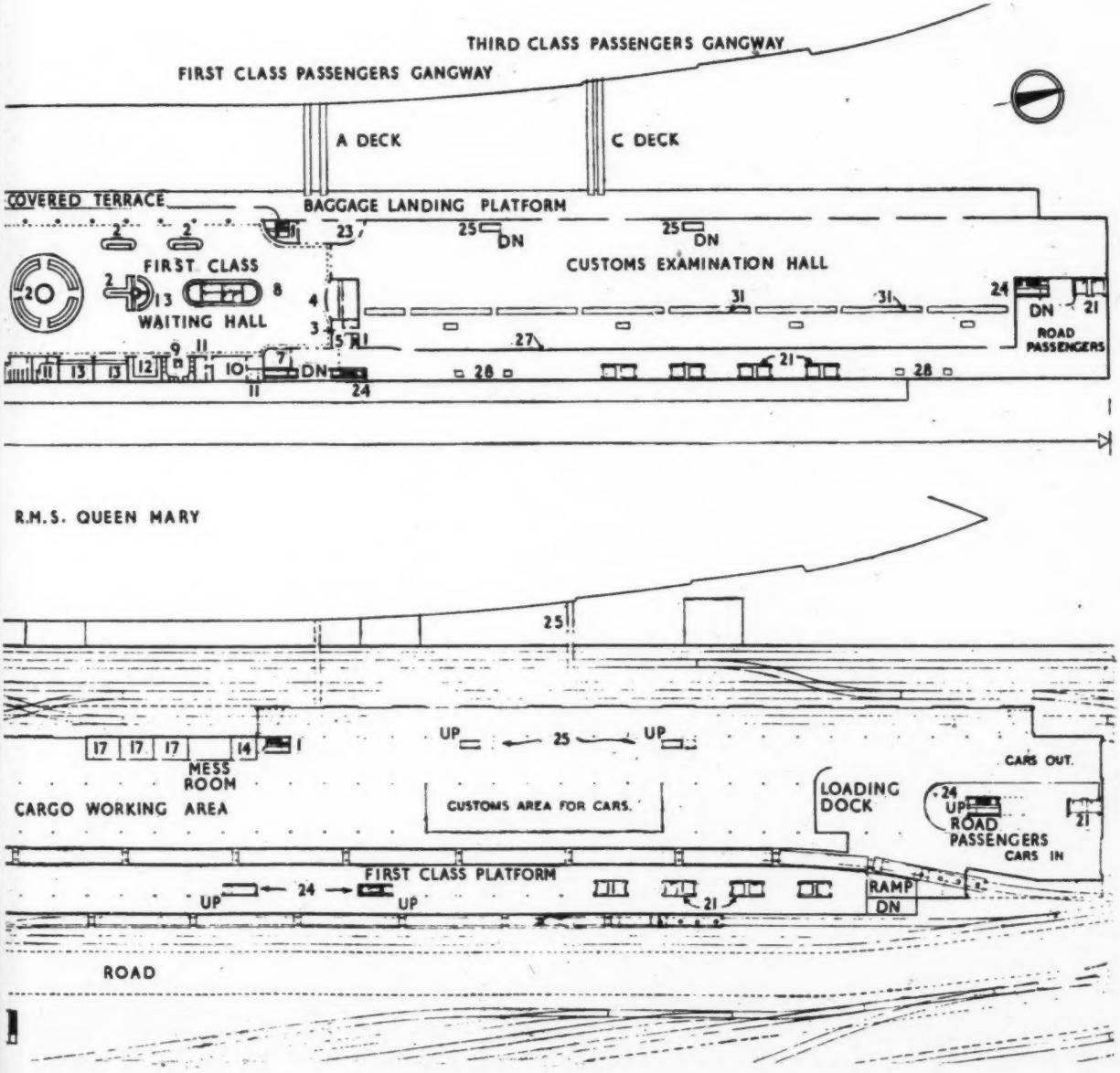
Ground floor plan

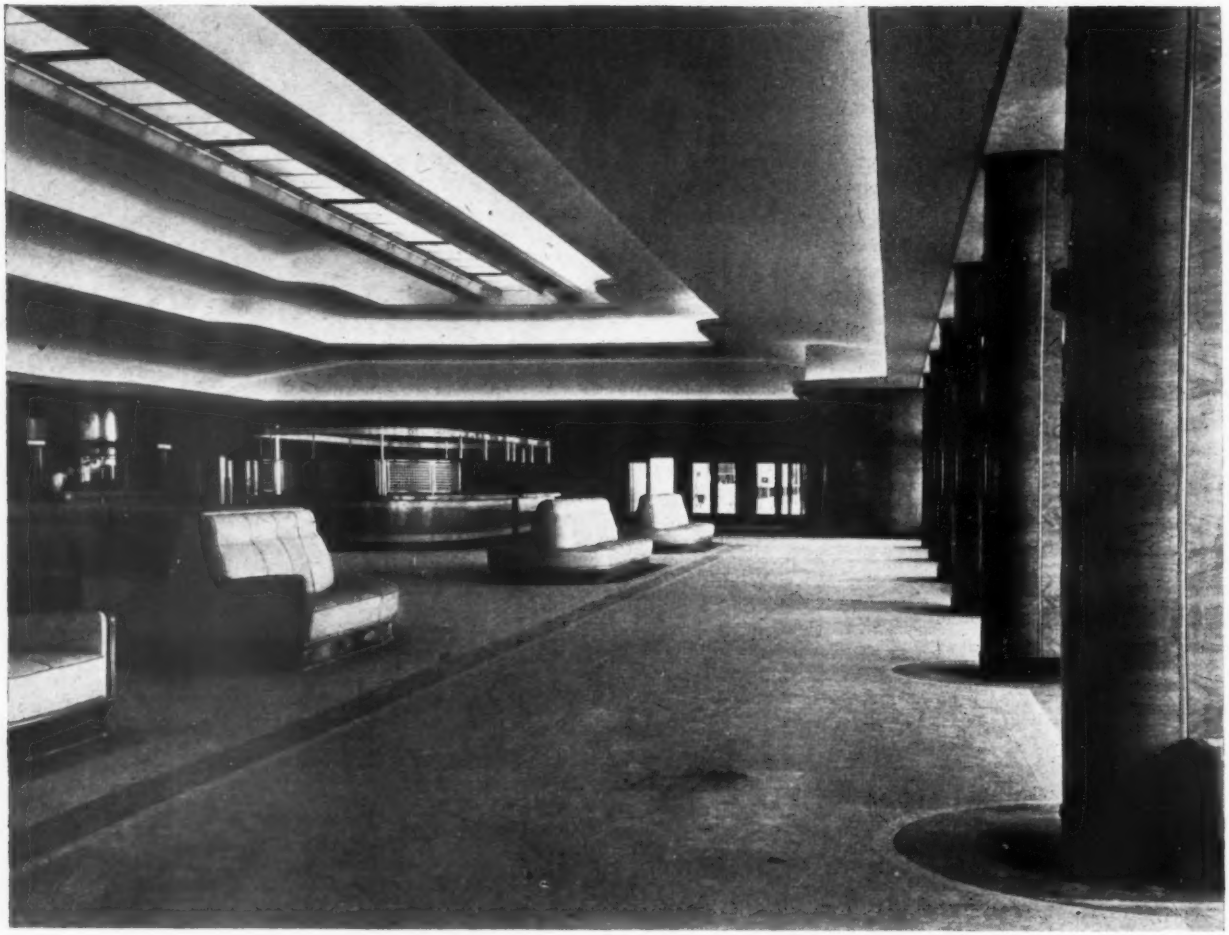
clearances, the intermediate supporting columns which divide this girder into the spans mentioned above had to be formed of 9-in. diameter solid steel shafts to achieve the necessary slenderness. From the first floor upwards the structure is designed as a two-pin continuous portal frame, springing from rocker bearings at first floor level. The span from centre to centre of rockers is 91 ft. 7¼ in. The height from rockers to outside of hip is 16 ft. 2¾ in. The rise from hip to ridge is 15 ft. 2⅝ in.

With the exception of three riveted and bolted site erection joints the portal frames are in continuous welded construction, the ruling section being formed of one 24 in. × 7½ in. RSJ with the addition of flange plates of varying width and thickness according to the incidence of loading. Walls consist of two skins separated by a 2-in. cavity. The outer skin consists of 4-in. thick precast concrete slabs faced with fine Portland stone aggregate. The inner skin is of 4-in. concrete building blocks and is secured to the outer skin at intervals by galvanized steel wall ties. In order to minimise the obstruction on the island platform arising from the structure of the building itself, the closing of this wall, when the building is not in use, is effected by a bank of 37 roller shutters, each 17 ft. 2 in. wide. These shutters are of the hand-operated type, but mobile power units are provided.

Suspended upper floors throughout the building are constructed in precast reinforced concrete hollow flooring units, supported on shelf angles attached to the webs of the main and secondary RSJ floor beams. The floors, which are surfaced in granolithic, are designed to carry a superimposed loading of 200 lb. to the square foot in the customs halls, with an allowance for point loads arising from loaded luggage trucks, and 100 lb. to the square foot in the waiting halls. For these loadings 6-in. deep units of an average span of 9 ft. 3 in. were used.

Two expansion joints are provided in the length of the building, one at each of the junctions between the waiting halls and the customs halls. At each





The cabin class passengers' waiting hall. Doors at the end lead to the customs examination hall.

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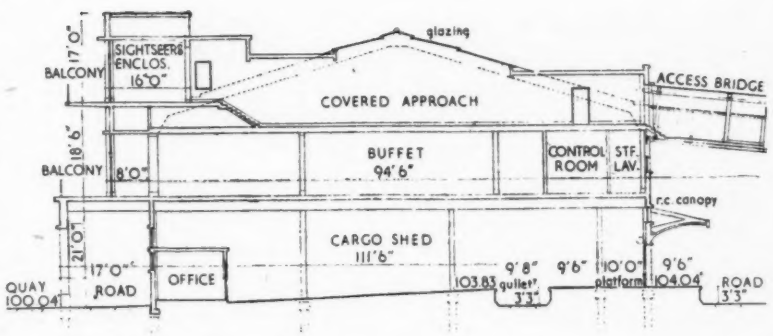
end of these joints the main cross sectional frame is afloat longitudinally, expansion taking place into it from both sides by means of slotted end connections in the floor beams, purlins, etc. Bronze sliding plates cover the joints in the concrete floors and flexible copper strips those in the precast block walls. Aluminium cover plates perform a similar function in roof glazing. The windows generally throughout the building are of pressed steel welded construction, galvanized after manufacture. The pitched roof is covered with asbestos cement combined sheeting, giving two thicknesses of material with a flat surface to the soffit and a ribbed finish externally. Aluminium glazing bars have been used for the long runs of glazing in the roof. The eastern side of the platform is covered by a reinforced concrete canopy 1,058 ft. 8 in. long, projecting 11 ft. 0 in. from the side of the building, with 1,150 9-in. diameter glass lenses cast into the 4-in. thickness of the barrel.

The reinforced concrete sigh seers' balcony is 18 ft. 6 in. above the first floor level. This balcony is constructed of a 4½-in. thick reinforced concrete slab supported on three longitudinal reinforced concrete beams spanning between the main frames of the building. One of these beams, along the back edge of the balcony, is formed above and not below the slab, and becomes the plinth of the parapet wall at the back of the balcony. For some 480 ft. in the centre of the building the balcony is widened outwards in two successive stages, the extension being carried by reinforced concrete cantilevers anchored back to the parapet beam or to the main steel framework. This widening enables the balcony to accommodate the enclosed verandah, and for the construction of which the columns, which form the similar enclosure on the first floor balcony below, are carried up to a distance of 32 ft., above the upper balcony level. Access to the upper balcony is by means of an overhead corridor passing through the slope of the roof above the division formed between the first and cabin class waiting halls. On the east side of the building this corridor connects with a 69-ft. span prestressed concrete footbridge, which is supported at its outer end on a separate building incorporating access stairs and the transformer house in which is accommodated the main sub-station equipment supplying power to the building. The bridge is on a slope of one in nine. The two 6 ft. 6 in. deep

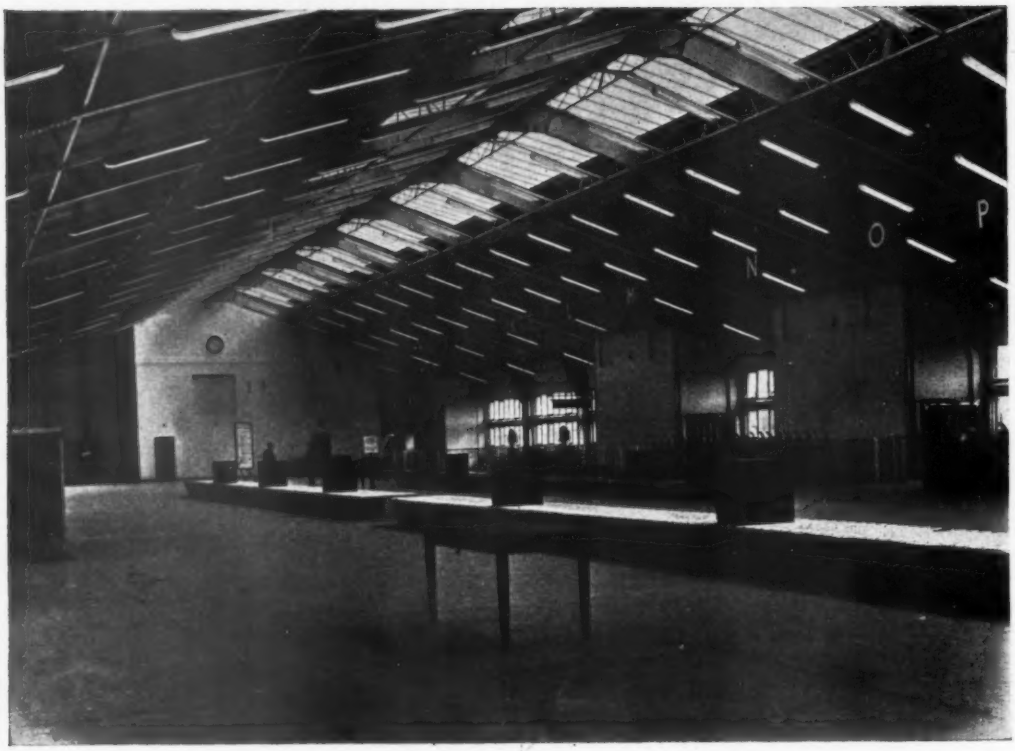
main beams were precast in sections, each beam being composed of a series of panels and posts through which run the five prestressing cables, each consisting of twelve 0·2 in. diameter high tensile steel wires surrounding a mild steel helix. The beams are interconnected below floor level by screwed steel tie bars running through precast concrete stretchers, and overhead by curved precast concrete transverse roof beams spanning between the tops of the posts. Precast concrete stringers connect the tops of the posts in a longitudinal direction, and the posts, roof beams and stringers are held together by a single post-tensioned cable passing through them. The stringers have an eaves gutter formed in the upper surface and also function as lintels to the window openings below them, of which the top flange of the main beams form the cills, and the posts the reveals. Pressed steel window frames are set in these openings and curved asbestos cement sheets form the roof. The floor is of hollow precast units laid on the bottom flanges of the main beams. Prestressing and anchoring of the cables were carried out at ground level on the Freyssinet system, the cables then being grouted up throughout their lengths and the completed beams lifted into position by two 15-ton railway cranes.

On the western side are three twin gangway assemblies which travel on rails along the first floor balcony. Each assembly comprises a turret carrying a pair of vertically revolving sponsons to which the gangways are attached through horizontal trunnions. Each gangway is telescoped in two sections, the outer end sliding into the inner end so as to allow for variation in the position of the ship's shell doors caused by changes in tide level, etc. Rotation of the sponsons to swing the gangways out to the ship and elevation and depression of the gangways themselves to the required angle is effected by hydraulic mechanisms, powered by an electrically driven hydraulic pumping unit built into the turret structure. The telescoping movement is effected by means of endless roller chains running in the sides of the shore section to which the outer or ship section is connected by means of detachable grabs. Detachment of these grabs is automatically effected by the weight of the gangway, coming on the hooks, which engage with the threshold of the ship's shell door. At the same time, the hydraulic pressure in the slewing and luffing mechanisms is released by a release valve so that the gangway is immediately free to follow any movement of the ship. In this condition the gangway will not respond to any operation of the controls except that of upward luffing, which is the first movement required to detach it from the ship. The movement of the control lever into the position appropriate to this operation causes the closing of the hydraulic release valve, to which reference has been made, so that the hydraulic circuits become operative again. The turrets, sponsons



Section from west to east [Scale: $\frac{1}{16}$"=1'0"]

The bar in the first class passengers' waiting hall.



The cabin class passengers' customs examination hall.

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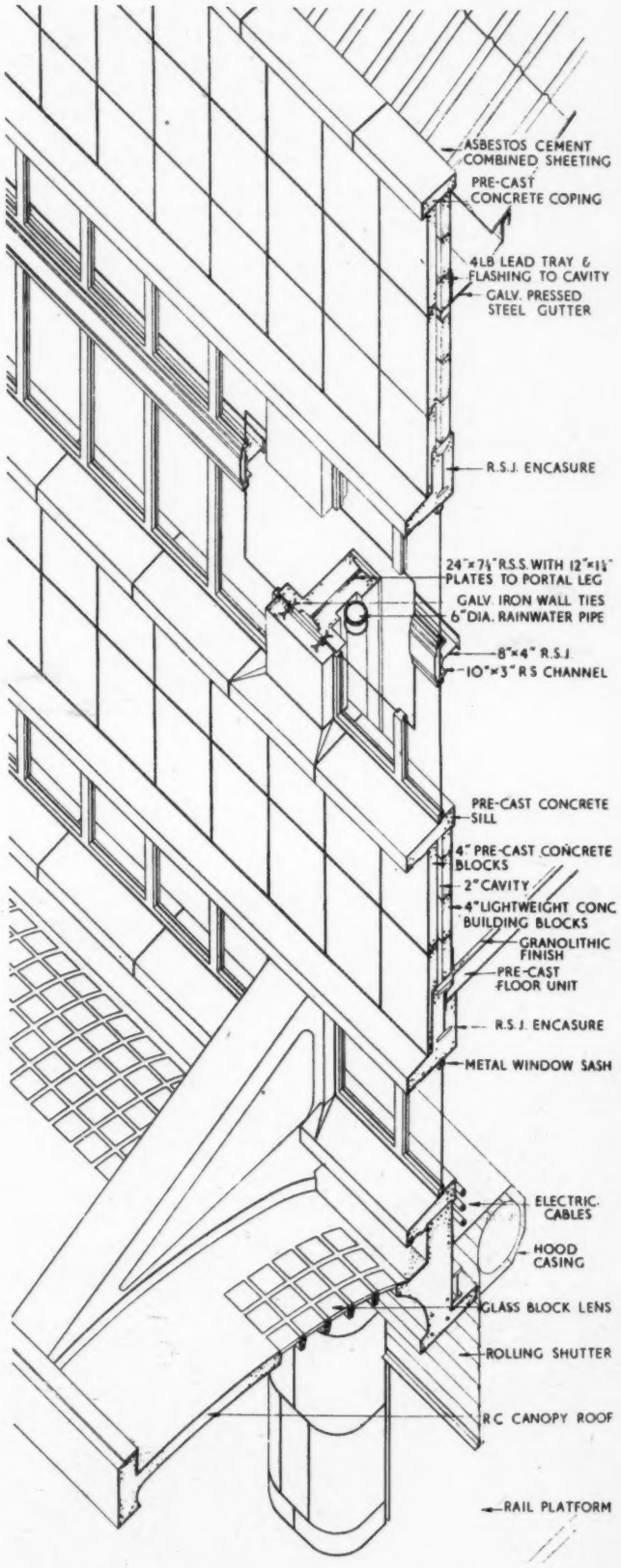
and gangways themselves are totally enclosed and constructed in aluminium alloy.

INTERNAL FINISHES.—First class waiting hall. Floor : 4·5 mm. thick linoleum ; main surfaces, marbled fawn ; panels and bands, marbled green ; border surrounds to seats, entrances and island stands, brown and black : walls ; main surfaces, Canadian wavy birch ; surrounds to architectural features, column casings and entrances, sapelli ; doors, display recess surrounds, bar front, entrance to administrative services, eucalyptus burr ; friezes and lighted sign features, Canadian burr maple : ceiling, matt cream : island settees, covered with green full grain leather. Reception suite : floor, beige carpet ; walls, white sycamore ; curtains, green and beige damask ; door surface and upholstery, green full grain leather. Ladies' retiring room : floor, beige carpet ; walls, diamond panels of eau de nil full grain leather divided by sycamore beading. Writing space : fixed desk, cedrona ; chairs, birch covered with green full grain leather. Cabin class waiting hall. Floor : 4·5 mm. thick linoleum ; main surfaces, cream and blue panels ; borders to seating and island stands, black and gold : walls ; main surfaces, bleached walnut, surrounds to architectural and constructional features, teak : ceiling, matt cream : top to bar counter, black laminated plastic.

SERVICES.—*Heating :* The cargo working area on the ground floor and the customs halls on the first floor are not heated, but all office accommodation and the waiting halls are heated electrically. The waiting hall heating is combined with the ventilating system by means of heater banks in the main ventilating trunking. A number of smaller heater banks are situated in the ventilating trunking in the roof space. These heater banks are controlled by multipoint thermostats situated at positions around the walls. The total heating load for the waiting halls is 733 kW. and the total fan loading approximately 25 h.p. The customs and other shed offices are heated by direct space heaters, mainly by wall-type convectors and standard tubular heaters. *Electricity:* Power and lighting services are provided by a separate external transformer sub-station situated on the east side of the terminal. The installation has been carried out in solid-drawn galvanized conduit containing VIR cables. The external lighting of the baggage-loading platform and quay on the west side of the building has been provided by scuttle-type 200-watt floodlights. These are arranged in two rows along the length of the west face of the building. The lower row, at a mounting height of 21 ft., and spaced at approximately 40 ft., provides illumination for the quay surface ; the upper row lights the baggage platform. The areas at the north and south ends are lighted by 1,000-watt floodlights mounted on the parapet of the building.

Lighting : Ground floor.—Direct tungsten lighting has been used and as the maximum available mounting height is comparatively small, fittings are spaced approximately 20 ft. apart in both directions. This results in an intensity of illumination of 4 foot-candles at floor level. 300-watt lamps in dispersive vitreous-enamelled reflectors and adjustable anti-glare filament shields have been used to obviate discomfort when looking down the length of the building. Additional lighting to facilitate the loading of box wagons, etc., has been provided on the west side rail road by means of 300-watt angle-elliptical fittings mounted 12 ft. above floor level. 15-amp. and 5-amp. switched sockets for general use are provided at 18 positions. The total number of main lighting points on the ground floor is approximately 400, with a loading of 115 kW. *Lighting : first floor, customs halls.*—Five-foot 80-watt low-tension fluorescent tubes in vitreous-enamelled industrial reflectors have been used, supported on special steelwork attached to the purlins. The illumination has been designed to give an intensity of 12-ft. candles at the customs examination benches, reducing to 5 ft.-candles at the walls. The fittings are spaced at 9 ft. centres transversely and 20 ft. 2 in. centres longitudinally at the two transverse positions nearest each wall, and 10 ft. centres for the remaining six centre positions. Auxiliary lighting is provided in each hall by means of 500-watt dispersive reflectors at 20 ft. 2 in. centres in the peak of the roof. There are, in all, 600 80-watt tubes. *Lighting : first floor, waiting halls.*—Indirect lighting by means of high-tension cold cathode fluorescent tubes concealed in suitable cornices has been used, consisting of two lines of warm white and one line of amber, designed to give an illumination intensity of 7·5 ft. candles at normal working plane. Each line of tubes consists of 8-ft. 6-in. tubes overlapped at the ends to give a continuous light source. Auxiliary lighting is provided by 300-watt tungsten fittings fitted into the ceiling. There are, in all, 4,500 tubes. *Second floor : sightseers' enclosure, approach bridge and corridor.*—150-watt tungsten lamps have been used in prismatic bulkhead fittings to prevent unauthorized interference, as this section of the building will be open to the general public. The fittings are mounted at 11 ft. with 10 ft. spacings. *Road passengers' escalator halls and stairways, customs offices, etc.*—Four reversible passenger escalators have been provided, two of which are installed on the railway platforms for train passengers, communicating direct with the vestibules of the waiting halls above,



Axonometric section of east wall

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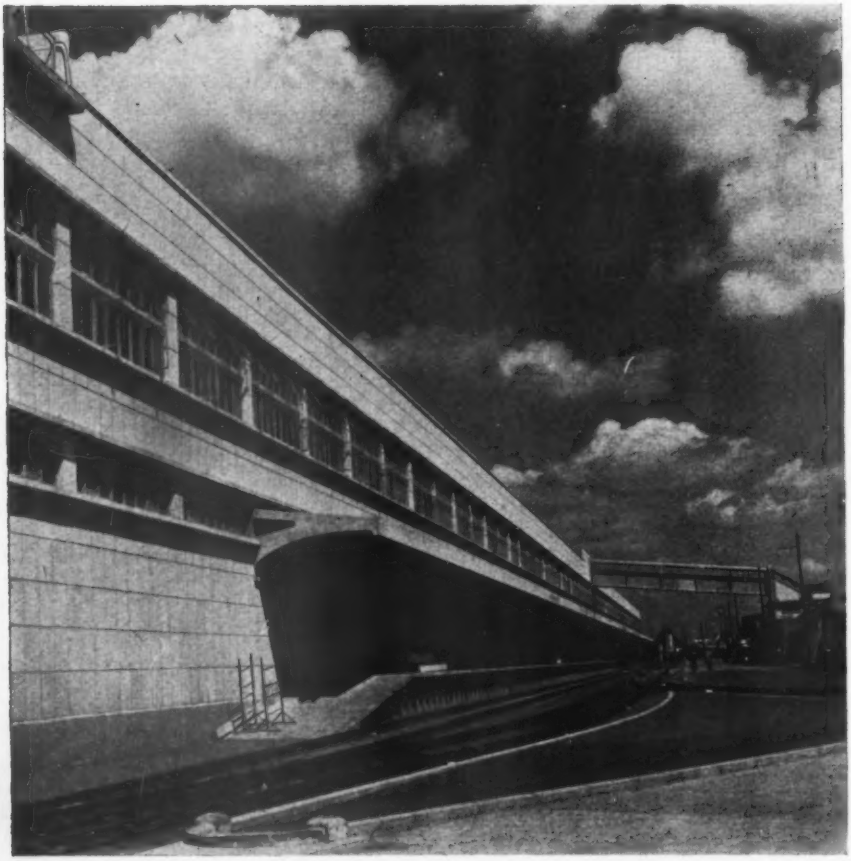
and two others are situated in positions at the extreme north and south ends of the building respectively, to deal with passengers arriving or departing by car. The escalators are 3 ft. wide, with a 30-deg. pitch. and are designed for a 17-ft. vertical rise in the case of the railway platform units, and 21 ft. in the case of the road passenger units. They are intended primarily for passengers with light hand baggage. The speed of the escalators has been arranged to deal with persons at the rate of 4,000 per hour without discomfort. Twenty combined goods and passenger lifts have been installed. These are disposed in pairs along the railway platform and the car loading platforms and communicate between the two floors only. One additional lift is situated at the extreme south end of the building, communicating between ground, first and second floors, and is primarily intended for the use of customs and waterguard staff, and for the transport of baggage to bonded storage in a room provided on second-floor level for the purpose. The lifts are of the two-speed push-button operated type running at a speed of 120 ft. per minute, slowing down on approach to the desired landing to 20 ft. per minute. The normal rated capacity is 30 cwt. in the car, with a 10 per cent. overload provision.

Heavy baggage and stored cargo is conveyed from the ground floor level, at which it is unloaded from the ship, to the first floor by four inclined reversible baggage conveyors of the wooden-slat type, which have been erected in line, in the western half of the building, and conveniently spaced so that two of the conveyors communicate between the ground floor and the north, or 1st class customs hall, and two others between ground floor and the south, or cabin class customs hall. These conveyors are inclined at an angle of about 30 deg., running at a speed of 70 ft. per minute.

Eight loud-speaker circuits are installed, distributed as follows. Nineteen loud speakers in the first-class waiting hall are concealed in part behind apertures in the overhead laylight and in part behind fascias cloaking the columns of the building. Fourteen loud speakers in the cabin class waiting hall, are similarly mounted and concealed. Special attention has been given to these two circuits to avoid stridency of the speaker output, and distraction to the hearers by using a larger number of speakers than would normally be required for the areas concerned, widely distributed and run at much reduced output. Two circuits, each consist of a line of sixteen railway platform back-to-back directional loud speakers suspended from the ceiling above the first-class and cabin-class railway platforms respectively. Sixteen dispersive type loud speakers in line cover the cargo working area of the ground floor. Eight ceiling type loud speakers are mounted in the sightseers' enclosure above the waiting halls, and overlooking the quayside. A number of re-entrant horn outdoor-type loud speakers are arranged to cover the car parking areas for first and third class passengers' motor cars and taxicabs.



The east front showing the cabin class passengers' platform and bridge from the electricity sub-station to the sightseers' enclosure.

INFORMATION CENTRE · INFORMATION SHEETS
QUESTIONS AND ANSWERS · CURRENT TECHNIQUE
THE INDUSTRY · PRICES · TECHNICAL ARTICLES

TECHNICAL SECTION

How is the Architect to effect necessary economies without, at the same time, reducing established standards? This paper, by F. J. Farmer, discusses the problem applied to the lighting of modern classrooms.

THE ECONOMICS OF CLASSROOM LIGHTING

by F. J. Farmer.

As the need for the greatest possible economy in the costs of constructing new schools is becoming established, the provisional sums introduced into the estimates to cover the specialist services are becoming particularly subject to close scrutiny with a view to considerable reductions being effected.

The electric lighting installation is not immune from such attention, but decisions to reduce should not be taken without being fully aware of the basic essentials of good lighting.

REQUIREMENTS

The Ministry of Education require 10-foot candles, *i.e.*, 10 lumens per foot square on the working plane, as a minimum degree of illumination in all classrooms, and this stipulation is mandatory for all types of school from the Primary upwards. The need for such intensities for Primary Schools is apt to be challenged in some quarters owing to the short hours of use and the lack of long periods of close work and visual concentration, the suggestion often being made that caretakers do not require 10-foot candles merely to clean the school. However, economies that can easily be effected by reducing standards and which are in direct proportion to the degree one is prepared to defy the regulations, are outside the scope of this treatise. As the old Board of Education recommended 10-foot candles for classrooms in 1936 and the modern recommendations of other responsible bodies are for still higher intensities, the lowering of the standard should not be undertaken without very careful consideration.

For any given area of working plane the watts required to produce a specified degree of illumination varies as the "Coefficient of Utilization." This factor is the percentage—expressed as a decimal fraction—of the total lumens output of the lamps employed that can be utilized on the working plane. The value of this coefficient is affected by various circumstances, *i.e.*, the dimensions of the room, the reflection value of the ceiling and walls, the suspension height of the fitting in relation to the working plane and the ceiling, and most important of all, the type of fitting or reflector used to house the lamp.

TYPES OF FITTINGS

The choice of fitting is governed by considerations of good lighting practice—other than the intensity on the working plane—such as the need to avoid glare, either direct or reflected, and the necessity of keeping the brightness factor of the light source as low as possible. To complete the list of requirements, the fittings should harmonize with the room to satisfy the æsthetic conceptions of the architect, and must meet the specification of the engineer in respect of robustness, the fixing arrangements and the electrical safety measures.

It will be appreciated that the examples given in the schedule are basic and there are of course many variations more or less conforming to the types and efficiencies. For instance, there is the "Benflux" type of fitting, which consists of an open opal reflector with the addition of a large vitreous enamel reflector surrounding the neck of the glassware to increase the downward component, a variation of Example "A."

The "Glassteel" type of fitting exploits the application of a metal reflector to an opal enclosed unit, also to increase the downward component and increase the efficiency of the unit.

The pear-shaped opal glass enclosed type fitting with, however, an open bottom—which several manufacturers produce—is an effective compromise between the open opal reflector ("A" and "B") and the completely enclosed unit ("C" and "D"), and will have an efficiency or coefficient of utilization for similar situations somewhere between the values of the factors operating for "A.B." and "C.D.," *i.e.*, higher than the completely enclosed unit, but lower than the ordinary opal open reflector. This type will, however, retain in theory some of the disadvantages of the open reflector in respect of "quality" of light, insomuch that with the direct undiffused downward component, there will be a greater intensity of shadow and a greater risk of reflected glare, than would obtain with the enclosed unit. There is, of course, no risk of direct glare from this type of fitting, as the aperture in the bottom is small enough and the lamp suspended high enough within the fitting to produce a most adequate cut-off.

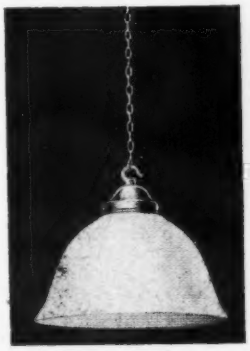
The adoption of any of these or other variations must remain the prerogative of the designer of the installation after all the factors have been considered.

For each set of circumstances there is, therefore, a minimum amount of watts to be employed below which the specified degree of illumination would not be obtained. By taking the best conditions obtaining in a modern classroom of area 528 sq. ft. (say, 24 ft. 0 in. by 22 ft. 0 in.), and applying the accepted basic formula for arriving at the coefficient of utilization and subsequently the illumination on the working plane, the performances as charted (see Appendix No. 1) can be established. It must be noted that the formula used allows for depreciation of the reflecting surfaces of the room and the normal gradual lowering of the lumens output of the lamp throughout its life.

From an analysis of the chart, it will be seen that in each example given, except "A," the total area of the classroom, *i.e.*, 528 sq. ft., can be covered by the particular method. As, however, the use of chalkboard lighting is now standard practice, the points producing the general lighting of the room can, if necessary, be sited to ignore 2 ft. 0 in. or 3 ft. 0 in. of the teaching end of the room, so concentrating more of the available lighting on the working area of the room occupied by the desks. Admitting this possibility, the area to be dealt with becomes $22 \times (24 - 3) = 462$ sq. ft., or $24 \times (22 - 3) = 456$ sq. ft., as the case may be, either of which being near enough for all practical purposes to the area of 450 sq. ft. covered by example "A."

It is thus established that under any circumstances *the absolute minimum* amount of tungsten lamp "wattage" required to produce the Ministry of Education's standard of 10 lumens per square foot in classrooms of approximately the dimensions given, is 900 *watts* (6×150), plus chalkboard lighting, and the housing of these six 150-watt lamps in common open opal type reflectors constitutes the cheapest possible method of conforming to the regulations, both in respect of capital costs and running charges. Needless to say, this type of lighting, æsthetically and optically, leaves much to be desired, and with only 900 watts employed the required intensity can only be obtained by accepting open type reflectors. As the use of 200-watt lamps in open reflectors, as in "B," still further aggravates the disadvantages of example "A," it is outside the scope of good practice, except for industrial situations or where mounting heights are, or can be considerably above the normal obtaining in classrooms.

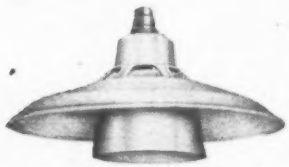
With the points more or less concentrated over the working area, rendered permissible by the introduction of the chalk-



1. *Ordinary opal, open-bottom reflector*

2. *Good example of spherical unit*

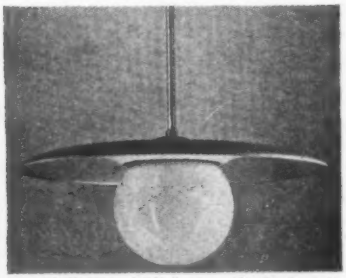
3. *Compromise between open and enclosed types*



4. "Benflux," open type reflector, with increased downward component

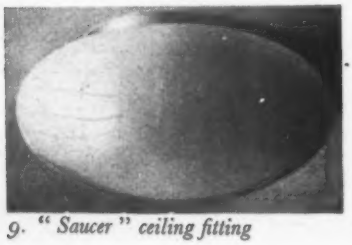
5. "Glassteel," addition of reflector to enclosed unit

6. Similar to E, ceiling fitting



7. Reflector added to spherical unit

8. Prismatic reflector, high efficiency but no glare



9. "Saucer" ceiling fitting

board lighting, either of schemes "C" or "D" will produce above 10-foot candles, together with a better "quality" of lighting with less risk of discomfort due to direct or reflected glare, conforming to accepted practice for commercial interiors, as apart from industrial or domestic applications. The capital costs and the running charges—1,200 watts against 900 watts—are higher than for scheme "A," showing that, although the intensities are not greatly exceeded, the extra "quality" has to be paid for. Scheme "D," including for only four fittings, housing 300-watt lamps, might appear to be cheaper in capital costs than "A," but in fact the extra cost of the large 16-in. diameter fitting above the cost of the reflectors used in "A" is greater than the saving in installation costs that can be expected by wiring only four points instead of six. The size of such 300-watt fittings is, however, a matter for further consideration when proposed for use in classrooms.

SIZE OF FITTINGS

In establishing the minimum amount of watts to produce the required intensity of illumination on the working plane, the minimum size of the fittings and glassware to house the lamps is also established. These sizes, recommended by the majority of manufacturers for enclosed units, are as given in the chart, and repeated herewith:—

Watts:	100	150	200	300
Diameter:	10 in.	12 in.	14 in.	16 in.

It must be noted, however, that two large firms at least accept responsibility for the use of 200-watt and 300-watt lamps in 12-in. and 14-in. spheres respectively, but the concensus of opinion is against the practice owing to difficulties in connection with the dissipation of heat and the higher surface brightness obtaining.

Whether the fittings are suspended from, or mounted directly on to the ceiling, the size is governed by the necessity of providing adequate housing for the specified lamp, although the shape can vary within prescribed limits from the sphere, which is used in this thesis as the basic design. In point of fact, however, the departure from the sphere has a tendency to reduce the apparent size. The use of six 14-in. diameter spheres, or four of 16-in. diameter, or to quote a possible alternative not yet mentioned, *i.e.*, eight 12-in. spheres housing 150-watt lamps, in classrooms of the size under review, might be considered by many to be æsthetically objectionable, such objections being more readily sustained the lower the ceiling becomes. Indeed, the use of only four 12-in. or 14-in. spheres has been known on occasions to cause apt, if impolite comment. The reader can partly test his reactions to the proportions by drawing a cross-section of a typical classroom and sketching in the fitting required to the same scale, and then varying the height of the ceiling.

APPEARANCE

If the proposals to achieve an economy in the cost of the construction of schools by materially lowering the height of the classrooms are implemented, it may be difficult to produce 10-foot candles on the working plane by means of ordinary tungsten lamp lighting, without the sources of light becoming objectionally "heavy" and obtrusive, and without contravening the Ministry of Education's regulations in respect of mounting height, which requires that no luminous portion of a general lighting unit shall be lower than 9 ft. 0 in. from the floor.

The introduction of fittings sunk into the roof construction flush with the surface of the ceiling might be offered by some as a solution, particularly where ceilings are low. Units large enough to house the size of lamps required, or alternatively, a multiplicity of smaller units, would have to be used, however, and such suitable flush fittings are expensive to buy and install. Further, in many of the roof constructions now being employed on school buildings, the available depth is so small that flush fittings would have to be specially designed and mounted in specially prepared cavities, the resultant costs being disproportionately high. A larger amount of electricity would be required to produce a result equal to general diffused unit lighting, and as the ceiling would only be illuminated by reflection, sharp contrasts between the light sources and the surrounding surfaces would exist and the general effect is likely to be unsatisfactory.

Another possible method of reducing the domination of the room by the lighting fittings might be to employ the flat saucer—elliptical in section—type of ceiling fitting, when the depth of the projection from the ceiling can be limited to a maximum of 7 in. or 8 in. This type of fitting, however, cannot house a 200-watt lamp, and a number of smaller lamps mounted horizontally within each fitting must be employed. Assuming the economic number of fittings to be used over the working area to be six, then expensive fittings of at least 16-in. diameter would be required housing one of the various combination of lamps as given herewith to provide the equivalent of a 200-watt lamp:—

No.	Size.	Total Watts.	Lumens Output	Lumens Per Watt	Percentage efficiency compared with 1-200 W.
4	60 W.	240	2,660	11·083	81·34
3	75 W.	225	2,649	11·773	86·4
2	100 W.	200	2,540	12·7	93·2

The larger a tungsten lamp is, the greater its efficiency or its output of lumens per watt, so that in using groups of smaller lamps to replace larger single lamps, considerable efficiency can be lost. The percentages given in the last column of the foregoing table are based on one 200-watt lamp, emitting 2,725 lumens, *i.e.*, 13·625 lumens per watt, taken as 100 per cent., and the loss of efficiency exposed, *i.e.*, up to 18 per cent., is a factor that cannot be dismissed in an economic survey. In addition to the expense of the fittings and the loss of efficiency, there is the shortening of the life of the lamps that are used in the horizontal position to be reckoned with, the whole becoming an appreciable disadvantage and a considerable charge to æsthetics.

It has thus been demonstrated that both methods of avoiding the use of the large fittings required by schemes "C" and "D" can be expensive in capital costs and —by reason of the higher "wattage" and lowered efficiencies—in running charges.

There still remains scheme "E" employing fluorescent lighting, but to persons in search of economies the capital cost can at first sight be alarming.

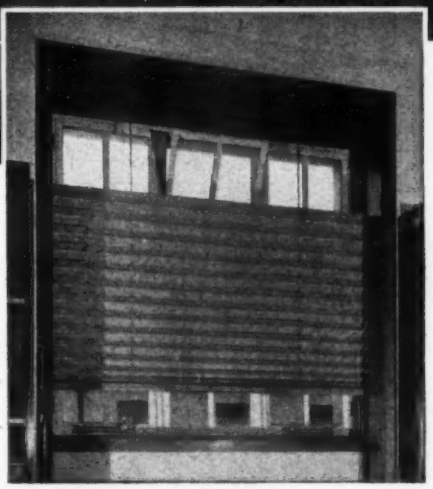
FLUORESCENT LIGHTING

*As will be appreciated, the economic difference between fluorescent and tungsten lighting installations, producing equal lighting results, can be approximately assessed by (1) finding the extra capital cost of the fluorescent system; (2) amortizing this amount into an extra cost per annum (depreciation and interest), and (3) setting this cost against the value of the saving in the charges for electricity per annum made possible by using fluorescent tubes, which consume less than half the amount of energy required by the tungsten lamps of equivalent light output. The amount of saving is governed by the load factor of the installation—*i.e.*, the number of hours of use per annum expressed as a percent-

* See *The Builder* December 26, 1947; *The Electrical Times* November 27, 1947; *Lighting Economics*.

R.I.B.A. HEADQUARTERS
ASTON WEBB COMMITTEE ROOM

ACCORDO *Blinds*



EFFICIENT in operation, and unobtrusive when not in use, ACCORDO Blinds have been specified for leading hospitals, schools, public and commercial buildings throughout the country. Springs have been eliminated and other moving parts kept to a minimum. ACCORDO Blinds have a trouble-free gravity action, enabling adjustment from top and bottom to give light or shade exactly where required. The distraction of noisy flapping blinds is effectively prevented when windows are open by the use of special guide rods. ACCORDO Blinds can be fitted to horizontal laylights or sloping roof lights, and can be supplied in any widths up to 20 feet. ACCORDO Dark Blinds, which give complete obscuration of light, are recommended for laboratories, operating theatres and rooms used for instructional or cinematic purposes. Illustrated literature will be sent on request.

HILLS

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age of the total hours possible (8,760)—and the tariff operating for electric lighting, and it follows that for a particular tariff there is an amount of use per annum above which the savings exceed the expenditure and the fluorescent lighting installation becomes the cheaper.

Tariffs for school lighting are high and this factor, by increasing the amount of saving possible, lessens the gap between the two systems. Lest this statement be challenged, let it be noted that the majority of the apparently cheaper "all-in" tariffs covering all services in the building, are based on the use of a much greater amount of electricity per annum than usually obtains in schools, so that unless a particular school is used intensively during the evening, the high flat rate charges for the lighting are almost invariably found to be the most economical. Generally, it can be shown that at a flat rate tariff of 5d. to 6d. per unit for lighting (which incidentally prevails over a large part of the country), the lighting system must be used for approximately 50 hours per annum for each £1 of difference between the cost of supplying and fixing a tungsten or fluorescent unit of equivalent light output before economic equality is attained. As the difference in cost between a 14-in. sphere housing a 200-watt lamp and its lighting equivalent, a 5-ft. fluorescent fitting, can be as much as £4 to £8, it follows that a user of from 200-400 hours per annum at this tariff is indicated before fluorescent lighting can be economically justified. Technical Schools and modern Secondary Schools with an active Evening Institute will attain this user and for these, despite the heavy initial costs, fluorescent lighting will be cheaper. For Primary and Junior Schools with the use of artificial lighting for teaching purposes, often as low as 50-100 hours per annum, fluorescent lighting cannot normally be justified when economies are pressed for.

When, on æsthetic grounds, the *necessary* bulk of the normal enclosed unit tungsten fitting is objectionable, or where, because of comparatively low ceilings, such fittings are definitely unacceptable, recourse must be made to the use of either the flush type, the saucer fitting, or fluorescent lighting. If expensive flush fittings or saucer type fittings are employed, with the added cost of overcoming the fixing and constructional difficulties, it follows that the difference between the capital costs of these types and fluorescent fittings is considerably less than for ordinary spheres, etc., lessened maybe to a point when, even for Primary Schools, an economic balance is obtained and fluorescent fittings can be introduced.

As shown on the chart, scheme "E" will provide over 10-foot candles on the working plane for the particular application and the fittings need not project below the ceiling more than 4 in. to 6 in. The types of fluorescent fittings shown in scheme "E" are the simplest and cheapest possible, but the actual tube is naked and unscreened. The surface brightness of fluorescent tubes can be tolerated without "disability glare," however, at all angles of more than 30° taken from the horizontal through the eye to the light source. Taking the horizontal distance from the eye of the rearmost child to a point below the front fitting in a classroom of the size under review at 14 ft. 0 in. to 15 ft. 0 in., then Tan 30° × 14 ft. or 15 ft. will give the vertical height of 8 ft. 1 in. to 8 ft. 7 in. from the eye to the fitting. Assuming 3 ft. 0 in. as the distance from the floor to the eye of a seated child, a minimum height for the suspension of bare tubes is established at 11 ft. 1 in. to 11 ft. 7 in. from the floor, if objectionable glare from the light source is to be avoided. It follows then that when suspensions appreciably lower than these are dictated by construction, troughing or screening for the lamp should be employed if the principles of good lighting are to be observed to the full. In actual practice slightly lower suspension heights might be tolerated without undue discomfort.

SUMMARY

In summary, assuming a normal classroom of 520 to 540 sq. ft. with chalkboard lighting as an established feature, the statements given below can be made:—

(1) The cheapest possible method of producing 10 lumens per square foot on the working plane is by means of six 150-watt lamps, total 900 watts, housed in open shades or reflectors. The "quality" is poor and the intensity just barely attained.

(2) Better quality lighting, a reasonable requirement in classrooms, can be obtained by using enclosed diffusing units, but six 200-watt lamps, or four 300-watt lamps, in 14-in. or 16-in. diameter fittings, *must* be employed, but the size of the fittings might be objectionable. (Note: by limiting the choice of fitting to several firms, 12-in. or 14-in. units might be used.)

(3) That, as an alternative, saucer ceiling fittings or flush types could be used, but these are expensive and comparatively inefficient.

(4) That generally, the installation of fluorescent lighting is a long-term economy in Technical Schools and Evening Institutes despite high initial costs, and in the case of the Primary Schools should be seriously considered when the size of the ordinary enclosed unit is found to be objectionable, and the use of saucer type or flush fittings is contemplated as a means of reducing the objections.

Appendix No. 1. Lighting of Classrooms (24 ft. by 22 ft. = 528 sq. ft. Area)

Scheme	Size of Lamp	Fitting	Typical Section of Fitting	Co. of U. and Area *	Number of fittings	Total area dealt with	Watts used
A	150 Watts	Good opal glass reflector, open at the bottom, with good "cut-off," 11 in.—12 in. diameter		·47 75	6	450	900
B	200 Watts	Ditto. 12 in.—13 in. Diameter		·47 102	6	612	1,200
C	200 Watts	General diffusing type of fitting, totally enclosed, 14 in. Diameter; smallest and cheapest form the sphere		·41 89	6	534	1,200
D	300 Watts	Ditto. 16 in. Diameter		·41 145	4	580	1,200
E	5-ft. Fluorescent tube. Nominal Watts, 80. Actual, 90	Open type 5-ft. fluorescent fitting—"Seagull" pattern, flat batten or semi-reflector type fixed on the ceiling		·4 98	6	588	540

* Coefficient of Utilization and area over which an intensity of 10 foot-candles will be produced.

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

INFORMATION CENTRE

4.59 planning: urban and rural

COUNTRY PLANNING

A Full Life in the Country—The Sudbury and District Survey and Plan. Keith Jeremiah, with foreword by Lewis Mumford. (B. T. Batsford, Ltd., 1949. 12s. 6d.)

Publication of the report written in the latter half of 1946 (86 pages, over 40 illustrations).

This report presented to the Sudbury and District Planning Association is a pleasant and sincere document, which deserves to be remembered because it is an attempt by an unofficial body, supported by voluntary contributions, with the aid of a professional expert, to chart the needs of a small market town and its village clusters and to formulate sensible proposals.

4.60 planning: urban and rural

PLANNING OF CAMBRIDGE

Cambridge Planning Proposals. William Holford and H. Myles Wright. (Cambridge University Press. 1950. 30s. 2 Vols.)

Publication in full of this admirable report to the Cambridgeshire County Council (Vol. 1, 102 pp., 9 illustrations. Vol. 2, 58 maps and drawings).

This report, covering the town of Cambridge and the neighbouring land and villages, forms the basis for part one of the county development plan due to be submitted to the Minister of Town and Country Planning in 1951. In the preparation of this report the consultants had the full collaboration of the county planning office. Details of the proposals can be found in the AJ Dec. 29, 1949, pp. 730-32.

19.99 construction: details

STRUCTURAL STEEL DESIGN

Examples of Structural Steel Design. V. H. Lawton (British Constructional Steelwork Association, London, 1950).

First of a series of brochures. Roof truss design, numerical examples. 19 pp., 11 figures, 3 tables.

Existing handbooks are still based on regulations which were largely superseded by BS 449:1948 "The Use of Structural Steel in Building." Worked examples conforming with the new code are therefore a welcome contribution to the designer's files. Certain new assumptions such as those for wind loading are entirely different and appreciable savings in steel are now possible. The examples in this brochure cover the orthodox type of triangulated riveted roof truss of 50 ft. span, and the design is completely worked out for trusses as used in single-bay and in triple-bay single-storey buildings of 150 ft. length, with 16 ft. height to eaves. Asbestos sheets and glazing are used as roof covering. The rafter, with the purlin loads between panel points, is designed as a continuous beam thus affecting economy. The main feature of this brochure is that all the calculations are based on the new British Standard. Further articles are to follow on the design of other structural elements. If extended to modern types of steelwork, this series should meet a widespread demand among busy designers.

20.185 construction: complete structures

BLOCK OF FLATS AT ROME

Immeuble à Appartements, Viale Pinturicchio, à Rome. Architect: V. Luccichenti. (La Technique des Travaux [Belgium], May-June, 1950, pp. 147-150.)

11-storey block of flats. Reinforced concrete frames. Interesting architectural effects. 7 illustrations.

About 50 apartments of two and three rooms are provided by this building, which is 5,300 sq. ft. in plan, standing in grounds of 12,400 sq. ft. Complete floors of two-room flats alternate with those of three-room flats. Balconies projecting nearly 5 ft. provide fresh air and sunshine, while the adjoining deep loggias give protection against heat. Interesting effects are obtained by tapering the balconies and by the use of different facing materials.

26.72 services and equipment: miscellaneous

WATER SOFTENING

Water Softening. Report of the Water Softening Sub-Committee of the Central Advisory Water Committee. (HMSO, 1949. 1s. 6d.)

Report of the Committee appointed by the Ministry of Health on the desirability or feasibility of softening public water supplies.

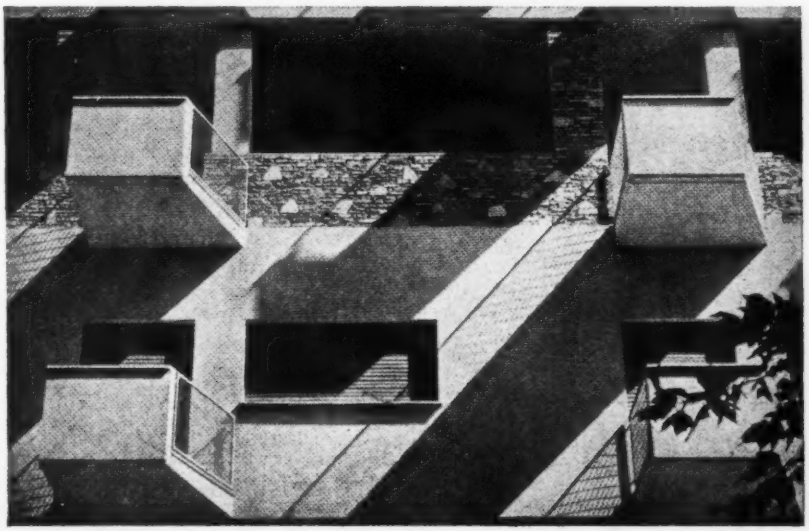
Hardness in water is due to the presence of various impurities; the degree of hardness, which is measured in particles per million, can only be satisfactorily determined by analysis. Even rainwater may contain up to 500 p.p.m. The fact that one half of the population of Great Britain uses moderately hard, hard or very hard water gives some idea of the magnitude of the problem.

Injurious impurities are removed by treatment before water is distributed, but the remaining impurities, principally calcium and magnesium salts, have the soap destroying property mainly associated with hard water. The soap curd caused thereby also has a deleterious effect on fabrics and the deposition of scale from hard water in domestic hot water system lowers their efficiency and eventually blocks the pipes (although this may be reduced by the use of a calorifier or by keeping the temperature reasonably low). It is calculated that these various disadvantages of hard water may equal a loss of over £1 per annum, per capita, while, of course, washing with soft water is much easier and more pleasant.

The disadvantages of hard water may be overcome: (1) by the use of reagents for softening the water after it is drawn from the tap, but soda in excess is objectionable to the skin and harmful to some fabrics while alternatives are expensive; (2) by the use of soapless detergents, but although there has been an increase in the use of these, their general use cannot be foreseen and the waste from them would be more difficult to treat in the sewage works; (3) by the use of domestic water softeners—those of the base-exchange type being efficient, but there is a possible risk that the water may be corrosive and the total cost per annum appears to be from 15s. to £1. The report discusses three processes for softening public water supplies and recommends as the most suitable the base exchange process, by which softened water could be supplied for an annual cost of only 3s. to 4s. per head. Hence the general conclusion is reached that from the points of view of economy, labour saving and convenience, the softening of public water supplies for domestic purposes is desirable. With regard to industry, however, although in certain circumstances the softening of the supply might be an advantage to an industrial undertaking, in general it is considered that as a whole industry would not benefit. To some industrial processes it would be a distinct disadvantage due to the increased proportion by volume of impurities, while some actually require hard water.

The report points out a few other disadvantages of softened water, such as its slight corrosive effect on metals, but does not consider them adequate objections. For example, the absence of calcium in softened water should not affect the public health, since we obtain only 5 per cent. of the calcium we require from water. Our inveterate tea-drinkers might, however, be concerned by the suggestion that base exchange water makes a darker, but less palatable brew.

Nevertheless, the Committee definitely recommends softening the public water supply as a service which should be encouraged and extended as circumstances permit.



Flats at Rome. See 20.185.

Readers requiring up-to-date information on building products and services may complete and post this form to The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order please).

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Please ask manufacturers to send further particulars to:—

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A.J. 10.8.50

Announcements

This year, for the first time, the DSIR is taking part in the Model Engineer Exhibition, which is open at the New Horticultural Hall, Westminster, until August 19. The exhibits will illustrate some of the work which is being done at a number of the DSIR's stations and the part which models play in research.

There are two exhibits from the Engineering Division of the National Physical Laboratory, a supersonic wind tunnel and the micrometers used to measure the movement of parts of the structure of the Tower of London. The wind tunnel was first used in 1926, when it was the only one in this country. The micrometers have been measuring movement at the Tower since 1916. It was these instruments that revealed recently that the quay wall of the Tower, which in places is 300 feet thick, is moving gradually away from the Thames. The model on show from the Fuel Research Station is of the Calorimeter Building, specially constructed for work on domestic heating. It consists of four cabinets, each the size of a room in a small house, where the performance of domestic appliances is measured. The heat passing through the walls, floor and ceiling is automatically recorded without the instruments affecting the performance of the stove or whatever provides the heating. The model shows the construction of the rooms and the way in which the measurements are made from the control room.

Buildings Illustrated

Ocean Terminal, Ocean Dock, Southampton. (Pages 137-144.) Designed by J. H. Jellett, O.B.E., M.A., M.I.C.E., Docks Engineer, British Railways, Southern Region. Chief Assistant Architect: C. B. Dromgoole, L.R.I.B.A. General Contractors: Staverton Builders Ltd. General Contractors for furnishings: Maple & Co. Ltd. Sub-contractors: Plumbing, Joyce Bros. Ltd.; external wall blocks, The Blokcrete Co. Ltd.; terrazzo paving, Art Pavements & Decorations Ltd.; pre-cast floor slabs, Concrete Ltd.; glazing, south elevation, Haywards Ltd.; window glazing, Faulkner Greene & Co. Ltd.; roller shutters, John Booth & Sons (Bolton) Ltd.; roofing, Roberts Adlard & Co. Ltd.; roof glazing, W. H. Heywood & Co. Ltd.; windows, Henry Hope & Sons Ltd.; plastering and granolithic floors, A.C.V. Telling (Southern) Ltd.; smoke extraction plant, Supervents Ltd.; illuminated direction signs, Straight-Lite Reflectors Ltd.; external and customs lettering, Southern Signs Co.; lifts, Hammond & Champness Ltd.; escalators, J. & E. Hall Ltd.; baggage conveyors, Sovex Ltd.; public address system, Ardente Acoustical Laboratories Ltd.; switchgear, Allen West & Co. Ltd.; internal lighting, customs halls, The English Electric Co. Ltd.; supporting steelwork, waiting halls, E. Webb & Co. Ltd.; internal lighting, waiting halls, Phœnix Electrical Co. (London) Ltd.; ventilating and heating in waiting halls, Viaduct Heating & Ventilating Co. Ltd.; light fittings, Hume Atkins Ltd.; foundation piling, West's Piling & Construction Co. Ltd.; constructional steelwork, Cargo Fleet Iron Co. Ltd.; passenger and telescopic gangways, Structural & Mechanical Development Engineers Ltd.; approach bridge, The Pre-Stressed Concrete Co. Ltd.; leather for seating, Connolly Bros. (Curriers) Ltd.

The Economics of Classroom Lighting. (*Pages* 145-147). Fittings illustrated: 1, Hailwood and Ackroyd Ltd.; 2 and 6, The Merchant Adventurers Ltd.; 3, Falk and Stadelman and Co. Ltd.; 4 and 5, Benjamin Electric Co. Ltd. (suppliers, GEC); 7 and 8, Troughton and Young (Lighting) Ltd.; 9, Holophane Ltd.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcement

25s. per inch; each additional line, 2s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: EMPLOYMENT REGISTER, WREN PARK, WHITELEAFE. Tel.: Uplands 0935. 991

NORTH THAMES GAS BOARD.

Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £650 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications, and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 9"57. 4341

LONDON COUNTY COUNCIL.

Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (816) 4558

FLINTSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of a SENIOR QUANTITY SURVEYOR in the County Architect's Department at a salary in accordance with Grades A.P.T., VIII-IX (commencing at £710 per annum rising to £900 per annum). Applicants must be Fellows or Professional Associates (Quantities Sub-division) of the Royal Institute of Chartered Surveyor's, and must be thoroughly experienced in the preparation of Bills of Quantities, Specifications, and Schedules of works for large contracts carried out by Local Authorities, including measurement, adjustment and the preparation of interim and final accounts. The appointment is superannuable and subject to the passing of a medical examination.

Applications will be considered from Registered disabled persons.

Applications, on a form to be obtained from the undersigned, together with the names and addresses of three persons to whom direct reference can be made, are to be submitted to me not later than the 21st August, 1950.

W. HUGH JONES,
Clerk of the County Council.

County Buildings,
Mold. 4941

BOROUGH OF BEXLEY. QUANTITY SURVEYOR (TEMPORARY).

Applications are invited for this appointment within Grade A.P.T., VI (£595—£660) plus £30 per annum London "Weighting."

Forms of application, with conditions of appointment may be obtained from the Borough Engineer and Surveyor, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by 21st August, 1950.

Canvassing, directly or indirectly, will disqualify.

W. WOODWARD,
Town Clerk.

Council Offices,
Bexleyheath. 4932

KENT EDUCATION COMMITTEE. MEDWAY COLLEGE OF ART, EASTGATE, ROCHESTER. DEPARTMENT OF ARCHITECTURE.

STUDIO MASTER (Design and Building Construction) required to commence in September next, or as soon after as possible. Burnham Technical Scale salary with additions for degree (A.R.I.B.A.), approved training, professional and/or teaching experience. In addition, for suitable candidate, post will carry responsibility allowance up to a maximum of £100 per annum.

Apply by letter to the Principal of the College. 4907

RHYMNEY URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECT.

Applications are invited for the permanent appointment of an Architect to the above Council. The salary will be Grade V (£520—£570 per annum) of the A.P.T. scales.

Applicants will be expected to prepare plans, specifications, bills of quantities, etc., for the Council's housing schemes, and supervise the housing contracts. They should preferably be members of the Royal Institute of British Architects.

The appointment is subject to the passing of a medical examination and to the provisions of the Local Government Superannuation Act.

Applications, stating age, qualifications, experience, etc., with the names of three persons to whom reference may be made, should reach the undersigned not later than Monday, the 4th day of September, 1950.

(Signed) R. T. LEWIS,
Clerk and Chief Financial Officer.

Council Offices,
Rhymney, Mon.
24th July, 1950. 4915

COUNTY OF LINCOLN—PARTS OF LINDSEY. COUNTY ARCHITECT'S DEPARTMENT. APPOINTMENT OF BUILDING INSPECTOR.

Applications are invited from persons having sound practical knowledge of building and able to prepare explanatory drawings and brief specifications and rough estimates for maintenance work and for small building work.

The appointment is on the permanent staff and superannuated. The salary payable is in accordance with APT., Grade IV, commencing at £480 per annum, rising, subject to satisfactory service, to £525 per annum.

It is the intention of the County Council to provide a car for the use of the person appointed and for the use of other persons, and therefore no car allowance is payable. Normal subsistence is payable.

Applications stating age, training, present and past appointments and experience, to be submitted to the undersigned, together with copies of three recent testimonials, not later than Monday, 21st August, 1950.

A. RONALD CLARK,
A.R.I.B.A., A.M.T.P.I.,
County Architect.

County Offices,
Lincoln. 4945

BOROUGH OF CHIPPENHAM. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Architectural Assistant in the Borough Surveyor & Water Engineer's Department at a salary in accordance with the National Conditions of Service for Local Government Officers, that is, Grade IV for Architect with Intermediate Examination R.I.B.A., and Grade V for Registered Architect. The appointment will be subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing a medical examination.

Candidates with experience in connection with Municipal Housing Works and other Public Buildings will be given preference, and should possess qualifications laid down by the National Conditions of Service for Local Government Officers.

Applications, in envelopes endorsed "Architectural Assistant," stating age, qualifications, experience, and accompanied by the names of three persons to whom reference can be made, must be received by the undersigned not later than Saturday, 26th August, 1950.

S. F. A. CLARKE,
Town Clerk.

The Old Palace,
10, Market Place,
Chippenham, Wilts.
28th July, 1950. 4959

HORBURY URBAN DISTRICT COUNCIL. ENGINEER AND SURVEYOR'S DEPARTMENT. TEMPORARY ARCHITECTURAL ASSISTANT.

The Council invite applications for the above appointment, which is estimated to last 3-4 years. Salary in accordance with Grade IV, A.P.T. Division, of the National Joint Council Scheme of Conditions of Service (£480 per annum, rising by annual increments of £15 per annum to a maximum of £525 per annum).

Applicants must have had experience in the carrying out of surveys, preparation of plans, specifications for architectural work usually undertaken by a Local Authority, and in particular housing. Proficiency in the complete process of taking off and billing quantities for new housing will be considered an advantage.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, the National Joint Council Scheme of Conditions of Service, and the person appointed will be required to pass a medical examination.

The Council will be prepared to allocate a Council house to the successful applicant, if desired.

Applications, endorsed "Architectural Assistant," stating age, present and previous appointments, and experience, together with copies of two recent testimonials, should be received by the undersigned not later than Saturday, the 26th August, 1950.

H. SENIOR,
Clerk of the Council.

Town Hall,
Horbury, near Wakefield.
31st July, 1950. 4958

BRITISH ELECTRICITY AUTHORITY. EASTERN DIVISION.

Applications are invited for the following posts in the Generation Construction Department at Divisional Headquarters in North London:—

GRADE I DRAUGHTSMEN (STRUCTURAL).

Commencing salary range £518-£636 per annum, which includes London Allowance.

Applicants should have had experience in the design of structural steelwork and reinforced concrete structures.

Initial salaries will be in accordance with the previous experience and qualifications.

The salaries are in accordance with the scale at present operating, but will be subject to negotiation through the medium of the appropriate negotiating body.

The appointments will be superannuable in accordance with the British Electricity Authority and Area Boards Superannuation Scheme.

Applications stating age, experience, and present position, and endorsed "Grade I Draughtsman (Structural)," should be submitted to arrive not later than 18th August, 1950, to the Divisional Controller, British Electricity Authority, Eastern Division, Northmet House, Southgate, N.14.

W. N. C. CLINCH,
Controller.

Northmet House,
Southgate, N.14. 4971

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

Applications are invited for the following appointments on the permanent staff of the County Architect's Department:—

(*a*) CHIEF QUANTITY SURVEYOR. Salary (A.P.T., Grade VIII), £685—£760 per annum.

Applicants should be members of the Royal Institute of Chartered Surveyors and have a wide experience in the preparation of estimates, specifications, Bills of Quantities, schedules, adjustment of final accounts and other work incidental to such an appointment.

(*b*) ASSISTANT QUANTITY SURVEYOR. Salary (A.P.T., Grade VI), £595—£660 per annum.

Applicants should be qualified and experienced in the preparation of Bills of Quantities, interim valuations and the settlement of final accounts.

(*c*) ENGINEERING ASSISTANT (ELECTRICAL). (A.P.T., Grade II), £420—£465 per annum.

Applicants should have appropriate qualifications with experience in the design, supervision and maintenance of electric light and power installations.

In the cases of (*a*) and (*c*) the successful candidates will be required to provide a motor car in respect of which a mileage allowance will be paid in accordance with the Council's scale.

The appointments, which are terminable by one month's notice on either side, are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications stating age, training, qualifications and experience, with particulars of past and present employment, with salaries, and accompanied by copies of three recent testimonials, must be received by the County Architect, County Hall, Beverley, not later than Friday, the 18th August, 1950. Applicants should disclose relationship to any member or senior officer of the Council and canvassing will be a disqualification.

T. STEPHENSON,
Clerk of the County Council.

County Hall,
Beverley.
July, 1950. 4970

WREXHAM RURAL DISTRICT COUNCIL. APPOINTMENT OF (*a*) ARCHITECTURAL ASSISTANT; (*b*) QUANTITY SURVEYING ASSISTANT.

Applications are invited for the following appointments in the Engineer and Surveyor's Department of the Council, namely:—

(*a*) Architectural Assistant at a salary in accordance with Grade VI of the A.P.T., Division (£595—£660). Applicants must be Associates of the Royal Institute of British Architects, or Registered Architects, and must be competent to undertake housing and general architectural work.

(*b*) Quantity Surveying Assistant at a salary in accordance with Grade VI of the A.P.T., Division (£595—£660). Applicants must be Associates of the Royal Institute of Chartered Surveyors (Quantities Division) and have had experience in the preparation of Bills of Quantities for housing and road works and the measuring of works in progress and on completion.

The appointments will be determined by one month's notice in writing on either side and will be subject to the provisions of the Local Government Act, 1937, and the National Joint Council's Scheme of Conditions of Service. The successful applicants will be required to pass a medical examination.

Applications stating age, qualifications, experience, present appointment and salary, together with copies of two recent testimonials, must be delivered to the undersigned not later than Monday, 28th August, 1950, in envelopes suitably endorsed.

Canvassing, either directly or indirectly, will be a disqualification, and relationship to any Member or Senior Officer of the Council must be disclosed.

TREVOR L. WILLIAMS,
Clerk and Solicitor.

Imperial Buildings,
Regent Street, Wrexham.
1st August, 1950. 4969

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Applications are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new housing, schools, and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications. Application forms from the Architect (AR/P/9), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (384) 3914

BOROUGH OF MALDEN AND COOMBE.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF SENIOR TOWN PLANNING ASSISTANT, GRADE A.P.T., V.

Applications are invited for the above-mentioned permanent appointment at a salary in accordance with Grade V of the Administrative, Professional and Technical Division of the National Scales for Local Government Officers, namely, £520 × £15/£20—£570 per annum, plus London weighting. The appointment will be subject to the National Scheme of Conditions of Service, terminable by one month's notice on either side, and subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidate will be required to pass a medical examination.

Candidates should have had good general experience in town planning and the preparation of surveys and control of development under the Town and Country Planning Act, 1947. Preference will be given to applicants who have passed the Final Examination of the Town Planning Institute.

Applications, giving details of age, experience, qualifications, present and past appointments, and enclosing copies of two recent testimonials, should be addressed to reach the undersigned not later than 23rd August, 1950.

Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in their applications whether to their knowledge they are related to any member or senior official of the Council.

HAROLD E. BARRETT,
Town Clerk.

Municipal Offices,
New Malden, Surrey. 4965

BOROUGH OF RADCLIFFE.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above-mentioned permanent appointment in the office of the Borough Engineer and Surveyor, at a salary within the range of Grades III, IV and V of the consolidated National Scale of Salaries, according to experience.

The person appointed must be experienced in the preparation of plans, specifications, etc., for housing, public buildings and general municipal work, and must have a thorough knowledge of present-day building.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

A council house will be made available if required.

Applications stating age, qualifications and experience, together with copies of not more than three recent testimonials, and endorsed "Architectural Assistant," must be received by the undersigned not later than Tuesday, 22nd August, 1950.

Canvassing will disqualify.

H. A. FOX,
Town Clerk.

Town Hall,
Radcliffe, Lancs.
1st August, 1950. 4972

BOROUGH OF ABERYSTWYTH.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant at a salary in accordance with Grades IV to V of the National Scale of Salaries (£480—£570). The commencing salary will be fixed according to the applicant's qualifications and experience. No car allowances will be made.

Applicants should have had previous experience in Housing and Public Buildings and should be members of a recognised professional body.

The appointment is subject to:—

1. The National Joint Council Scheme of Conditions of Service.
2. The provisions of the Local Government (Superannuation) Act, 1937.
3. The passing of a medical examination.
4. Termination by one month's notice on either side.

Housing accommodation will be offered to the successful applicant if required.

Applications, stating age, qualifications, experience, etc., and giving the names of two persons to whom reference can be made, and endorsed "Architectural Assistant," must reach the undersigned not later than 28th August, 1950.

Applicants should state whether to their knowledge they are related to any Member or Senior Officer of the Council.

Canvassing, directly or indirectly, will be a disqualification.

H. D. P. BOTT,
Town Clerk.

Town Hall,
Aberystwyth.
31st July, 1950. 4968

BOROUGH OF WEDNESBURY.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Borough Engineer and Surveyor's Department at a salary in accordance with A.P.T., Grade VI (£595 to £660 per annum).

Applicants must be Associate Members of the Royal Institute of British Architects and be experienced in the design, erection and maintenance of houses, flats and public buildings.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications stating age, qualifications and experience, and enclosing copies of two recent testimonials, are to be received by the Borough Engineer and Surveyor, Mr. C. G. Morrish, not later than 31st August, 1950.

G. F. THOMPSON,
Town Clerk.

Town Hall,
Wednesbury, Staffs.
5th August, 1950. 4966

BIRMINGHAM CITY TRANSPORT.

Applications are invited for the appointment of a GENERAL ARCHITECTURAL ASSISTANT in the Civil Engineering Department of Birmingham City Transport.

Applicants must have had experience in design, construction and maintenance of buildings, preparation of specifications, estimates and quantities.

The salary will be in accordance with the National Joint Council A.P.T. Division, Grade III, £450—£495 per annum.

The appointment is subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937.

The successful applicant will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant," stating age, qualifications and experience, together with copies of two recent testimonials, must reach the undersigned not later than 9th September, 1950.

F. C. HADLEY,
Secretary.

The Council House,
Birmingham, 3. 4961

COUNTY BOROUGH OF NORTHAMPTON.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications for the following appointments, stating age, qualifications and experience, past and present appointments and salary, whether related to any member or senior officer of the Council, and giving names of two persons to whom reference can be made, should be delivered to J. L. Womersley, A.R.I.B.A., A.M.T.P.I., Borough Architect and Town Planning Officer, Guildhall, Northampton, not later than 21st August, 1950.

(*a*) ASSISTANT ARCHITECT (PERMANENT)—GRADE V, A.P.T. (£520—£570).

Applicants must be Registered Architects and should have sound design ability and be experienced in the preparation of working drawings and estimates. The successful applicant will be engaged in the Education and General Section of the Department and preference will be given to applicants having experience in educational work.

(*b*) TWO TEMPORARY CLERKS OF WORKS, GRADES A.P.T. III-IV (£450—£525).

(*c*) TEMPORARY ASSISTANT CLERK OF WORKS, GRADE A.P.T., III (£450—£495).

The appointments may be made permanent on satisfactory service being given.

Applicants should have a thorough practical knowledge of the building trade, have experience of supervision of works in progress, and should preferably have had early training as a craftsman. For (*b*), one of the two successful applicants will be required to supervise the construction of houses and flats, and the other, schools only. The successful applicant for (*c*) will be required to assist a Clerk of Works in both schools and housing projects.

The appointment for which application is being made should be clearly stated.

Canvassing will disqualify.

C. E. VIVIAN ROWE,
Town Clerk.
4956

BOROUGH OF ILKESTON.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Department of the Borough Surveyor at a salary ranging from General Division to Grade III of the National Scale of Salaries according to training, experience and qualifications.

Applicants should preferably have passed the Intermediate Examination of the Royal Institute of British Architects and previous local government service will be an advantage.

Applicants must disclose in writing whether or not to their knowledge they are related to any Member or Senior Officer of the Council. Canvassing will disqualify.

Forms of application, conditions of appointment, and any other information, can be obtained from the undersigned, to whom the applications are to be submitted by 4th September, 1950.

A. O. MARSHALL, M.I.Mun.E., M.I.Struct.E., F.I.A.A.,
Borough Surveyor and Water Engineer.

Town Hall,
Ilkeston.
2nd August, 1950. 4982

HERTFORDSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments on the County Planning Staff at Hertford:—

JUNIOR PLANNING ASSISTANT (Grade I, A.P.T.).

Salary £390—£435 per annum. Applicants must have had previous experience in a Planning Office, be competent draughtsmen and students of the T.P.I., I.C.E., I.Mun.E., R.I.B.A., or R.I.C.S., or have had special training at a University or Technical College. Persons holding the Intermediate examination of one of these Institutions or qualifications of equivalent standard, will be given preference.

PLANNING ASSISTANT (Grade V, A.P.T.).

Salary £520—£570 per annum. Applicants must have had previous experience in the preparation of a County Survey, and Development Plan, and must be first-class Draughtsmen. Applicants should be Corporate Members of the Town Planning Institute. Preference will be given to candidates with additional qualifications.

The appointments are established posts on the permanent staff of the County Council, and are subject to the provisions of the Local Government Superannuation Act, 1937.

Forms of application are obtainable from the County Planning Officer, County Hall, Hertford, to whom they must be returned not later than 19th August, 1950. 4967

COUNTY BOROUGH OF BOURNEMOUTH.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

ASSISTANT ARCHITECT. Established Post. Salary Grade A.P.T., V, £520—£570 per annum.

Applicants must be Registered Architects and should be members of the R.I.B.A., experienced in the various types of general municipal building work.

SECOND ARCHITECTURAL ASSISTANT. Established Post. Salary Grade A.P.T., III, £450—£495 per annum.

Applicants must have had a minimum of one year's experience in an architectural office after passing R.I.B.A. Intermediate examination.

THIRD ARCHITECTURAL ASSISTANT. Established Post. Salary Grade A.P.T., II, £420—£465 per annum.

Applicants must have passed R.I.B.A. Intermediate examination and have had subsequent experience in an architectural office.

CLERK OF WORKS. Unestablished Post. Salary £10 per week. Required for a period of approximately two years in connection with the erection of a new school. Applicants should have had previous experience as a Clerk of Works on this type of work.

The successful candidates for the architectural positions will be appointed at their present salary if such salary is within the incremental scale of the advertised posts.

The above appointments will be terminable by one month's notice, in writing, on either side and subject to the provisions of the Local Government Superannuation Act, 1937, also to the conditions of service in accordance with the National Scheme.

The successful candidates will be required to pass a medical examination.

No assistance can be offered regarding housing accommodation.

Applications, on forms to be obtained from the Borough Architect, Town Hall, Bournemouth, accompanied by copies of three recent testimonials, to be returned to the undersigned in envelopes endorsed "Staff Architectural," not later than 9.0 a.m., Saturday, 26th August, 1950.

A. LINDSAY CLEGG,
Town Clerk.
4962

CARMARTHENSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following posts in the County Architect's Department:—

(*a*) TWO ASSISTANT ARCHITECTS, Grade VII (£635—£710).

(*b*) TWO ASSISTANT ARCHITECTS, Grade VI (£595—£660).

(*c*) ARCHITECTURAL ASSISTANT, Grade II (£420—£465).

(*d*) ASSISTANT QUANTITY SURVEYOR, Grade VI (£595—£660).

Candidates for posts (*a*) and (*b*) must be Associates of the Royal Institute of British Architects and must have had a good experience in the design and construction of educational and general buildings normally carried out by a Local Authority.

Candidates for post (*d*) must be suitably qualified and must have had experience in the preparation of Bills of Quantities, settlement of final accounts and estimating for all classes of building work.

The appointments will be subject to the National Joint Council's Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side.

The successful applicants will be required to pass a medical examination.

Forms of application may be obtained from W. T. Lloyd, A.R.I.B.A., County Architect, County Hall, Carmarthen, to whom applications should be submitted by the 2nd September, 1950.

DANIEL JOHNS,
Clerk of the County Council.

County Offices,
Carmarthen.
1st August, 1950. 4981

BOROUGH OF WORTHING.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
TOWN PLANNING ASSISTANT.

Applications are invited for the appointment of Town Planning Assistant on the permanent establishment of the Borough Engineer and Surveyor's Department, at a salary in accordance with A.P.T., Grade V of the National Joint Council's Scale of Salaries, *i.e.*, £520, rising to £570 per annum.

Candidates must have had previous experience in municipal engineer's office and preference will be given to applicants who are Corporate Members of the Town Planning Institute.

The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.

Applications, endorsed "Town Planning Assistant," stating age, qualifications and experience, etc., and accompanied by copies of three recent testimonials, should be delivered to the office of the Borough Engineer and Surveyor, Town Hall, Worthing, not later than Friday, the 1st September, 1950.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.
1st August, 1950. 4980

HUNTINGDONSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
ARCHITECTURAL ASSISTANT,
GRADE III, A.P.T.

Applications are invited for the appointment of an Architectural Assistant, Salary Grade III, A.P.T., £450×£15 to £495 per annum.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937.

Applications should be submitted to S. J. Hands, A.R.I.B.A., County Architect, County Buildings, Huntingdon, by not later than Monday, 21st August, 1950, with copies of two recent testimonials or the names of two referees.

JOHN KELLY,
Clerk of the County Council.

County Buildings,
Huntingdon.
10th August, 1950. 4979

WAR DEPARTMENT.

Applications are invited to fill a vacancy for TEMPORARY ASSISTANT CIVIL ENGINEER in the office of the Engineer-in-Chief, at the War Office.

Applicants must be A.M.I.Struct.E. or A.M.I.C.E., and will be required to undertake work in connection with the development of military bridging and rafts. They should have had operational experience of bridging, and also have a sound theoretical knowledge of the design and construction of civilian road and rail bridges. Candidates must be under 50 years of age.

Salary range is £500—£760 per annum. Starting salary will be fixed according to age, qualifications and experience, and annual increases are payable.

Apply in writing, stating age, nationality and full details of qualifications and experience, to the War Office (C.5(A)), Room, 503, Hotel Victoria, Northumberland Avenue, W.C.2. 4991

CHESHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.
NORTH CHESHIRE AREA PLANNING COMMITTEE.
APPOINTMENT OF PLANNING STAFF.

Applications are invited for the following appointments on the permanent establishment of the North Cheshire Area Planning Department which is situated at 47/51, Station Buildings, Altrincham.

The posts are subject to the Local Government Superannuation Act, 1937, and the successful applicants will be required to act under the direction of the Area Planning Officer in the preparation of a Development Plan for the County and the Control of Development under the Town and Country Planning Act, 1947.

(*a*) PLANNING ASSISTANT—Salary A.P.T., III—IV (£450—£525).

Applicants for this position should have obtained the intermediate examination (or equivalent) of one of the recognised professional institutes, and preference will be given to candidates who have had training in architecture and some experience in town planning.

(*b*) JUNIOR PLANNING ASSISTANT—Salary A.P.T., I—II (£390—£465).

Applicants for this position should have had training in a planning, architectural, surveying or engineering office.

Forms of application, together with details of the duties and conditions attaching to the appointments may be obtained from me on receipt of a stamped and addressed foolscap envelope, and applicants should state which form they require.

The last date for the receipt of completed applications is Saturday, the 26th August, 1950.

KENNETH O. MALE,
County Planning Officer.

Bridgegate House,
Lower Bridge Street,
Chester. 4987

SOUTH-EAST METROPOLITAN REGIONAL HOSPITAL BOARD.
BUILDING SURVEYOR.

Applications are invited for the above post covering the East Kent area in A.P.T., Grade VI. Salary £595—£660 a year.

Candidates should have an extensive knowledge of building construction in both traditional and modern methods for all types of hospital work; be able to draft reports and prepare sketch plans, specifications and estimates of cost for adaptations and extensions to small schemes.

The person appointed will be directly responsible to the Regional Architect, but a local office will be provided.

The post is superannuable under the National Health Service (Superannuation) Regulations, 1950.

Applications stating age, present salary, education and experience, and the names and addresses of two referees should reach the Secretary, South-East Metropolitan Regional Hospital Board, 11, Portland Place, W.1, not later than 26th August, 1950. 4986

EAST ASHFORD RURAL DISTRICT COUNCIL.
TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Temporary Architectural Assistant in the Surveyor's Department at a salary of £500 per annum.

Applicants should have passed the R.I.B.A. Intermediate examination and should have had experience of local authority housing schemes; they should possess a sound knowledge of the design and construction of small housing estates, including the preparation of working drawings and specifications.

The appointment will be terminable by one month's notice in writing on either side, and is subject to the National Scheme of Conditions of Service.

Housing accommodation will be provided if required.

Applications, stating age, qualifications, present and past appointments, and full details of experience, together with copies of two recent testimonials, must be delivered in a plain sealed envelope endorsed "Temporary Architectural Assistant" to the undersigned not later than the first post on Monday, 21st August, 1950.

C. F. FIELD,
Clerk.

Council Offices,
8, Elwick Road, Ashford, Kent.
2nd August, 1950. 4976

WYCOMBE RURAL DISTRICT COUNCIL.
HOUSING ARCHITECT AND HOUSING SURVEYOR.

Applications are invited for the appointment of Housing Architect and Housing Surveyor in connection with the Council's Housing Schemes.

The commencing salary will be £750 per annum, rising by three annual increments of £50 to a maximum of £900 per annum, and in addition a travelling allowance will be paid.

Applicants must be Members of the Royal Institute of British Architects, have a thorough knowledge of Architectural work, Surveying, Building construction, Road and Sewer Works, and have had experience in the layout and development of Housing Estates of a Local Authority.

The appointment will be a whole time one, and all necessary assistance will be provided by the Council. Housing accommodation will be provided if necessary.

Applications, stating age, qualifications and experience, accompanied by copies of three recent testimonials and endorsed "Architect," should be sent to reach the undersigned not later than Saturday, the 26th August, 1950.

J. AUTON,
Clerk to the Council.

17, High Street,
High Wycombe.
1st August, 1950. 4975

BOROUGH OF SOUTHALL.
APPOINTMENT OF :—
(*a*) ARCHITECTURAL ASSISTANT.
(*b*) JUNIOR ENGINEERING ASSISTANT.

Applications are invited for these permanent appointments on the staff of the Corporation. Salary for appointment (*a*) in accordance with Grade A.P.T., III of the National Scheme (£450—£15—£495), and for appointment (*b*) in accordance with Grade A.P.T., II of the National Scheme (£420—£15—£465). Appropriate London Weighting is payable in both cases.

Candidates for appointment (*a*) should have passed the Intermediate Examination of the R.I.B.A. and have had previous Local Government Experience.

Candidates for appointment (*b*) should have had training in municipal engineering and should be taking the examinations for a recognised engineering qualification.

The posts are subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications, on forms to be obtained from the Borough Engineer, Town Hall, Southall, must be returned to him not later than Thursday, 24th August, 1950.

J. S. SYRETT,
Town Clerk.

Town Clerk's Offices,
South Road,
Southall, Middlesex.
July, 1950. 4994

KENT COUNTY COUNCIL.
BUILDINGS DEPARTMENT.

Applications are invited for an appointment in the Buildings Department of an ARCHITECTURAL ASSISTANT at a salary within the range A.P.T., Grade II—III (£420—£495).

Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects and have had some experience in the preparation of working drawings and development of detail drawings.

The commencing grade and salary will be dependent upon the experience of the successful candidate.

The post is superannuable and the successful candidate will be required to pass a medical examination.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be delivered to him within two weeks of the appearance of this advertisement.

W. L. PLATTS,
Clerk of the County Council.

County Hall,
Maidstone.
31st July, 1950. 4974

URBAN DISTRICT OF FELTHAM.
APPOINTMENT OF (*a*) CHIEF ARCHITECTURAL ASSISTANT (ESTABLISHED STAFF); (*b*) ARCHITECTURAL ASSISTANT (UNESTABLISHED STAFF).

Applications are invited for the above-mentioned appointments in the Engineer and Surveyor's Department in the following grades of the Administrative, Professional and Technical Division of the National Scales :—

(*a*) Chief Architectural Assistant : Grade V(*a*) —Commencing salary, £550 per annum, rising by annual increments of £20 to a maximum of £610 per annum, plus the appropriate London "weighting."

(*b*) Architectural Assistant : Salary in accordance with the Scales for Architectural Assistants approved by the National Council. The salary for a Registered Architect will be in accordance with Grade V, commencing at £520 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £570 per annum, plus the appropriate London "weighting."

Preference will be given to Registered Architects who have had previous experience in the Department of an Engineer and Surveyor to a local authority. The appointments will be subject to (i) the National Scheme of Conditions of Service, (ii) the successful candidates passing a medical examination, and (iii) one month's notice in writing on either side.

Forms of application may be obtained from the undersigned, to whom they should be returned, accompanied by copies of two recent testimonials, not later than 8th September, 1950.

Canvassing will disqualify, and applicants must disclose in writing whether to their knowledge they are related to any member of or the holder of any senior office under the Council.

M. W. COUPE,
Clerk of the Council.

Council Offices,
Feltham, Middlesex. 4993

AYCLIFFE DEVELOPMENT CORPORATION.
(Established under the New Towns Act, 1946).
APPOINTMENT OF ASSISTANT ARCHITECTS.

The above Corporation invite applications from Architects for appointment on the staff of their Chief Architect, Mr. G. A. Goldstraw, B.A., A.R.I.B.A., at salaries in accordance with Grades A.P.T., V and A.P.T. VII of the National Joint Council for Local Authorities' Administrative, Professional and Technical Services, *i.e.*, £520 rising to £570, and £635 rising to £710 respectively.

Where necessary, housing accommodation will be available.

Applications, stating qualifications, previous experience, present appointment, salary, age, and the Grade applied for, must be forwarded to the undersigned not later than 26th August, 1950.

The applicant should include the names and addresses of three persons to whom personal reference can be made if necessary.

(Signed) A. W. THOMAS.
General Manager.

Newton Aycliffe,
Co. Durham.
2nd August, 1950. 4977

CITY OF NOTTINGHAM.
HOUSING ARCHITECT'S DEPARTMENT.
SENIOR ASSISTANT ARCHITECT.

Applications are invited from Registered Architects with good experience in the design and construction of large housing estates, for the appointment of a Senior Assistant Architect in A.P.T., Grade VI (£595—£660).

The appointment is in accordance with the National Joint Council's Scheme of Conditions of Service, and subject to the Local Government Superannuation Act, 1937.

The successful candidate will be required to pass a medical examination.

Applications, giving details of age, training, qualifications, experience and present appointment, together with the names and addresses of two persons to whom reference can be made, should be forwarded to C. A. Pilkington, L.R.I.B.A., City Housing Architect The Guildhall, Nottingham, not later than Monday, the 28th August, 1950.

J. E. RICHARDS,
Town Clerk.

The Guildhall,
Nottingham. 4985

OUNDLE AND THRAPSTON RURAL DISTRICT COUNCIL.
APPOINTMENT OF ARCHITECT.

Applications are invited for the above appointment at a salary in accordance with Grade IX of the A.P. & T. Division of the National Scale of Salaries (i.e., £750×£50—£900 per annum).

The appointment is a new one, and the successful applicant will be responsible for the organisation of the newly created Architect's Department. Subject to satisfactory service, prospects of promotion after reaching the maximum in Grade IX are good.

Candidates should be Associates of the R.I.B.A. (or equivalent examination), with experience in house design, preparation of working drawings, details, specifications, quantities, supervision of construction and the settlement of Contractors' Final Accounts. Preference will be given to applicants holding a Town Planning qualification.

The successful candidate will be required to provide and maintain a car, for which an allowance will be made in accordance with the Scheme of the National Joint Council for a 10-h.p. car.

The appointment will be terminable by three months' notice on either side, and is subject to the provision of the Local Government Superannuation Act, 1937, and the National Scheme of Conditions of Service, and the successful applicant will be required to pass a medical examination.

Applications, stating age, present and previous appointments, with dates, qualifications and experience, accompanied by copies of three recent testimonials, should be sent to the undersigned in an enve.ope endorsed "Architect," not later than Thursday, the 31st August, 1950.

Canvassing, directly or indirectly, will disqualify the candidate, and any relationship to a Member or Senior Officer of the Council must be stated in the application.

The Council will be prepared to discuss the possibility of providing housing accommodation if the successful applicant is not able to find suitable accommodation.

H. H. HASSALL,
Clerk of the Council.

Council Offices, Midland Road,
Thrapston, Kettering.
3rd August, 1950. 4996

CROWN AGENTS FOR THE COLONIES.

DRAUGHTSMAN required by the Government of Kenya for the Public Works Department for one tour of four years with possibility of permanency. Salary according to age and experience in the scale £670 a year rising to £840 a year. Outfit allowance, £30. Free passages. Liberal leave on full salary. Gratuity payable on satisfactory completion of services. Candidates between 30 and 40 years must have had at least 10 years' exprience in a Civil Engineer's Drawing Office. They must be neat and accurate draughtsmen and capable of designing simple structures. Apply at once by letter, stating age, full name-s in block letters, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/26645/3A on both letter and envelope. The Crown Agents cannot undertake to acknowledge all applications, and will communicate only with applicants selected for further consideration. 4988

SALOP COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments to Established Posts in the Department :—

1. ASSISTANT ARCHITECTS, A.P.T., Grades III—IV. Salary £450 to £525 per annum.
2. ASSISTANT ARCHITECTS, A.P.T., Grades II—III. Salary £420 to £495 per annum.
3. JUNIOR ASSISTANT ARCHITECT, A.P.T., Grades I—II. Salary £390 to £465 per annum.
4. ASSISTANT QUANTITY SURVEYOR, A.P.T., Grades II—III. Salary £420 to £495 per annum.

The appointments will be subject to one month's notice in writing on either side; to the terms of the National Joint Council's Scheme of Conditions of Service, and to the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.

Application forms may be obtained from the County Architect, A. G. Chant, F.R.I.B.A., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of not more than three recent testimonials, not later than Tuesday, 29th August, 1950.

G. C. GODBER,
Clerk of the Council.

Shrewsbury,
August, 1950. 4990

COUNTY BOROUGH OF DERBY.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointment on the permanent staff in accordance with the National Scale of Salaries :—

ONE JUNIOR QUANTITY SURVEYOR, Grade III, IV and V. Salary £450—£570.

Applicants should be fully experienced in working up, final accounts, the taking off of minor works, and must have passed the Intermediate Examination of the R.I.C.S.

The appointment will be subject to one month's notice in writing on either side, and to the terms of the National Joint Council's Scheme of Conditions of Service, and the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Form of application may be obtained from Thos. W. East, F.R.I.B.A., Borough Architect, The Council House, Corporation Street, Derby, and should be returned when completed, together with a copy of one testimonial and the names of two persons to whom reference may be made, to arrive not later than Monday, 28th August, 1950.

Canvassing, directly or indirectly, will be a disqualification.

E. H. NICHOLS,
Town Clerk.
4989

WAR DEPARTMENT.

Applications are invited for the following vacancies in the Fortifications and Works Directorate at Chessington, Surrey :—

DRAUGHTSMEN (Civil Engineering). Must have practical experience of re-inforced concrete or steelwork or general civil engineering work.

Applicants for the above vacancy should have reached a technical standard of not less than Ordinary National Certificate.

DRAUGHTSMEN (Architectural). Must have had a recognised training and not less than 3 years' experience in an architect's office.

Candidates for all posts should be under 50 years of age. Salaries for the posts are on the range of £283—£495 per annum. Starting salary will be fixed according to age, qualifications and experience. Annual increases up to the maximum of the range are payable subject to satisfactory service.

The posts are temporary but have long-term possibilities and open competitions are held periodically to fill established posts.

Opportunities for promotion to Leading Draughtsman and above arise from time to time.

The work is varied and interesting and good canteen facilities exist.

Apply in writing, stating age, nationality and full details of qualifications and experience, to The War Office (D.F.W.(Co-ord.)), "A" Block, Leatherhead Road, Chessington, Surrey. 4992

Competition

6 lines or under, 12s. 6d.; each additional line, 2s.

COVENTRY CATHEDRAL.
ARCHITECTURAL COMPETITION.

The Reconstruction Committee invite architects who are British subjects practising in the United Kingdom, the British Commonwealth and Eire, to submit designs in competition for a proposed new Cathedral, Chapel of Unity and Christian Service Centre to be erected on a site in the centre of Coventry.

The Royal Institute of British Architects have nominated Sir Percy Thomas, LL.D., D.L., P.P.R.I.B.A., Mr. Edward Maufe, R.A., M.A. (Oxon), LL.D., F.R.I.B.A., and Mr. Howard Robertson, M.C., A.R.A., F.R.I.B.A., S.A.D.G., to act as Assessors. Premiums of £2,000, £1,500 and £1,000 will be paid to the authors of the designs placed 1st, 2nd and 3rd, respectively.

The Schedule of Conditions and particulars of site, etc., will be ready for issue about the beginning of October, and in the meantime intending competitors should make application to Captain N. T. Thurston, M.C., Secretary to the Reconstruction Committee, 22, Bayley Lane, Coventry, enclosing a deposit of two guineas, which will be returned upon receipt of a *bona fide* design or upon the return of the Competition documents within one month of receipt of the Answers to Questions.

The latest date for application for the Conditions is 30th October, 1950, and the closing date for the receipt of designs the 2nd July, 1951.

N. T. THURSTON,
Secretary to Coventry Cathedral Reconstruction Committee.

22, Bayley Lane,
Coventry.
27th July, 1950. 4963

Tenders for Contracts

6 lines or under, 12s. 6d.; each additional line, 2s.

COUNTY OF LINCOLN—PARTS OF LINDSEY.
Proposed SUPERINTENDENT'S HOUSE and TWO INSPECTORS' HOUSES, Town Hall Square, Scunthorpe.

Contractors desirous of tendering for the above Houses should submit their names to the Architects, Messrs. Charles B. Pearson & Son, F.R.I.B.A., 18, Dalton Square, Lancaster, not later than Wednesday, 30th August, 1950.

Bills of Quantities and Specification will be sent to intending Tenderers. Plans may be seen at my office during normal working hours, or at the offices of the Architects, or the Clerk of Work's Office on the site.

The acceptance of any Tender is subject to the approval of the Home Office, and the Council do not bind themselves to accept the lowest or any Tender.

HERBERT COPLAND,
Clerk of the Council.

County Offices,
Lincoln.
2nd August, 1950. 4984

Partnership

6 lines or under, 12s. 6d.; each additional line, 2s.

B. ARCH. (L'pool), A.R.I.B.A., A.M.T.P.I., with some capital available, seeks partnership with Architect in Midlands or Southern Counties. Please write initially to Box 4962.

Architectural Appointments Vacant

4 lines or under, 7s. 6d.; each additional line. 2s.

YOUNG ASSISTANT, interested in Ecclesiastical work required in private East Midlands office; student considered. Full particulars to Box 4167.

ARCHITECTURAL ASSISTANT, of Intermediate standard, required immediately by firm of Architects in West End of London; salary according to experience and qualification. Box 4403.

ARCHITECTURAL ASSISTANT required for Industrial Company in Wembley. Write, stating age, experience, and salary required, to Box 4873.

EXPERIENCED ARCHITECTURAL ASSISTANT required by Architect to London Brewery, must be a practical draughtsman with good knowledge of construction. Apply in writing, stating age, training, experience and salary required, to Box 4942.

ARCHITECTURAL and SURVEYING ASSISTANT (25—30) required by Chartered Surveyors and Architects for General Practice and to understudy Principal. Must be good draughtsman and able to prepare Specifications, and with sound knowledge of materials. Car or motor-cycle essential. Mileage allowance paid. Apply by letter, with age, experience, salary expected, etc., Sedgwick, Weall and Beck, 18/20, High Street, Watford. 4929

ARCHITECTURAL and ENGINEERING ASSISTANTS required by large company specialising on factory-made buildings for home and overseas; good prospects overseas and dominions after short initial experience at works. Reply, giving age, experience and salary required, Managing Director, A. W. Hawksley, Gloucester. 4916

BREWERY in Southern Counties requires ARCHITECTURAL ASSISTANT experienced in Surveys of premises as existing, preparation of working drawings. House available. Salary according to qualifications.—Box 4930.

ARCHITECTS and ARCHITECTURAL ASSISTANTS required by Architects with considerable hospital, ecclesiastical and general practice, in North Wales office. Initiative and willingness to accept responsibility primary considerations. Apply immediately with particulars, and state starting salary required, to Box 4911.

ARCHITECTS have vacancy for SENIOR ASSISTANT with good office experience. Commencing salary £550—£600 with excellent prospects. Stephenson & Gillis, 2, Saville Chambers, North Street, Newcastle-upon-Tyne. 4946

BURGH OF MUSSELBURGH.—Applications are invited for the post of JUNIOR ASSISTANT in the Architectural Department of the Burgh Surveyor's Office, Musselburgh. Salary £225 p.a. (at 21), rising to £370 p.a. Applications, stating age and experience, to be lodged with the Burgh Surveyor not later than 25th August. 4983

ARCHITECTURAL DRAUGHTSMAN, age 25/35 years, required by City Surveyors. Salary, £500/£600 p.a., with good prospects. Must have previous experience in design and detail of commercial and industrial buildings. Write Box 4978.

APPLICATIONS are invited for positions as ASSISTANT ARCHITECTS in an Architect's Office of the Civil Engineer's Department, British Railways, located in London. Assistants will be engaged on large Station Reconstruction Schemes and should be A.R.I.B.A. or hold an equivalent qualification. The salary offered is up to £550 per annum, dependent on qualification and experience. The posts are temporary. Apply stating age, qualifications and experience, to Box 4954.

ARCHITECTURAL ASSISTANT (single), Intermediate Standard, required in Private Office. State salary required to E. T. Howard, L.R.I.B.A., 67, High Street, Wellington, Somerset. 4957

SENIOR ASSISTANT ARCHITECT for permanent position, £600—£800 p.a.; also Assistants, £400—£500 p.a. Apply giving full particulars, S. T. Walker, Chartered Architects, 83, Suffolk Street, Birmingham, 1. 4964

Architectural Appointments Wanted

A.R.I.B.A. (office trained), age 29, with 6 years' experience of managing private practice, requires position as Managing Assistant or Branch Manager. Any district considered, and living accommodation desirable but not essential. Salary, £800. Box 564

ASSISTANT, 27, completing Finals, wants job in South. Box 567.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

ARCHITECTURAL Metalworkers require a DESIGNER-DRAUGHTSMAN of considerable merit; top salaried position for skilled man. Apply The Morris Singer Company, Hope House, Gt. Peter Street, Westminster, S.W.1. 3564

SETTER-OUT wanted for Architectural Metalwork; good wages and ideal working conditions. Apply: The Morris Singer Co. Ltd., Ferry Lane, Forest Road, Walthamstow, E.17. 3524

INTELLIGENT and enthusiastic young man, with some knowledge of building construction and materials, wanted for unusually interesting selling job, mainly in London (full-time). Write, with full particulars of age, training, experience, salary required, to Box 366.

LONDON ELECTRICITY BOARD.
ENGINEERING DRAUGHTSMEN.

APPLICATIONS are invited for the above positions in the Design and Planning Branch of the Northern Sub-Area.

Applicants should have had considerable experience in building construction, the design of new buildings and the adaptation of existing structures, also possess electrical and technical qualifications.

Pending grading of the posts under the national agreement of the appropriate negotiating body, the provisional salaries will be fixed, according to qualifications and experience, within the range £500 to £550 per annum inclusive.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, on receipt of foolscap addressed envelope, to be returned duly completed by 21st August, 1950. Please quote EST/V/906/A on envelope and all correspondence. 4996

BRISTOL firm of Quantity Surveyors require several young recently qualified ASSISTANTS, desirous of obtaining further experience, with opportunity of responsibility; permanent positions, pensionable. Write in confidence, stating age, experience, and salary required, to Box 4867.

ARTICLED PUPIL or JUNIOR required by Quantity Surveyors, no premium. Age 15-18, good education, must be keen, accurate at figures, excellent prospects to learn profession. Reply in writing, stating age, education, etc., George Lewis & Son, 49, Sheepcote Road, Harrow, Middlesex. 4936

CLERK OF WORKS required for project in Chelmsford. Must be experienced in reinforced concrete structures. Contract will be in excess of £100,000 and scheduled for completion in 18 months. Apply Taylor & Collister, Chartered Architects, 19, London Road, Chelmsford, in writing, giving particulars of experience and salary required. 4960

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

ARCHITECTURAL MODELS and Dioramas. Edward J. Ashenden, A.R.C.A., 15, Chenil Studios, 183, Kings Road, S.W.3. Tel.: Flax 6103. 2566

NOTICE TO ARCHITECTS.—Builder, with good tradesmen, plant, and transport, now in a position to accept War Damage and Maintenance repairs. Hawkes, 63, Hogarth Gardens, Heston, Middx. HOU. 1667. 4345

MANUFACTURERS of exclusive hand-made Lampshades; architects' contracts carried out. J. & M. Beagley, 51, Great Ormond Street, London, W.C.1. CHAncery 8969. 2397

R.I.B.A. Calculation of Simple Structural Members and Theory of Structures. Intensive Postal Tuition. D. A. Fowler, Dip.Arch.(Abdn.), A.R.I.B.A., 22, Oakwell Mount, Leeds, 8. Tel. No. 58294. 4791

CHARTERED ARCHITECT (A.R.I.B.A.), with own London office, offers services on W.D. repair and rebuilding contracts; extensive experience, all facilities. Box 4965.

COMPETENT LADY TYPIST and Tracer, architectural experience, requires work at home. FLAxman 8801. 4973

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4 lines or under, 7s. 6d.; each additional line, 2s.

SLATES.—All types Asbestos and Welsh, including Diagonal's; Corrugated and Flat Asbestos Sheets. G. Paget Ellis & Co., Ltd., 7, Oxford Street, Leamington. 3999

SLATES.—All sizes in Asbestos, including Red and Grey Diagonals, Welsh Slates, Corrugated and Flat Asbestos Sheets; delivered all parts U.K. G. Paget Ellis & Co., Ltd., 7, Oxford Street, Leamington Spa. 3998

WANTED.—Copies of "The Architectural Review," Aug., Sept., and Oct., 1949, in good condition. Full price will be paid. Box 4944.

Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99-107, St. Pauls Road, N.1. Canonbury 2061.

The Race Upholstery Unit will be pleased to report on and tender for your specialised upholstery requirements and repairs. 22, Union Road, Clapham, S.W.4. 4048

FLOORS OF DISTINCTION Laid; in wood, rubber, composition, cork, mosaic; existing floors repaired, resurfaced and polished; also panelling restored. Davis Floorings, Grove Hall Court, Hall Road, N.W.8. CUN. 3205/6 and 6616. 600

FENCING FOR ALL PURPOSES. Supplied and erected; established 100 years. PARKER, WINDER & ACHURCH, LTD., 80, Broad Street, Birmingham, 1.

Educational Announcements

4 lines or under, 7s. 6d.; each additional line, 2s.

THE POLYTECHNIC,
309, REGENT STREET, W.1.
SCHOOL OF ARCHITECTURE, SURVEYING AND BUILDING.

President of the School: Sir Banister Fletcher, D.Lit.(London), M.Arch., P.P.R.I.B.A.
Head of the School: John S. Walkden, F.R.I.B.A., Dist.T.P., M.T.P.I., R.I.B.A., Athens Bursar.

EVENING COURSE IN PLANNING.
The three years' PART-TIME COURSE leading to the Polytechnic DIPLOMA IN PLANNING and to exemption, where applicable, from the Final Examination of the Town Planning Institute, will commence in September.
Prospectuses may be obtained on application to the undersigned.

J. C. JONES,
Director of Education.
4963

R.I.B.A. EXAMS.—Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I., Dist. in T.P. (Tutor in the Sch. of Arch. Lond. Univ.), prepares Students by correspondence tuition. 15, North Road, N.6. MOU. 8104.

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Printed in Great Britain for the Proprietors of "THE ARCHITECTS' JOURNAL" (The Architectural Press, Ltd.), 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, by HARRISON & SONS LTD., Printers to His Majesty The King, London, Hayes (Middx.), and High Wycombe.