

ARTS DEPT.

Registered as a Newspaper

Nº 3037

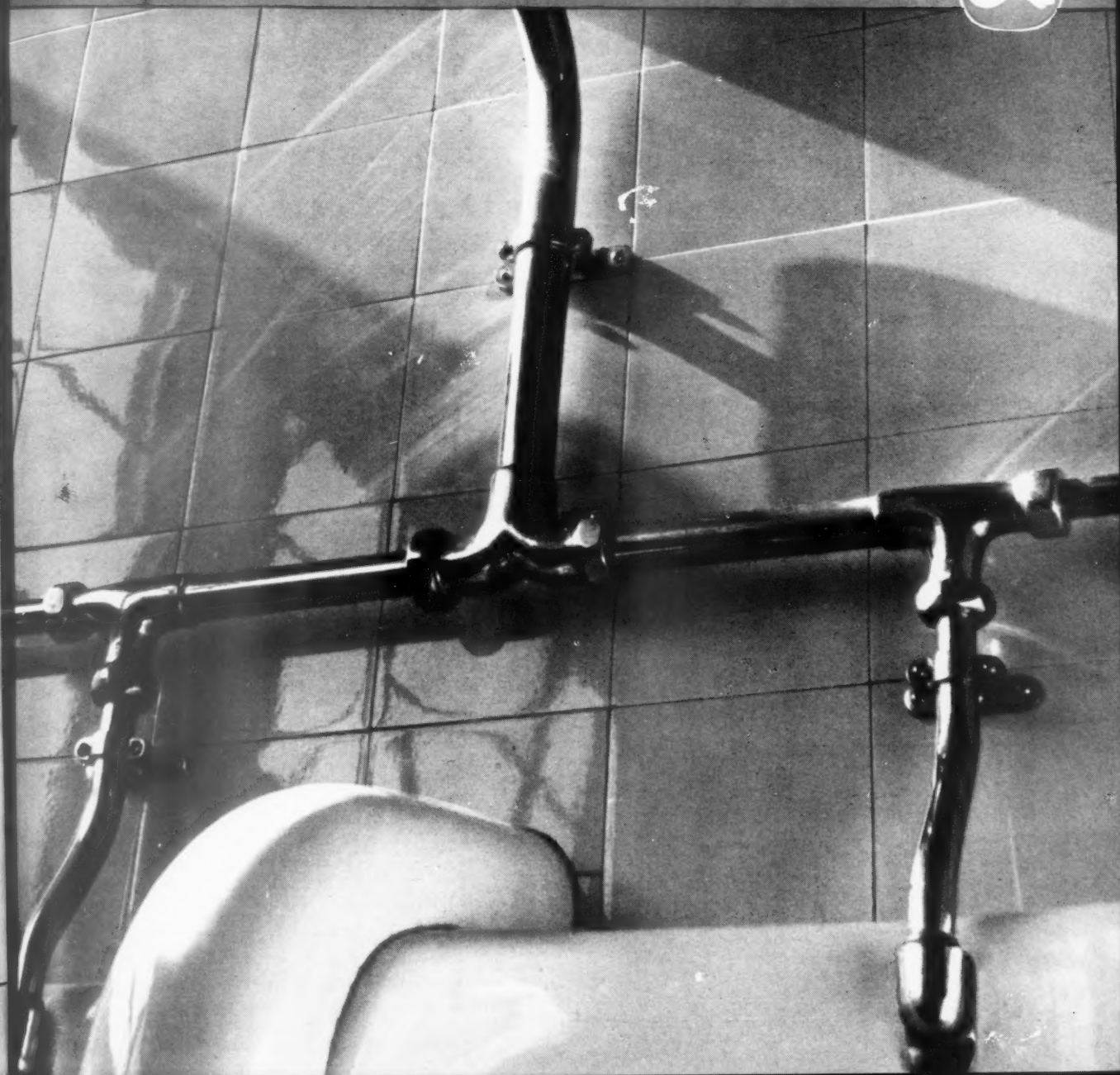
Vol. 117, May 14th, 1953

THE ARCHITECTS' JOURNAL

ONE SHILLING

PUBLIC LAVATORIES NUMBER

TILING BY CARTER

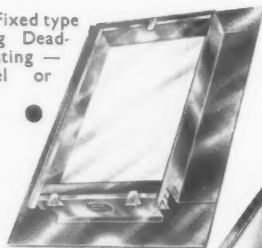


GREENWOOD'S

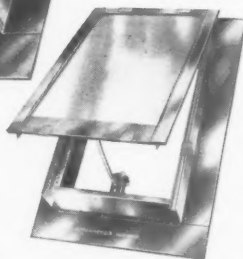
'PERMAVENT' ALL-STEEL LARDER LIGHTS VENTI-LIGHTS AND SKYLIGHTS



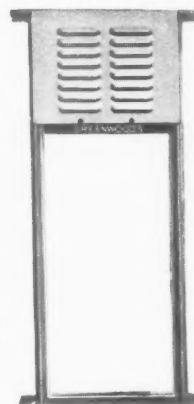
'PERMAVENT' Fixed type non-condensating Dead-light — anti-misting — galvanised steel or copper.



'PERMAVENT' Venti-light Type VAS—all-steel — gauze-backed multi-louvres top and bottom — top-hinged light with locking push-stay—delivered unglazed —permanent ventilation even when closed.



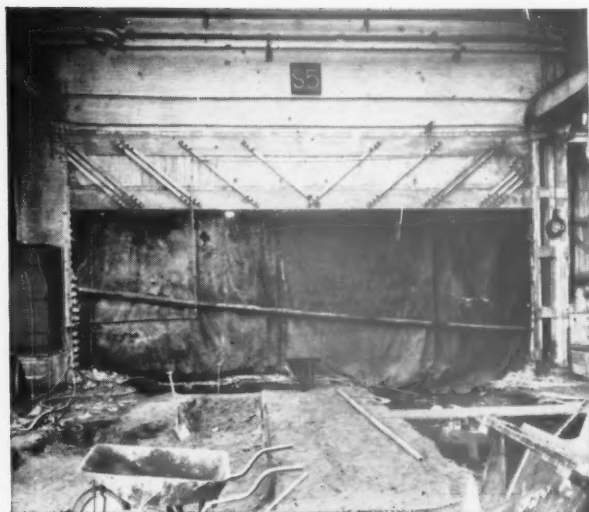
'PERMAVENT' Larder Light Type MBS—all-steel — gauze-backed multi-louvres top and bottom or top only—unglazed, ready for building-in—vision with permanent ventilation.



'PERMAVENT' Opening type non-condensating Skylight —Leggott's patent opening gear optional —galvanised steel or copper.

GREENWOOD'S AND AIRVAC
Ventilating Company Limited
BEACON HOUSE KING'S WAY LONDON W.C.2

DESIGNERS AND MANUFACTURERS OF VENTILATING EQUIPMENT FOR BUILDINGS, VEHICLES AND VESSELS VENTILATING ENGINEERS



ARCHITECT: C. E. OWEN WARD, L.R.I.B.A.

FOR FOUNDATIONS AND UNDERPINNING AT ANY LEVEL

The 'Pynford' method of placing R.C. beams under existing walls, buttresses, piers, etc., without needling or shoring, may be used at any level and is thus especially valuable when altering existing buildings to suit modern requirements.

The illustration shows a lintel of clear span 30ft. 3in. carrying a heavy 14in. brick gable. The design includes two small 14in. by 15in. R.C. beams at approximately 4ft. centres diagonally braced with flat steel bars. Underpinning stools and machined diagonal bracing bars and anchors were supplied and fixed by Pynford Limited.

Pynford Limited

BUTT WELDING MACHINE AND OPERATOR MAY BE HIRED

14 Lancaster Road Stroud Green London N4

Telephone Archway 6216/7

TS

[

S
G

ler
out
is
ng

in.
gn
at
ith
ed
nd

7

CFW

for thermal insulation

The designers' mind is a naturally questioning one. It takes nothing for granted. When, therefore, we see Versil

Glass Silk Insulation adopted in increasing numbers of public buildings, institutions and industries—some of whom have names to conjure with—we can be sure it's not just because the

Versil representative is a jolly good chap or the Versil publicity persuasively written. The fact is: Versil measures up to every test, practical and theoretical. With its innumerable applications, it is a dependable thermal insulation for the architect and builder seeking high efficiency with economy and ease of handling. Write for full information to Versil Ltd., Rayner Mills, Liversedge, Yorks.

VERSIL

GLASS SILK INSULATION

CFW

TO THE ARCHITECT-SURVEYOR AND BUILDER

**Yours the problem-
Harveys the answer!**

Whenever the question of where-to-get, not only Tanks, but Cisterns and Cylinders arises—remember Harveys. Our illustration shows a typical "Harco" product—unsurpassed for soundness of construction and galvanized after manufacture for lasting use. Get all supplies from your Builders' Merchant. For full information of all ranges write for Pocket List A.J.873

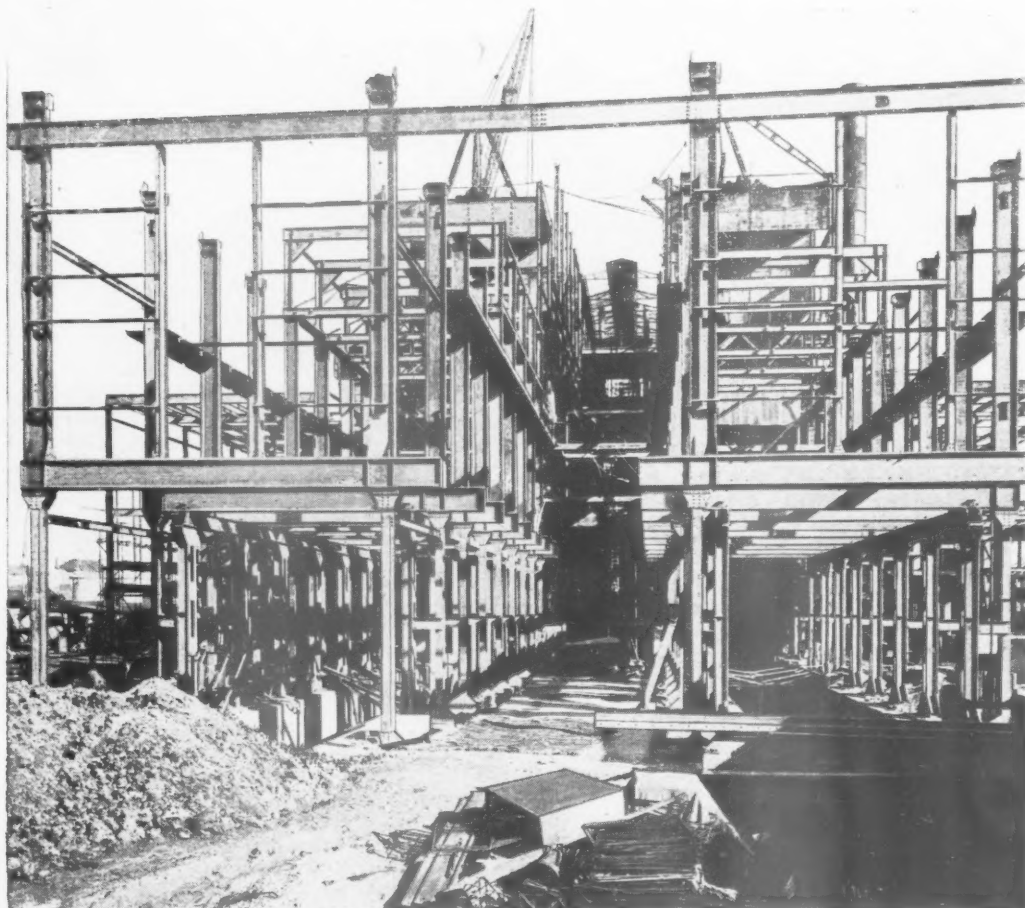
Harvey

G.A. Harvey & Co. (London) Ltd.
Woolwich Rd. London, S.E.7

GH/GH2/48

GH/GH2/46

1903-1953 Fifty Years of Service to Industry



...STRUCTURAL ENGINEERING

T.C. JONES

AND COMPANY LIMITED

WOOD LANE • LONDON • W.12 Telephone: Shepherds Bush 2020
BUTE STREET • CARDIFF Telephone: Cardiff 28786
TREORCHY • GLAMORGAN Telephone: Pentre 2381

THE
600
GROUP
OF COMPANIES



EMERGENCY

LIGHTING

In the new schools that will be built emergency lighting will be installed. Not, it is hoped, as an afterthought. The installation of the standby system which guards against all the risks of mains interruption should be planned, as the main lighting is planned, by the architect. Chloride Batteries Limited, makers of Keepalite, the automatic emergency lighting system, offer the advisory services of their engineers to architects in any part of Great Britain.



A Product of Chloride Batteries Limited, Exide Works, Clifton Junction, Swinton, Manchester and Grosvenor Gardens House, Grosvenor Gardens, SW1

MESSRS MAYES

of Southampton put the accent on entrance.

Two main entrances,
eight frameless ARMOURPLATE glass doors
to each, and large boomerang shaped
handles to facilitate effortless entry.

The front has bronze framed
backless windows on blue-grey
granite stallboards,
one window having vertical louvres
designed to form either a solid
or open back—or intermediate
variations of the two.

Architect: Anthony C. Tripe, F.R.I.B.A.

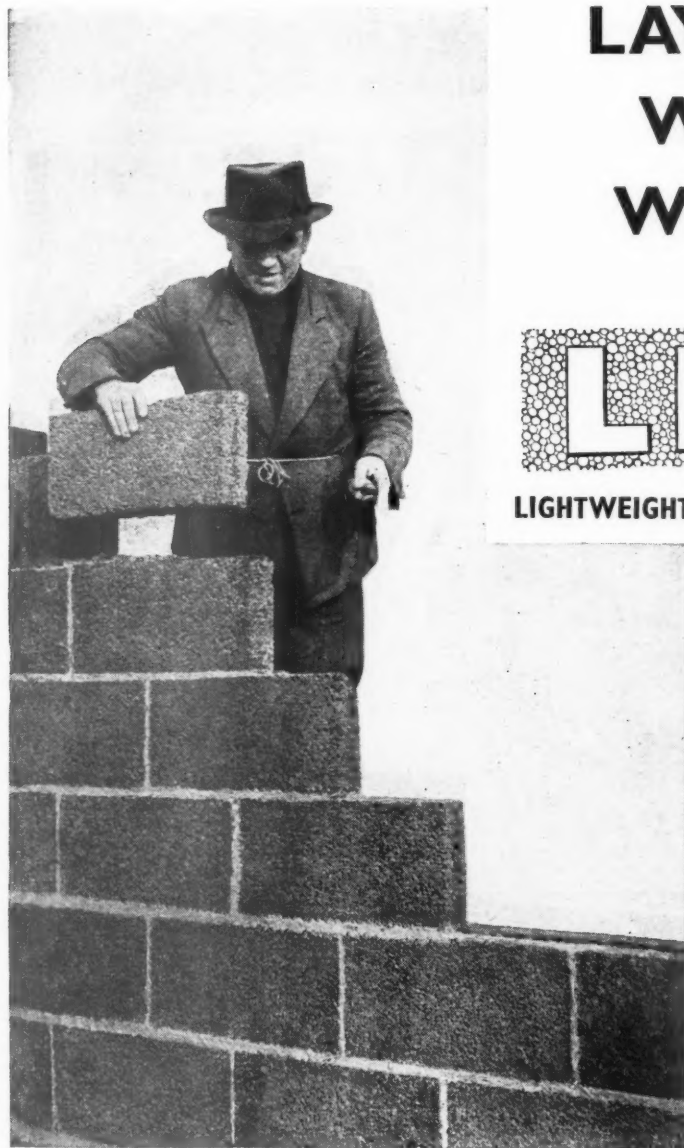


SHOPS **BY** **POLLARDS**

E. Pollard & Company Limited



159 St. John Street, London, E.C.1 Telephone CLerkenwell 6701 Showrooms: 299 Oxford Street, London, W.1



LAYING UP WINTER WARMTH

WITH

LECA

LIGHTWEIGHT EXPANDED CLAY AGGREGATE

Concrete blocks made with LECA save fuel by reducing heat losses to a minimum.

LECA aggregate has a K. value of .9. The K. value of dry LECA concrete of a mix of 9 to 1 and weighing about 50 lbs. per cubic foot is approximately 1.3.

But low thermal conductivity is only one of the many advantages offered by this lightweight aggregate. It produces concrete with high strength for its weight and has a high resistance to fire, frost, damp and shock.

Concrete blocks made with LECA are now being used on many housing schemes. It is also being used as a screed for floors and as loose infill for roofs for insulation purposes.

Information on LECA will be supplied on application to

THE CEMENT MARKETING COMPANY LIMITED
Portland House, Tothill Street, S.W.1



The architect was MNESICLES B.C. 410



"THE ERECHTHEION" ATHENS

but who was the builder?

The Erechtheion, a temple on the Acropolis at Athens, stands as a superbly proportioned and graceful symbol of the Greek civilization. The delicate perfection of its detail is a living testimony to the exquisite craftsmanship of its Greek builders. Such traditions are upheld in our own day by the skill and technical knowledge of Townsons the Builders. Their work gives shape and reality to the dreams of an architect.

HIGHER SWAN
LANE

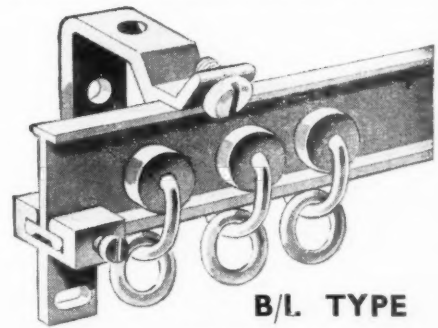
WILLIAM
TOWNSON
AND SONS LIMITED

BOLTON Tel:
Bolton 1840/4

T13

Every new building calls for
the specification of
'Rufflette'
BRAND
CURTAIN RUNWAY SYSTEMS

'Rufflette' Brand Runways, either corded or non-corded, are being increasingly used as landlord's fixtures in many new building schemes. Full details will be supplied on request.

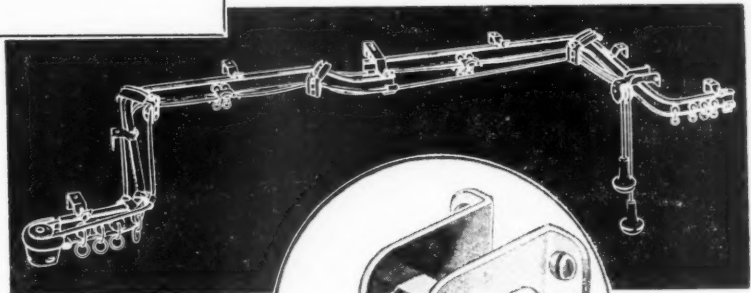


B/L TYPE

This is a strong corded or non-corded 'Rufflette' runway for all general purposes. Also available in plastic.

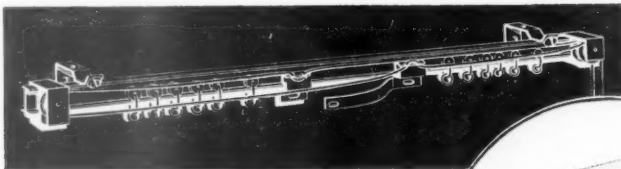
FOR BAY WINDOWS

'Rufflette' Brand Curtain Runways have been developed for every curtain suspension need. Shown on right is the new cord-controlled 'Rufflette' runway for fitting to bay windows.

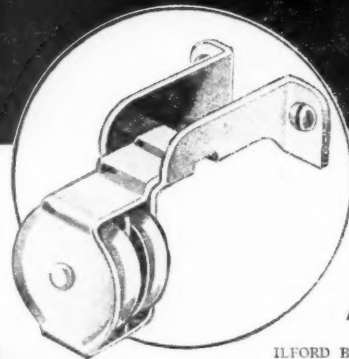


FOR STRAIGHT RUNS

For straight runs, curtains can be effortlessly opened or closed with this 'Rufflette' cord-controlled runway with sliding overlap arm. Brackets are top or face fixing, and are designed to save valuable fitting time and cost on the job.



* Note the curved travelling section which enables curtains to be overlapped without cutting rail.

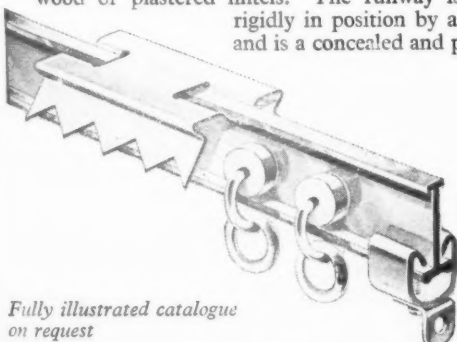


**CHOSEN
BY THE
FOLLOWING
AUTHORITIES**

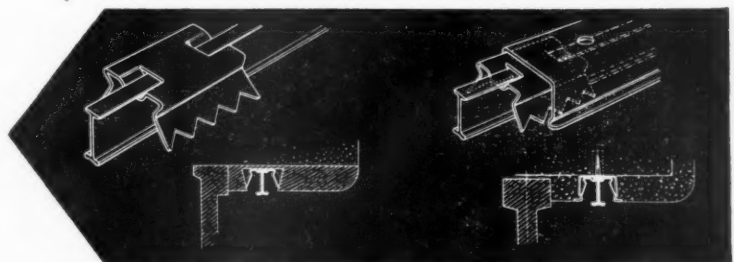
ILFORD BOROUGH COUNCIL
WANDSWORTH BOROUGH COUNCIL
LEWISHAM BOROUGH COUNCIL
WILLESDEN BOROUGH COUNCIL
FINCHLEY BOROUGH COUNCIL
WOOD GREEN BOROUGH COUNCIL
POPLAR BOROUGH COUNCIL
WIMBLEDON BOROUGH COUNCIL
GREENWICH BOROUGH COUNCIL
STOKE NEWINGTON BOROUGH COUNCIL
ISLINGTON BOROUGH COUNCIL
HOLBORN BOROUGH COUNCIL
LEYTON BOROUGH COUNCIL
WEST HAM BOROUGH COUNCIL

**OR AS A BUILT-IN
INTEGRAL UNIT**

'Rufflette' Brand Recessed Curtain Runway is a permanent and integral part of building construction. It is inexpensive and can be fitted into wood or plastered lintels. The runway is held rigidly in position by a patent spring clip without screws and is a concealed and permanent fitting.



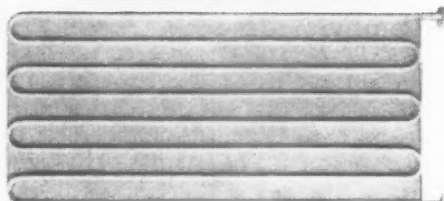
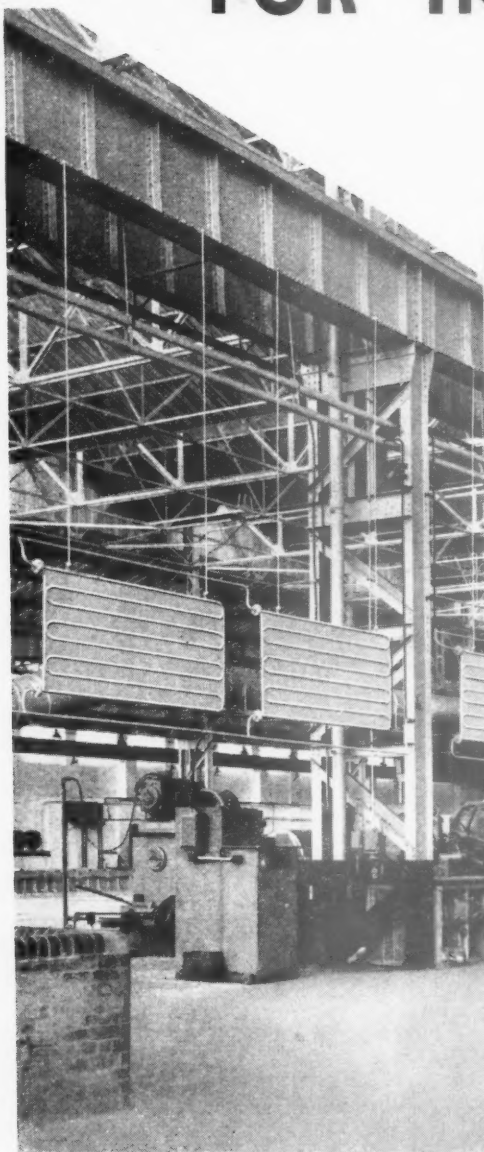
Fully illustrated catalogue
on request



LONDON COUNTY COUNCIL
BUCKS COUNTY COUNCIL
SURREY COUNTY COUNCIL
MIDDLESEX COUNTY COUNCIL
KENT COUNTY COUNCIL
ESSEX COUNTY COUNCIL
SCHOOLS

WAR OFFICE (MARRIED QUARTERS)
R.A.F. (MARRIED QUARTERS)
POLICE (MARRIED QUARTERS)
HOSPITAL MANAGMENTS COMMITTEE

CONDITIONED COMFORT FOR INDUSTRY



The BRIGHTRAD Panel consists of a sinuous steam coil, with steel web plates continuously welded between the coils, the whole forming a ribbed panel.

Write for our Booklet :—Heating and Air Treatment in Industry.

Controlled comfortable conditions are assured in industrial buildings by BRIGHTRAD Radiant Panels. Designed for surface temperatures of 200°—250°F. these panels give a pleasant working environment. They make for economy in maintenance and running costs.



THE BRIGHTSIDE FOUNDRY & ENGINEERING CO. LTD. SHEFFIELD

BELFAST · BIRMINGHAM · BRADFORD · BRISTOL · EDINBURGH · GLASGOW · LIVERPOOL · LONDON · MANCHESTER · NEWCASTLE · PORTSMOUTH

BP.36

£60 million project roofed with



When these Large Hot and Cold Strip Mills (revolutionary in design and layout) were constructed by The Steel Company of Wales Ltd., the roof presented many difficult and unusual problems.

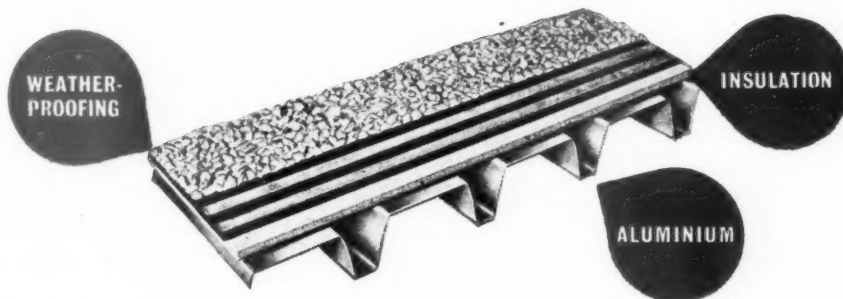
It had to protect valuable machinery indefinitely against all weathers, and yet be free from maintenance. It had to be quickly erected, light in weight yet strong, rigid yet ductile. It had to

provide high thermal insulation and a clean attractive ceiling.

Bitumetal Roofing fulfilled all these exacting requirements.

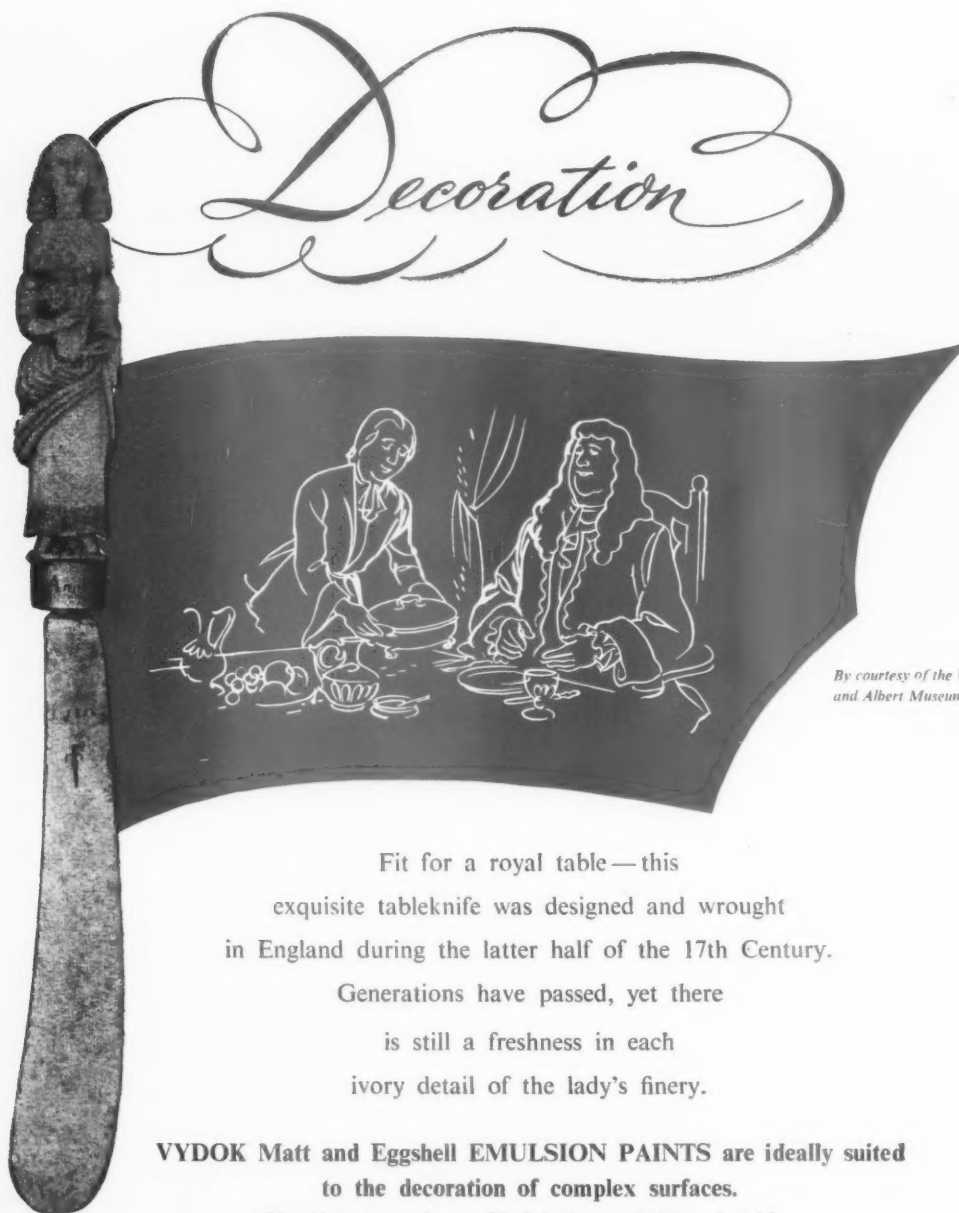
To-day so many architects are specifying this modern, efficient method of roof construction that it has rapidly become an accepted building principle.

Please ask our nearest Resident Manager for the latest information about Bitumetal.



WILLIAM BRIGGS & SONS LTD., Vauxhall Grove, London, S.W.8. Regd. Office: DUNDEE

ABERDEEN BEDFORD ROAD NORWICH TROWSE MILLGATE LIVERPOOL KIRKBY TRADING ESTATE LEICESTER BELGRAVE ROAD STATION
GLASGOW 200 OLD DUMBARTON ROAD BRISTOL STILLHOUSE LANE, BEDMINSTER EDINBURGH MURRAYFIELD STATION



By courtesy of the Victoria
and Albert Museum.

Fit for a royal table—this
exquisite tableknife was designed and wrought
in England during the latter half of the 17th Century.

Generations have passed, yet there
is still a freshness in each
ivory detail of the lady's finery.

VYDOK Matt and Eggshell EMULSION PAINTS are ideally suited
to the decoration of complex surfaces.
Needing no primer, Vydok is washable, durable,
and will sustain its brightness
for many years.



DOCKER BROTHERS

Makers of Paints, Lacquers and Varnishes for every purpose

LADYWOOD · BIRMINGHAM 16

BIG BUSINESS NEEDS BIG BUILDINGS



STEELWORK

for Flight

A smaller world results from larger and faster aircraft. Terminal points need buildings with vast spans, as shown in this view of the Aircraft hangar at Hythe with Steelwork by



**CONSTRUCTIONAL
ENGINEERS**



Registered Office & Works: **MANCHESTER, 17.** Telephone: TRAfford Park 2341 (10 lines)
London Office: 68 Victoria St., S.W.1. Tel.: Victoria 1331/2. Technical Offices: BIRMINGHAM, LOUGHBOROUGH

dm WD36

Extract from "The Sunday Times"

'Cut Building Costs' Appeal by Mr. Eccles

MR. DAVID ECCLES, Minister of Works, declaring that the time has come for the building industry to take more active steps to reduce costs and review contracting arrangements, has appealed to the Royal Institute of British Architects to provide a lead in these matters.

In a letter to the Institute he pointed out that, though there had been a marked improvement in the output of building in the past 12 months, there was widespread concern about the level of building costs. There had also been criticism of the contracting methods employed by the industry and apprehension about the existence of restrictive practices.

"These circumstances," said the Minister, "constitute at once a challenge and an opportunity. With the assurance of plenty of work to come, there is every reason for developing contracting arrangements which on the one hand will encourage the proper pre-

Today's prime need

AND ONE WAY TO MEET IT

HOUSES AT REASONABLE PRICES, houses if necessary without the expensive frills—that's what millions of people want and must have. But can high standards of workmanship, reliability and safety still be maintained? The answer for the electrical installation is "Yes."

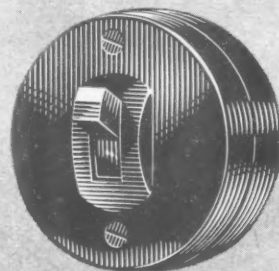
By choosing MEM equipment you get quality and workmanship which represents the very best obtainable. But every item offers exceptional value for money because of MEM's simplicity in design and their very large scale mass precision manufacture. As an Architect too you will find MEM equipment is a leader in clean modern design.

Catalogues available on request

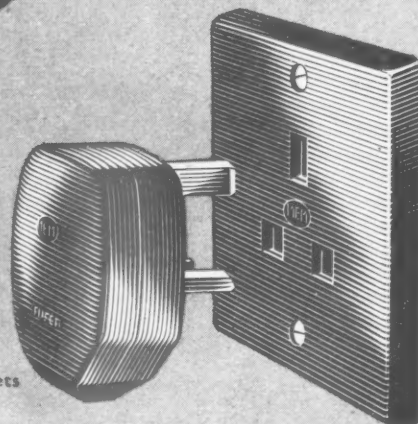
MEMSPEL main switch and fuse



MEMERA consumers service unit



MEM tumbler switches



MEM plugs and sockets

"I assure you of the warm encouragement and support of Her Majesty's Government in the steps you are taking. You may also be assured that my own good offices and those of the Ministry under my control will be at your service."

Mr. Howard Robertson, President of the Royal Institute of British Architects, replied: "We shall be very happy to take the lead in this important matter."



Midland Electric Manufacturing Co. Ltd., Tyseley, Birmingham 11
BRANCHES IN LONDON AND MANCHESTER.

SEALON

GRADE L180

METAL CASEMENT

PUTTY

Coloured Pink for easy and constant recognition, Sealon Grade L. 180 Metal Casement Putty is extremely fast and clean working. It is ready for painting 24 hours after application.

Obtainable from all Glass, Plumbers and Builders Merchants.

Full details sent on request.



Part of one of Messrs. British Timken Ltd. factories.

Architect—Cecil E. M. Fillmore, F.R.I.B.A.,
A.I.Struct.E.

General Contractors
Henry Martin Ltd.,
Northampton

Glass & Glazing
A. R. & W. Cleaver
Ltd., Northampton

One of two identical blocks of flats at Kings Heath Housing Estate, Northampton.

Architect—
J. L. Womersley,
A.R.I.B.A., A.M.T.P.I.
Borough Architect
and Town Planning
Officer, County
Borough of
Northampton
Architect-in-Charge—
P. C. R. Bryan, Borough Architects Dept.
General Contractors—
A. Glenn and Sons Ltd., Northampton
Glass & Glazing
A. R. & W. Cleaver Ltd., Northampton



SEALANCO (ST. HELENS) LTD.

ST. HELENS, LANCASHIRE
TELEPHONE : ST. HELENS 2432 and 7782

SOUTHERN & MIDLAND AGENTS : HARRISON, CLARK LTD.
94 The Broadway, Leigh-on-Sea. 62 Bushland Rd., Northampton
49 Leadenhall Street, London, E.C.3

Largest exclusive manufacturers of Putty in Great Britain

**NO NEED TO
GILD THE LILY**



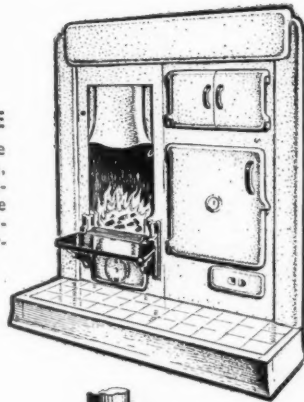
BRICK OBVIATES PAINTING

Issued by The National Federation of Clay Industries, London, W.C.1.

THE ECONOMICAL FOUR

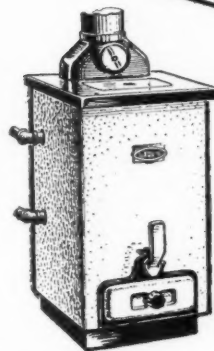
DERWENT COMBINATION GRATE

Efficient and economical fire provides heat for a large oven, fast-boiling hotplate with extension hob; hot closet. Ample domestic hot water and controlled room warmth. Over-night burning.



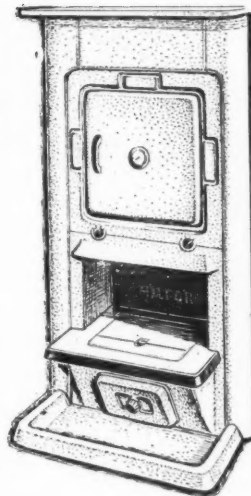
BOILERS B33 and B22

Waterway encircles fire and gives high output per square foot of heating surface. Bright, clean finish, minimum cleaning. B33 has steel water jacket, B.22 cast-iron.



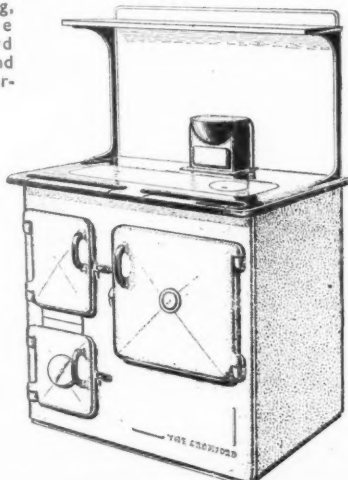
MILFORD oven-over Fire COMBINATION GRATE

At last, the perfect oven-over-fire grate. For space heating, water heating, cooking. Has withstood every test. Boiling space for five saucepans. Flue cleaning without removing ovens.



CROMFORD COOKER

The perfect all-purpose stove — Cooking, Water heating, Space heating. The economical Cromford burns any solid fuel and can be regulated for over-night slow burning.

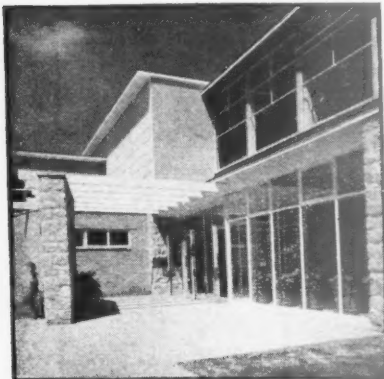


EACH MODEL APPROVED BY THE
MINISTRY OF FUEL AND POWER

GLOW-WORM

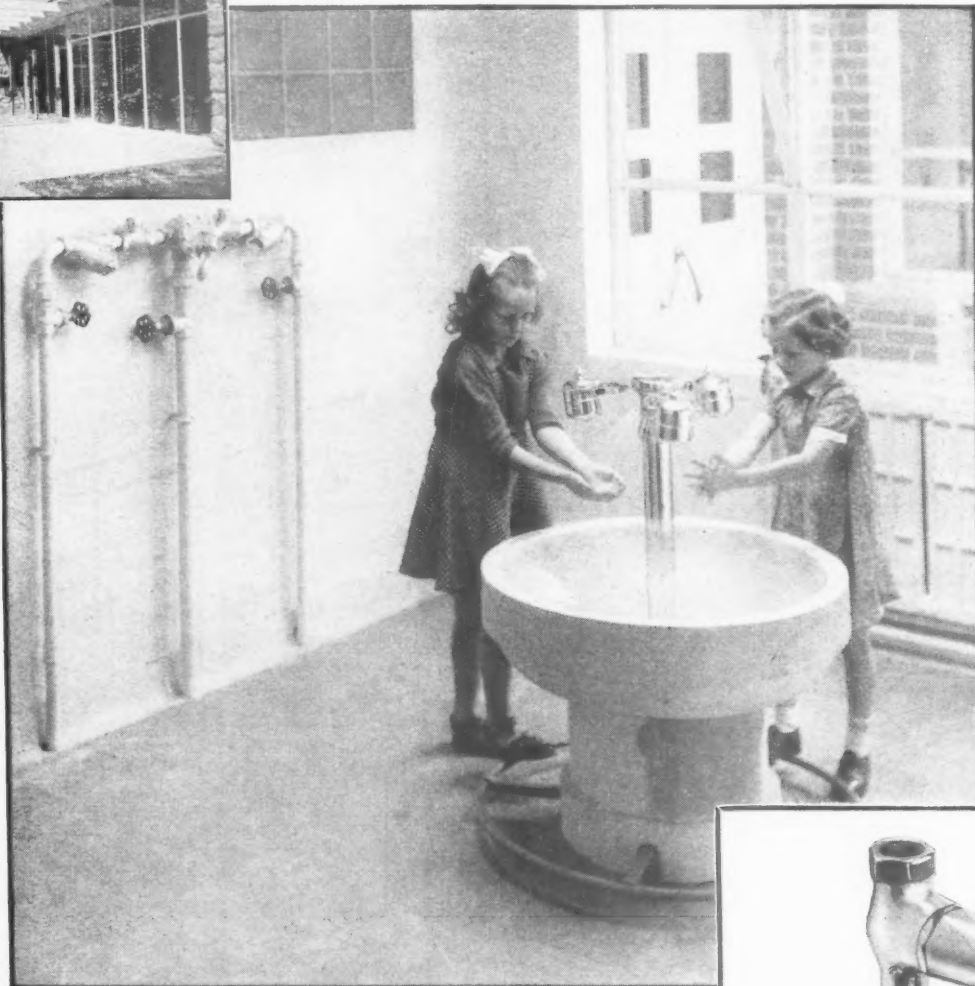
GLOW-WORM BOILERS LTD · DERWENT FOUNDRY · MILFORD · CROMFORD

London Showrooms: 22-24 Buckingham

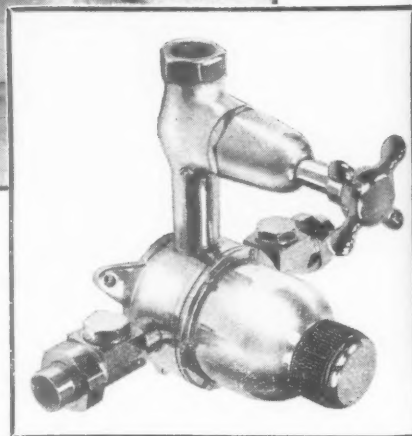


"To prevent scalding, particularly in the case of younger children, controlled mixing facilities should be provided for basins and showers."

*Ministry of Education Memorandum on
the Building Regulations—1945*



SPECIFY LEONARD
THERMOSTATIC MIXING VALVES
FOR SHOWERS AND WASH BASINS
IN SCHOOLS AND HOSPITALS



LEONARD Thermostatic mixing valves automatically mix Hot and Cold water to give Warm water at the right temperature for showers and wash basins. By preventing too high a temperature being used, they not only protect the user from scalding, but also give marked economies in fuel and water.

Send for Pamphlet No. RD/2.

WALKER, CROSWELLER & Co. Ltd., CHELTENHAM, GLOUCESTERSHIRE

Tel.: Cheltenham 5172 (3 lines)

London Office: HOLborn 2986.

Manchester Office: Blackfriars 0058

EXCELSIOR FIRECLAY WARE

URINAL RANGE
 Long group stands 26 in. high, with integral channel, 16 in. (16 in.) divisions and 16 in. (16 in.) divisions and 16 in. (16 in.) divisions. Guaranteed non-crazing copper or chromium plated pipe and brackets. Also heavy duty outlet grating with screwed on and bracket.

Approximate Dimensions

Size (inches)	16 in.	20 in.	24 in.	30 in.
Height	26	26	26	26
Width	16	20	24	30
Depth	16	20	24	30

Approximate Weight

Size (inches)	16 in.	20 in.	24 in.	30 in.
Weight (lb.)	16	20	24	30
Weight (kg.)	7.2	9.1	10.9	13.6

Approximate Length of fittings — 7 in. (7 in.) and 10 in. (10 in.)

JF
 JOHNSON FIRECLAY COMPANY LIMITED

*For Hygiene with Durability...
 use Excelsior Fireclay Ware*

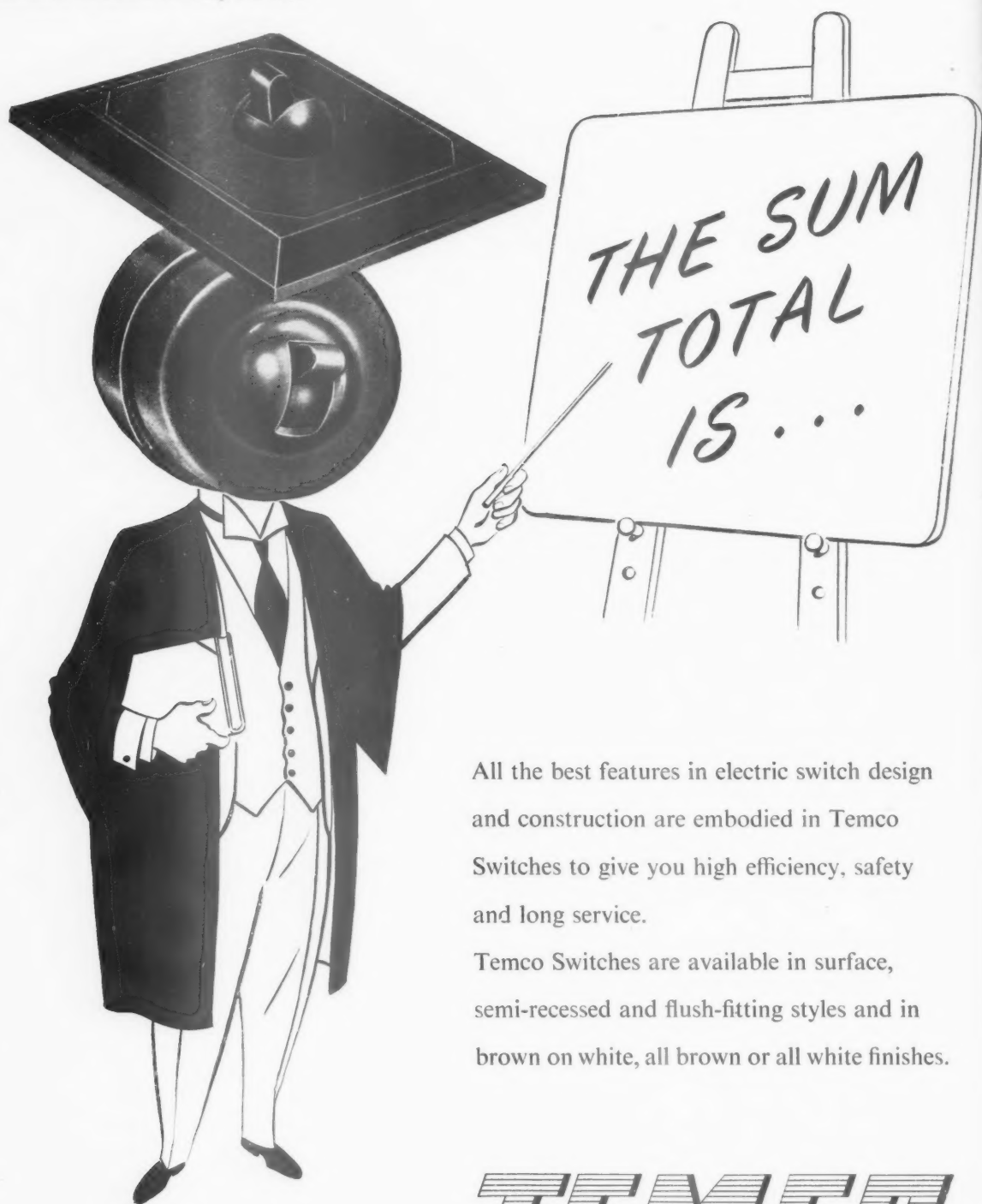
GUARANTEED NON-CRAZING

JOHNSON FIRECLAY COMPANY LIMITED

EXCELSIOR WORKS · CLIFFE VALE · STOKE-ON-TRENT

Manufacturers of High Grade Sanitary Fireclay Ware—Ideal for use in Hospitals
 Schools, Factories, Public Buildings etc.

Supplied through all leading Builders' Merchants — Catalogue supplied on request



*You will find our complete
Accessories Catalogue very
useful for quick reference.
Let us send you a copy.*

All the best features in electric switch design and construction are embodied in Temco Switches to give you high efficiency, safety and long service.

Temco Switches are available in surface, semi-recessed and flush-fitting styles and in brown on white, all brown or all white finishes.

TEMCO
ELECTRICAL ACCESSORIES

Manufactured by: **TELEPHONE MANUFACTURING COMPANY LTD**

and Marketed by their Sales Organisation: **T.M.C.-HARWELL (SALES) LTD**

37 UPPER BERKELEY STREET, LONDON, W.1

Telephone: **PADddington 1867/8/9**

A COR

We



The M
Scotlan

The New Outlook

A new architecture has emerged which depends largely for its style on new materials. It might be said that the new outlook and the new materials have produced in combination a new designer. In turn, the triple alliance of outlook, materials and designer has gone a long way towards producing a new kind of manufacturer who must be more aware of the designer's needs than in the past.

Previously it was the custom of builders to use natural materials and finish them in various ways according to the taste of the client or designer. Thus, wood was polished or stained, metal work was painted, floors were covered with carpets and walls were papered or distempered. In other words, the finish of any material was largely the affair of the owner and the only self-coloured materials were the stones, bricks and roof tiles which were the result of either natural processes or kiln burning.

The new materials are totally different in so far as they are compositions which have no reference at all to the natural products of the earth. Many forms of flooring and internal linings, such as rubber, laminated plastics and the like are the result of the chemist's work and they are pigmented throughout in such a way that the finish and the colour are fixed and cannot be altered. This new procedure puts an entirely new aesthetic responsibility upon the manufacturer and unless his products are finished and coloured with knowledge and taste he is bound to run counter to the designer's ideas.

The Marley Floor is pre-eminently such a product and we have for some time past been aware that our floor tile products should echo as closely as possible the new outlook in architecture and design. With this object in view we asked Myerscough Walker, Architect and Painter, to devise a system of colour and pattern in harmony with the new outlook. The completion of these studies on floor tile colours has coincided with the production of a new tile in the Marley range. The essential ingredient of the material in this tile is the synthetic plastic, polyvinyl chloride, the use of which confers resilience, flexibility, toughness and exceptional resistance to wear: the essential ingredient of the colour is a totally new use of balanced complements. We now offer MARLEYFLEX tiles in the new COLORTONE range, with the confidence that the aesthetic aspect of floor tiling has been studied with more thoroughness than has hitherto obtained in this industry.

This is the first of a series of announcements, six in all, describing a new system of colour co-ordination for flooring. Copies of the whole series will be available shortly.

A CORONATION BAR by R. Myerscough Walker

We now offer **MARLEYFLEX** floor tiles
in the new "COLORTONE" range with the
confidence that the aesthetic aspect of
floor tiling has been studied with more
thoroughness than has hitherto obtained



The Marley Tile Company Ltd., Riverhead, Sevenoaks, Kent. Tel.: Sevenoaks 2251
Scotland: Bishopbriggs 1093. Wales: Pencoed 376. N. Ireland: Belfast 24447. Eire: Dublin 51294

MARLEY



A school
Washroom
in
RICHARDS TILES



DETAIL OF THE REPTON SCHOOL CREST IN MOSAIC MAKES A COLOURFUL FEATURE OF THIS SIMPLE SCHEME



THERE ARE POINTS OF INTEREST IN THIS SIMPLE WHITE TILE DESIGN AT REPTON—THE "RECESSO" FITTINGS, THE MOSAIC PANEL AND THE "GRIPFOOT" FLOOR TILES WHICH FORM THE ONLY SAFE NON-SLIP SURFACE FOR WASHROOMS, SWIMMING POOL SURROUNDS, ETC.

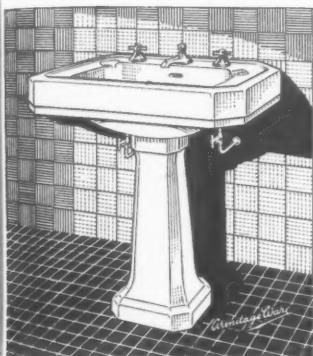
First throughout the world

IN EVERY COUNTRY OF THE WORLD THERE IS A RICHARDS REPRESENTATIVE EQUIPPED WITH INFORMATION FOR ARCHITECTS MEMBERS OF THE PROFESSION WILL FIND MUCH TO INTEREST THEM AT OUR LONDON SHOWROOM—

GRAND BUILDINGS, TRAFALGAR SQUARE, LONDON, W.C.2. • TELEPHONE: WHITEHALL 2488/8063

RICHARDS TILES LTD • TUNSTALL • STOKE-ON-TRENT • STAFFS

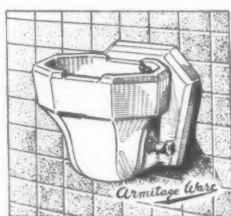
Armitage Ware



4077PC—"CORNDALE"
27" x 22" : 24" x 10" : 22" x 19" :
26" x 18"
in Armitage Quality Earthenware
★ Available in Armitage Genuine
Vitreous China



British Standard U.K. Regd. Design
4000P—"NEW PRIMERDALE"
(wall brackets if required)
27" x 19" : 25" x 16" : 22" x 16" :
20" x 16"
in Armitage Quality Earthenware
★ Also available in Armitage Genuine
Vitreous China or in Heavy Earthenware



**5501—"AQUALON" WALL
DRINKING FOUNTAIN**
in Armitage Genuine Vitreous China
12 3/4" wide x 14" projection
Also available in Pedestal form.
Completely hygienic



5401—BATHROOM comprising—4 1/2" 7" C "CORNDALE" Pedestal
Basin, 24" x 20" ; 4024 "DENTEX" Dental Basin, 14" x 14" ; 5600
"MANNEX" Manicure Table, 27" x 16" ; 1028 "ORLAN" BIDET ;
56 "NEW UNIVERSIA" CLOSE COUPLED Syphonic W.C. Unit ;
310 "LOCH AYR" Bath in Cast Iron, plunge and shower fitting,
plate glass screen.

THE complete Armitage range contains fixtures for all purposes including Hospitals, Institutions, Ships, Railway Carriages, Factories, Hotels, Schools and Public Buildings of every description.

The latest and best Armitage product is Genuine Vitreous China, a superior and unsurpassed quality product, the body of which being fused together and vitrified at extremely high temperature, is dense and permanently non-absorbent. It has great resistance to thermal shock and being tougher, provides extra strength.

Armitage Vitreous China, will not craze and is highly resistant to ordinary acids and alkalis, will meet the most exacting tests.

The Armitage Pottery also manufactures large quantities of Quality Earthenware, which is in general demand on account of its economical price and outstanding value—also will not craze.

Armitage Genuine Vitreous China and Quality Earthenware (distributed through bona fide wholesalers) are available, in addition to white, in any of the following fadeless and attractive colours:—

ARMITAGE IVORY
ARMITAGE CREAM
ARMITAGE BEIGE
ARMITAGE AQUA
GREEN
ARMITAGE JADE

ARMITAGE PRIMROSE
ARMITAGE LIGHT
CORAL
ARMITAGE PEONY
ARMITAGE BLACK
ARMITAGE BLUE

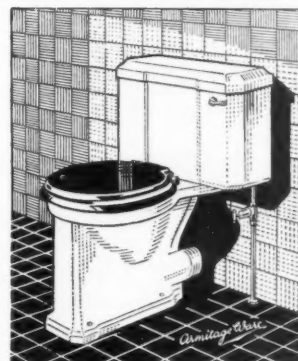
Architects and Quantity Surveyors are cordially invited to visit our London Showrooms (address below) where an interesting display of completely tiled bathrooms can be seen ; also to visit our Factory at Armitage, Staffordshire ; which has been reconstructed and modernised over the past 5 years and is now an outstanding example of technical efficiency.

Further information or details for the Drawing Office, also coloured Bathroom Booklet and General Catalogue will be sent on request. Ask for latest leaflet A/BBs.

EDWARD JOHNS

AND COMPANY LIMITED
ARMITAGE SANITARY POTTERY
NEAR RUGELEY · STAFFORDSHIRE

TELEGRAMS AND CABLES: JOHNS ARMITAGE TELEPHONE: ARMITAGE 253 (5 LINES)
LONDON OFFICE AND SHOWROOMS: 333/337 GRAND BUILDINGS, TRAFALGAR SQUARE, W.C.2
TELEPHONE: WHITEHALL 8063 & 2488



Syphonic U.K. Patent
**56—"NEW UNIVERSIA"
CLOSE COUPLED
SYPHONIC
W.C. UNIT**
in Armitage Quality Earthenware
or Genuine Vitreous China
Height overall—30"



British Standard U.K. Patent
**14—"NEW MAGONA"
(Non-Syphonic)
W.C. SUITE**
Comprising 1130 "MAGNIA"
W.C. in Armitage Quality Earthen-
ware or Genuine Vitreous China



1028—"ORLAN" BIDET
in Armitage Quality Earthenware
or Genuine Vitreous China
Length overall—25" approx.

NOW ! BETTER THAN EVER !

Celotex HIGHLIGHT Finish



*Celotex Insulation Boards
with this factory - applied finish*

BUILD • INSULATE • DECORATE

- ★ All in one material !
- ★ All in one operation !
- ★ All at one low cost !

The attractive, smooth, white Celotex HIGHLIGHT finish is now a better proposition than ever ! Continuous research since its introduction last year has resulted in new manufacturing techniques which now give you these *added* advantages :

Greater uniformity of colour
Increased depth of colour
Higher light reflection
Smoother and cleaner cut edges

The HIGHLIGHT finish is *not* a superficial, spray-coat application. It is a permanent finish of specially-prepared paint which *penetrates* the surface of Celotex cane fibre insulation boards. It is scientifically *brushed* into the board and then

hot-rolled to give the smooth, white finish that has no equal throughout the world.

Great savings can be made in decorating costs—one coat of paint or distemper gives the attractive and permanent finish of more expensive applications.

Ideal for lining walls and ceilings, no further decoration is required in industrial buildings if handled carefully. In public buildings, offices or in the house, the HIGHLIGHT finish provides an ideal base for the direct application of paint or distemper—no sizing or undercoating is necessary.

Use Celotex Insulation Boards with the factory-applied HIGHLIGHT finish—and start saving NOW !

CELOTEX

Made in England by

Celotex Limited, North Circular Road, Stonebridge Park, London, N.W.10. Telephone : Elgar 5717



The old towns and villages of this land bear testimony to the lasting nature of clay tiled roofs, and clay tiles bring colour and character to the city streets. The hidden strength and slow maturing beauty of the clay tile exemplifies the British scene.

There's nothing so good
as a *clay* tiled roof . . .

CLAY *lasts*

IT takes a long time to make good clay tiles; time well spent, for the warm tones of Acme and Acme Sandstorm Tiles will never fade. Their colour, burnt in at high temperatures, is *absolutely permanent*—their superior strength saves on site breakages and maintenance.

Acme and Acme Sandstorm Tiles are made from the well known Etruria Marls of Staffordshire—acknowledged to be the best clay in the world for tile manufacture. They are available in a wide range of colours, with fittings to match. *Nation wide delivery from stock.*

Send for the Acme Catalogue, containing valuable technical information.



*Bucklow R.D.C. Marthol Lane Site, Ullerton
Eng. & Surveyor—H. V. Shaw, M.Inst.Mun.E.*

For enduring beauty specify

ACME SANDSTORM *clay roofing tiles*



DOWNING'S range of roofing tiles includes:—

ACME M.M. ROOFING TILES, ACME SANDSTORM ROOFING TILES,
ACME CENTURY HANDMADE SANDFACED and ACME REDFLOOR QUARRIES

G. H. DOWNING & CO. LTD. (Dept.C.1), BRAMPTON HILL, NEWCASTLE-UNDER-LYME, STAFFS.
Telephone: Newcastle-under-Lyme 65381

L.G.B.



Welding in progress.



Canteen at Barnsley for Brook Motors Ltd.



New Factory at Barnsley for Brook Motors Ltd.

Architect: Noel Heppenstall, L.R.I.B.A., Milnesbridge, Nr. Huddersfield

specialists in the design
fabrication and erection of steelwork



Established 1850

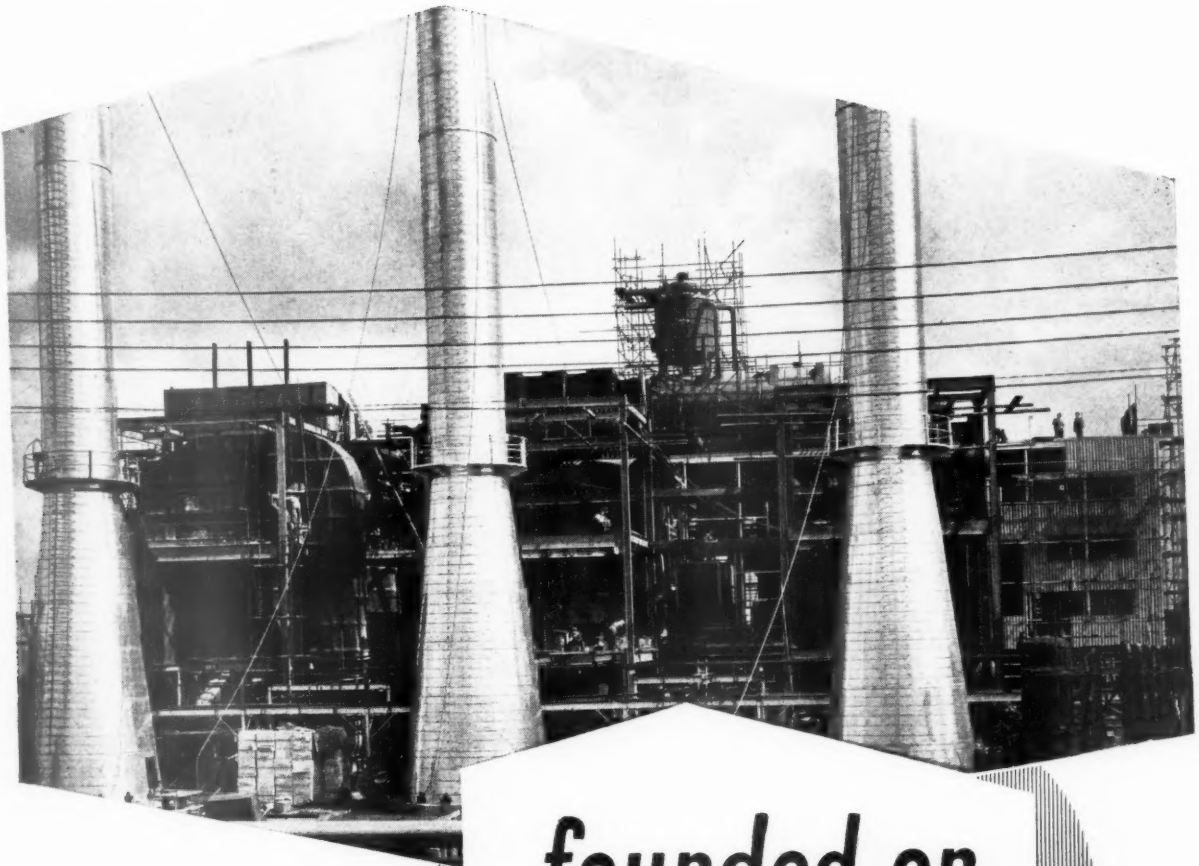
James Austin & Sons Ltd (DEWSBURY)

THORNHILL IRON & STEEL WORKS · DEWSBURY

Telephone: 1750 (5 lines) Telegrams: "Austins," Dewsbury

Private Sidings: British Railways, Thornhill

Associated Companies: ASTLEY BROOK & CO. LTD., ST. GEORGE'S WORKS, HUDDERSFIELD, MANUFACTURERS OF "A.B.C. GARAGES AND GREENHOUSES."
A. J. RILEY & SON LTD., VICTORIA WORKS, BATLEY, BOILER MAKERS, WELDING ENGINEERS.



The installations at
Coryton Refinery are
supported on more
than 12,000 Frankipiles.

*Photograph of the Power
House, above, by courtesy of
the Vacuum Oil Company Ltd.*

founded on
FRANKIPILES

FRANKIPILE

(THE FRANKI COMPRESSED PILE CO., LTD.)

**39, Victoria Street,
London, S.W.1.**

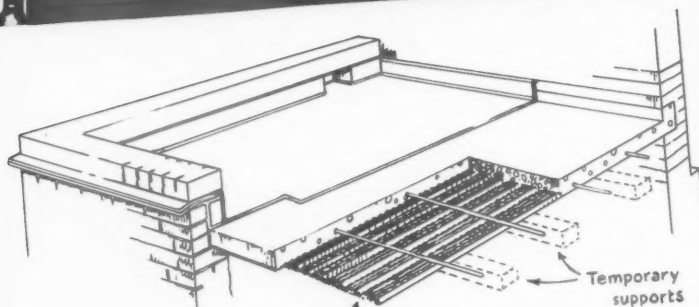
Telephone: ABBey 6006-9.

'Grams: Frankipile, Sowest, London.

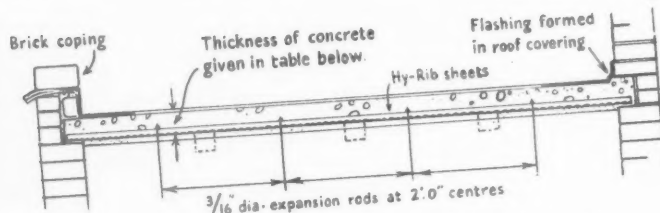
And in AUSTRALASIA, BRITISH WEST INDIES AND SOUTH AFRICA

HY-RIB

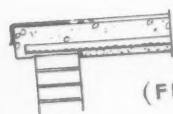
Combined Centering
and Reinforcement
for
FLAT CONCRETE ROOFS



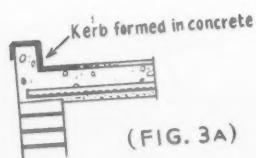
(FIG. 1) Hy-Rib sheets



SECTION (FIG. 2)



(FIG. 3)



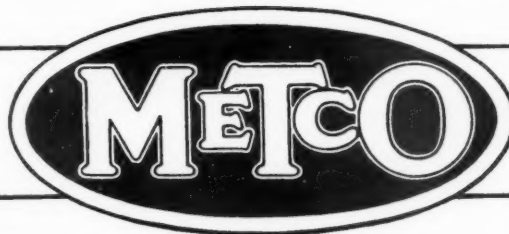
(FIG. 3A)

ALTERNATIVE DETAILS
AT EAVES

Span of roof	Thickness of concrete	Gauge of Hy-Rib
Up to 6' 0"	3"	28 G
6' 0" to 7' 0"	3 1/2"	28 G
7' 0" to 8' 0"	3 1/2"	26 G
8' 0" to 9' 0"	4"	26 G
9' 0" to 10' 0"	4 1/2"	24 G
10' 0" to 11' 0"	5"	24 G (H)
11' 0" to 12' 0"	6"	24 G (H)

Write for a copy of the HY-RIB Handbook

**SPECIALIST
ADVISORY
SERVICE**



**BACKED BY
34 YEARS'
EXPERIENCE**

We offer you Immediate Delivery from STOCK

DOORS & GATES

of all descriptions including :
PANELLED DOORS (Canadian Door Stock and Deal)
FLUSH DOORS (Plywood and Hardboard faced)
Prepared for locks or fitted if required.
OAK (Doors and Gates)

PLYWOOD

We are now holding large stocks of Plywood and Blockboard in Warehouses situated in the London, Manchester, Liverpool and Newcastle-on-Tyne areas.

These Stocks are available, free of all licencing restrictions, in a very wide range of thicknesses, sizes, grades and manufactures.

We specialise in the importation of popular sizes, 72" x 36", 72" x 48", 84" x 48" and 96" x 48" in thicknesses $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " suitable for the Building Trade, in addition to Blockboards, which we can supply in a variety of attractive woods in sizes as large as 67" x 201".

Full details of these Stocks will be gladly provided on request.

FIBRE BUILDING BOARDS

Hard, Insulating and Laminated Boards, in the following well-known trade-marked brands:

"UNITEX" Ivory Faced (Swedish)
"VIKING" (Swedish)
"KENMORE", "JUMBO", "BEAVER" and
"DONNACONA" (Canadian)
ENAMELLED HARDBOARDS
PERFORATED HARDBOARDS
ACOUSTICAL TILES

We invite your enquiries for any or all of the above, and will gladly send on request price lists, literature and samples, or instruct our local Representative to call on you.

We also offer you our SERVICES in :

METAL FIXING — PARTITIONING — ACOUSTICS

We have our wide range of MeTcO Metal Fixing Systems for the lining of roofs and walls and for flat ceilings, selection from which can meet any requirements in these fields.

Our MeTcO Partitioning is a sectional built-up system of components, taking all configurations, of extremely high salvage value when rearrangement or removal is desired, and designed for plain infillings or special panels of various materials, with either single or double glazing.

Acoustical Correction and Sound Quietening problems are dealt with by our various sound absorbent materials.

In these fields, we are organised to take charge of complete estimating and design, and the execution of the final job. Your enquiries accompanied by full data and preferably drawings are invited, and our Consulting and Technical Service is at your disposal.

PLASTICS

Main Distributors of **FORMICA** and "TRAFFOLYTE"
Decorative Laminated Plastic Sheets.
Prompt Delivery from our Southall Warehouse in the following finishes:—

FORMICA
"Linette" "Onyx"
"Coarse Linette"
"Woodgrain"
"Softblow"

TRAFFOLYTE
"R.U. Cream"
"White"
"I.U. Ivory"
"K.U. Green"

We can also supply "BOSCOPRENE 503 CEMENT", "BOSCOTEX PRIMER 5R" & "EVO-STIK" Adhesive for veneering **FORMICA** to table tops, counter tops etc.

HARDWOOD

SQUARE EDGED, GOLD COAST, MAHOGANY LUMBER Mark "METCO"

In two grades:

F.A.S. (Firsts & Seconds) and No.1.C & S. (No. 1 common & Select)

The thickness range is 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ " and 2" for both grades.

F.A.S. Average width approx. 10"

" length " 14' 6"

No. 1. C & S. Average width approx. 9"

" length " 13' 6".

This material is at our Southall Warehouse, and your inspection is cordially invited; if inspection is not possible, your requirements can be placed with confidence that a good representative parcel of boards will be dispatched.

INDASCO BITUMEN EMULSION

for resilient Industrial Floor surfaces.



The MERCHANT TRADING COMPANY Limited.
EFFINGHAM HOUSE, ARUNDEL STREET, STRAND, LONDON, W.C.2
Telegrams: "Themetraco. Estrand. London."
Telephone: TEMple Bar 5303 (8 lines)

*Fine building stone was quarried at Ketton
before 1594, the date of this legal document
which bears the Great Seal of the first Queen
Elizabeth. The document relates to the one-time
ownership of a part of the Ketton estate now
the property of this company which today
still quarries Ketton Freestone and makes
Ketton Portland Cement*



KETTON PORTLAND CEMENT CO. LTD

KETTON, NR. STAMFORD, Lincs.

SOLE DISTRIBUTORS · THOS. W. WARD LTD · SHEFFIELD



Lyctus brunneus

The enemies of woodwork

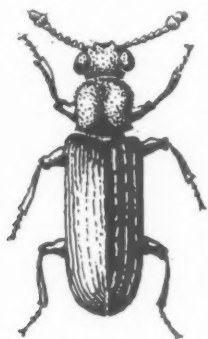
... and the modern antidote

Damage costing several million pounds a year is caused by destructive fungi and wood-boring insects. Some of the most effective methods of modern preservation are provided by Monsanto's 'penta' chemicals.

PENTACHLOROPHENOL gives protection against all of the wood-destroying fungi and insects found in this country—including dry rot, furniture beetles, etc. When the annual cost of dry rot alone is

estimated at £20,000,000, such a preservative speaks for itself.

Remember — impregnated timber is the best guarantee of future immunity. 'Penta'—made by Monsanto in several forms—can be easily applied to whole timbers before construction by simple cold dipping; or it can be brushed on to woodwork already



Lyctus planicollis

in service which cannot be treated by dipping.

'Penta' preservatives are clean and safe to handle

under normal operating conditions. Timber treated with 'penta' is free from stain and can be painted over.

What to specify

Monsanto's range of pentachlorophenol preservatives includes:—

PERMASAN.* Monsanto's own oil solution of pentachlorophenol, ready for application.

SANTOPHEN* 20. Pentachlorophenol (technical) for solution with oil; chemically stable, involatile, virtually insoluble in water—the cheapest, most versatile good preservative.

SANTOBRITE.* Sodium salt of pentachlorophenol, water soluble. A short-term preservative, especially for sapstain control in newly-converted timber.

Full information and bulletins from Special Products Sales Department, Monsanto Chemicals Limited. (*Registered Trade Marks)



MONSANTO CHEMICALS LIMITED

Victoria Station House, Victoria Street,
London, S.W.1

In association with: Monsanto Chemical Company, St. Louis, U.S.A. Monsanto Canada Ltd., Montreal. Monsanto Chemicals (Australia) Ltd., Melbourne. Monsanto Chemicals of India Ltd., Bombay. Representatives in the world's principal cities.



Housing contract for the Ministry of Works, Newbury



Housing contract for the Ministry of Works, Aldermaston



Private houses at Edgware

THERMALITE

in house construction

Three of many housing contracts where Thermalite lightweight loadbearing material has been used.

In these schemes Thermalite has been used in the inner leaf, or both leaves, of cavity wall construction because of its unique properties, combining the functions of loadbearing and thermal insulation, and because of its rapid rate of laying. These contracts have proved that an overall average rate of laying of 30 blocks per hour (180 brick equivalents) can readily be achieved.

THERMALITE
FOR LIGHT WEIGHT · FOR STRENGTH
FOR INSULATION · FOR ECONOMY

For full details and technical data:

THERMALITE LIMITED

SHEPHERDS HOUSE LANE, EARLEY

READING, BERKS. Telephone : Reading 62694



Or don't you care . . . ?

The urgency of the post-war housing problem, successive shortages of materials, rising costs and the difficulties arising from an unbalanced national economy — all these have conspired to hinder the implementation of the improved standards of heating and ventilation recommended in various post-war Studies, Reports and Codes.

If these standards are to be generally realised in the near future in spite of coal shortage and other difficulties, a first essential is that heat services should be planned in detail well before building starts. At present, this is not always done, with such results as unsatisfactory ventilation and insulation, condensation troubles, increased installation costs, and the enforced use of uneconomic methods of heating.

The wide knowledge of Gas technicians can be of great value in ensuring complete co-ordination of heat services with the general building plan. It is freely available, through local gas undertakings, to all who wish to realise improved standards of heating whilst making the best use of the Nation's fuel resources.

Where to go for information about Gas

If you are considering the use of Gas, however tentatively, your first move should be to get in touch with the Gas Undertaking serving the area in which the job is situated. Through it you have access to the combined technical resources of the entire Gas Industry. The following list gives the addresses and telephone numbers of the Area Boards. Where there is any uncertainty as to which Area Board is concerned, The Gas Council will be pleased to give you the correct address.

SCOTTISH GAS BOARD: 26, Drumsheugh Gardens, Edinburgh, 3. Edinburgh 34331/5.

NORTHERN GAS BOARD: 30, Grainger Street, Newcastle-upon-Tyne, 1. Newcastle-upon-Tyne 26101.

NORTH WESTERN GAS BOARD: Bridgewater House, 60, Whitworth Street, Manchester, 1. Manchester Central 8121.

NORTH EASTERN GAS BOARD: Bridge Street, Leeds, 2. Leeds 32571/8.

EAST MIDLANDS GAS BOARD: Beverley House, University Road, Leicester. Leicester 23201/5.

WEST MIDLANDS GAS BOARD: 6, Augustus Road, Edgbaston, Birmingham, 15. Edgbaston 3616.

WALES GAS BOARD: 1 and 2, Windsor Place, Cardiff. Cardiff 28621.

EASTERN GAS BOARD: 2, The Abbey Garden, London, S.W.1. Trafalgar 5373/7.

NORTH THAMES GAS BOARD: 30, Kensington Church Street, London, W.8. Western 8141

SOUTH EASTERN GAS BOARD: Katharine Street, Croydon, Surrey. Croydon 4466.

SOUTHERN GAS BOARD: 164, Above Bar, Southampton. Southampton 76362.

SOUTH WESTERN GAS BOARD: 9a, Quiet Street, Bath. Bath 60411/5.

Issued by the Gas Council, 1, Grosvenor Place, London, S.W.1. Telephone: Sloane 4554.

GC 10



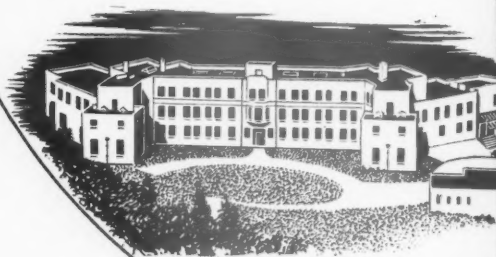
St. Mary's Church, Erdington, Birmingham. Wood and Kendrick and Edwin F. Reynolds, F.R.I.B.A.



Prudential Buildings Birmingham. The Estate Department, Prudential Assurance Co., Ltd.



Odeon Theatre, York. Harry W. Weedon, F.R.I.B.A. and Partners.



Convalescent Home, Kewstoke, Weston-super-Mare. W. H. Martin, L.R.I.B.A.

**A good
name for
building
and Civil
Engineering**

**Bryants
Birmingham**

IT'S A GOOD JOB IT'S BRYANTS

**C. BRYANT & SON LTD.
WHITMORE ROAD,
BIRMINGHAM, 10.**

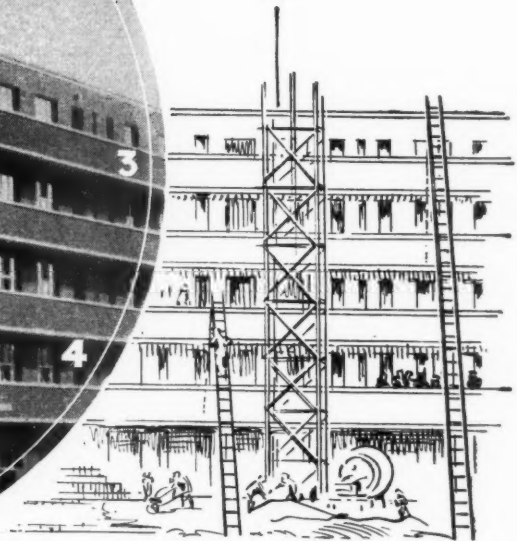
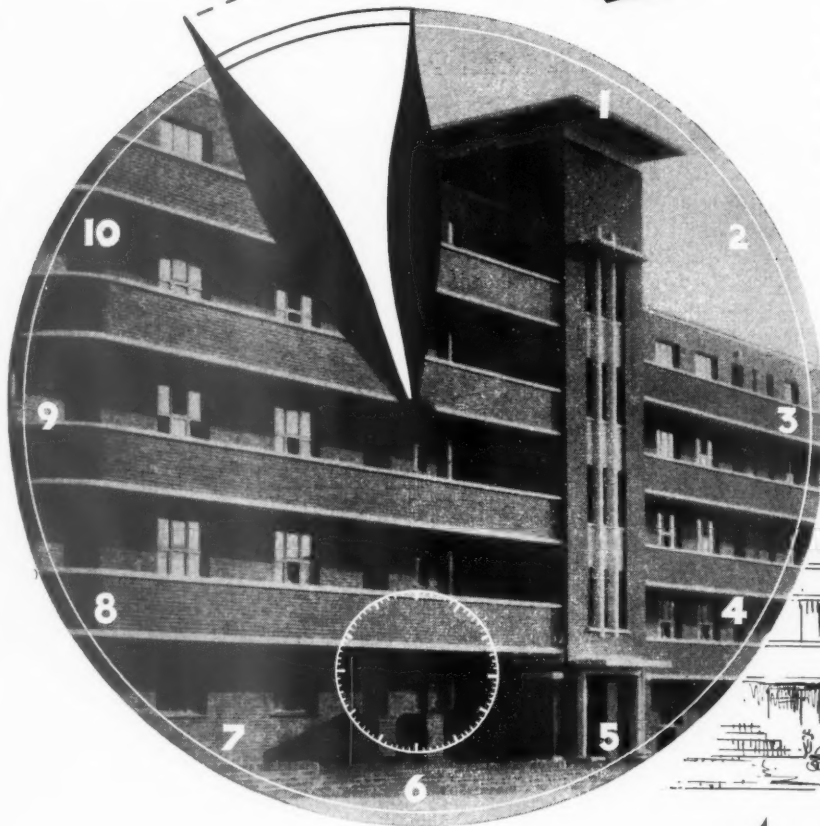
LONDON OFFICE:
66. VICTORIA STREET, S.W.1

L.G.B.

MAGNET beats the clock

Priced right and speedily installed, Magnet windows, doors, cupboards and standardised joinery bring down construction costs and save a tremendous lot of valuable time on any building schedule.

Thanks to 3 strategically-placed modern factories, well staffed and plentifully stocked with kilned and air-conditioned timber, Magnet nation-wide service will immediately answer your most urgent needs anywhere throughout the entire country.



* Write for *FREE* literature to:

WHITLEY STREET, BINGLEY, YORKS. Phone : Bingley 3547 (3 lines)

LOVE LANE, ASTON, BIRMINGHAM. Phone: Aston Cross 3291

LONDON ROAD, GRAYS, ESSEX. Phone: Tilbury 77 (5 lines)

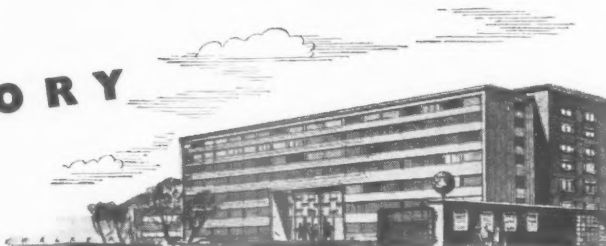




PLIMBERITE

WOOD CHIPBOARD

IN OFFICE
AND FACTORY



cuts costs of conversions

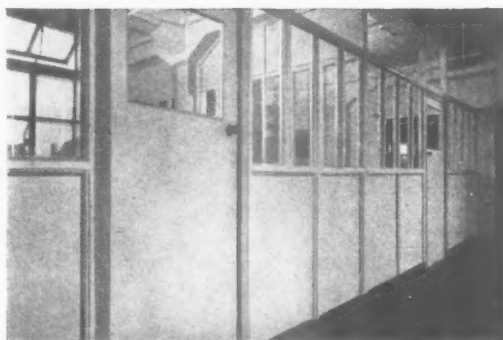
Speed up your conversion work with Plimberite and cut partitioning costs. A sheet (8 ft. x 4 ft. in thicknesses of $\frac{1}{2}$ " and $\frac{3}{4}$ ") of this versatile resin-bonded wood chipboard cuts readily to fit any angle, thus saving you time, trouble and money. Manufactured under heat and pressure to a density of 50 lbs/ cu. ft., Plimberite is rigid, flameproof, with good sound and thermal insulating qualities. Moisture movement and load tests, carried out on Plimberite by the Department of Scientific and Industrial Research prove its stability and strength. The surface of Plimberite, so ideal for painting, is also suited, because of its pleasing appearance, to staining, waxing and varnishing. To ensure best decorative results, ask for specifications of various finishes. Complete technical data on Plimberite is available from the manufacturers.

PRICES (ex works) 10 boards and over

$\frac{1}{2}$ " — 1/1 $\frac{1}{2}$ per sq. ft.

$\frac{3}{4}$ " — 1/6 per sq. ft.

Lower prices for large quantities



Offices constructed with $\frac{3}{4}$ -in. PLIMBERITE and timber framing, by Messrs. Baiger & Co., Confectionery Manufacturers, London, E.I.

BRITISH PLIMBER LIMITED

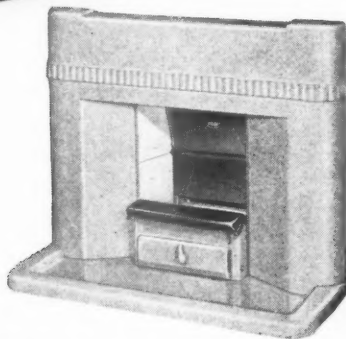
20 Albert Embankment • London • S.E.11 • Reliance 4242



**For the 1953
Housing Programme**

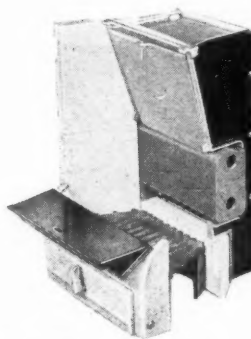
SOLID FUEL **Radiation** APPLIANCES

a winner in every class



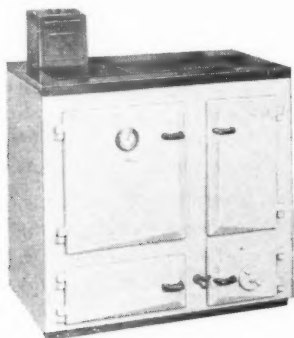
LORAY Fireplace Suite

- A handsome cast iron suite finished in "Lexos" porcelain enamel.
- Incorporates the Loray continuous burning inset grate, with or without back boiler.
- Combines the advantages of simple installation with low maintenance costs.



EAGLE Boiler Flue Set

- Shown here with Loray continuous burning grate, but can also incorporate the Sutton, Fulham or Chevin grate.
- Free access to boiler and boiler connections.
- Boilers supplied in copper or wrought-welded iron.
- Interior frames available in "Lexos" enamel finishes to match Radiation inset grates.

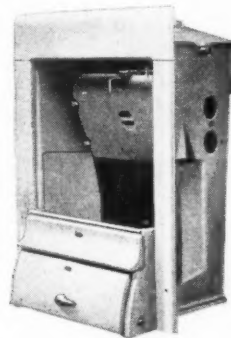


YORKVALE Cooker & Water Heater

- A compact cooker with exceptionally large main oven and hot-plate.
- Economic day and night burning on coke, coal, anthracite, etc.
- Outstanding water heating performance.
- Simple installation and low maintenance costs.



/ APPROVED BY THE
MINISTRY OF FUEL AND POWER



CHEVIN Convectair Fire

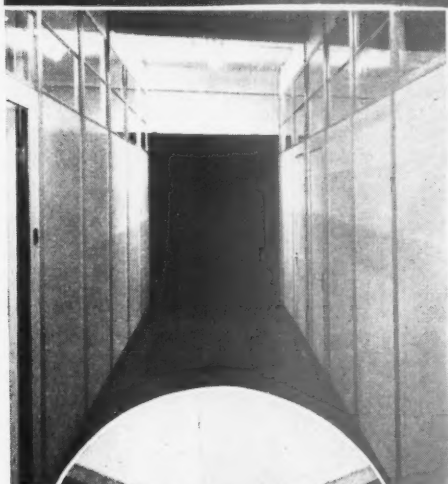
- Models available for fitting in front of or behind tile surround.
- Boiler easily removable through front of appliance for servicing.
- Can be supplied with Chevin, Loray, Sutton or Fulham continuous burning inset grates, with or without built-in gas ignition.

Full details of these and other solid fuel appliances from: Radiation Group Sales (Solid Fuel Division), Leeds 12



MEDINO BOARD PARTITIONING

*New Offices of Messrs. John Le Boutillier Ltd., British Columbia House, London, S.W.1.
Contractors: Messrs. A. Hunt & Co. (City) Ltd. Erectors: Messrs. Firmin & Collins Ltd.*



Close-up showing the compressed granular cork structure of Medino Board.

PLASTIC FACED MEDINO BOARD

has a substantial core of compressed granular cork providing good insulation against temperature variation, and is almost completely sound proof. It is light in weight, economical in price, yet is strong and rigid. It can be quickly fabricated into partitioning of almost any size and complexity and is particularly useful for the construction of interview rooms and cubicles. It is supplied with SaR-ReZ protective plastic finish which is available in a range of attractive colours and combines a pleasing appearance with an exceptionally hard wearing surface.

SARO

FLUSH DOORS, SOLID & GEODETIC FRAME
SAR-REZ PANELLING & LIQUID PLASTIC FINISHES
SAROLITE CORRUGATED TRANSLUCENT MATERIAL

*We shall be happy to send you descriptive literature regarding
Medino Board, or any of the other Saro products.*

SARO LAMINATED WOOD PRODUCTS LIMITED
FOLLY WORKS · WHIPPINGHAM · EAST COWES · ISLE OF WIGHT (Cowes 704-8)
London Office: 45 Parliament Street, S.W.1 (TRAFALGAR 6291)

Technical details of Medino Board are given in Information Sheet 14.LII published in April 30th issue.

Write for YOUR copy. . .

SLIDING DOOR GEAR PROBLEMS

SOLVED



This catalogue consists of 104 pages of information which should be available to all Architects & Builders. We will send you a copy, free of charge, on request.

The **BRITISH TROLLEY TRACK CO. LTD.**
COBURN WORKS COPPERFIELD STREET LONDON · S.E.1

Telephone: WATerloo 4311 (3 lines) Private Branch Exchange

“There’s a lot of fine points to puttin’ up a first-class privy† that the average man don’t think about. It’s no job for an amachoor take my word on it. There’s a whole lot more to it than you can see by just takin’ a few squints at your nabor’s.”

*Lemuel Putt **



WE’VE been deeply into these fine points at Williams & Williams lately ; and we think we have something really satisfying in our new Roften Privy. Just a few of the reasons for our satisfaction are shown below :—

1. Roften toilet compartments are cheaper than brick and tiles : prefabrication makes them easy and quick to erect.
2. They can be grouped in any number.
3. They are made of high quality sheet steel which is rustproof, fire resistant and won’t harbour germs.
4. The doors are double skinned to prevent warping.
5. They will stand up to climatic conditions in any part of the world.
6. The clean straight lines are in keeping with modern trends in design.
7. Rofstens are supplied in finished colours to specification.

If you are putting toilet compartments into schools or hospitals, factories or offices we should be glad to tell you about the new Roften lavatory units. Please write or telephone.

† *Lavatories or even toilet compartments if you wish Sir.*

* *The Specialist by Charles Sale : Putnam, 42 Great Russell Street, London, W.C.2.*

The Pressed Metal Division of WILLIAMS & WILLIAMS Limited

ROFTEN WORKS HOOTON CHESHIRE

London Office: Victoria House, Southampton Row, W.C.1. Telephone: HOLborn 9861-5

DUCTUBE

*and
now*

DRAINAGE-

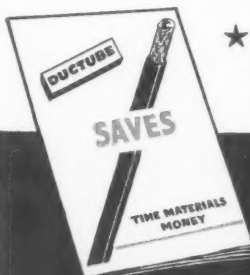
6"

**SURFACE WATER
DRAINAGE**

The first occasion on which 6" "Ductube" was used for surface water drainage in concrete haunching, was at St. John's Hill, Shaftesbury, by the Roads and Bridges Department of the Dorset County Council.

"Ductube" Pneumatic Tubing, the most economical method of forming ducts in concrete, is now available in the following diameters:— $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 1 $\frac{3}{4}$ ", 2", 2 $\frac{1}{2}$ ", 3", 3 $\frac{1}{2}$ ", 4", 5", 6", 7", 8", 9", and 12", and CONTI-DUCT from 12" to 48"

A free brochure "DUCTUBE SAVES" will be sent on request.



★ CERTAIN DIAMETERS
OF "DUCTUBE" CAN
NOW BE HIRED

Photograph by courtesy of
J. J. Leeming, Esq.,
B.Sc., M.I.C.E., M.I.Struct.E.
County Surveyor.

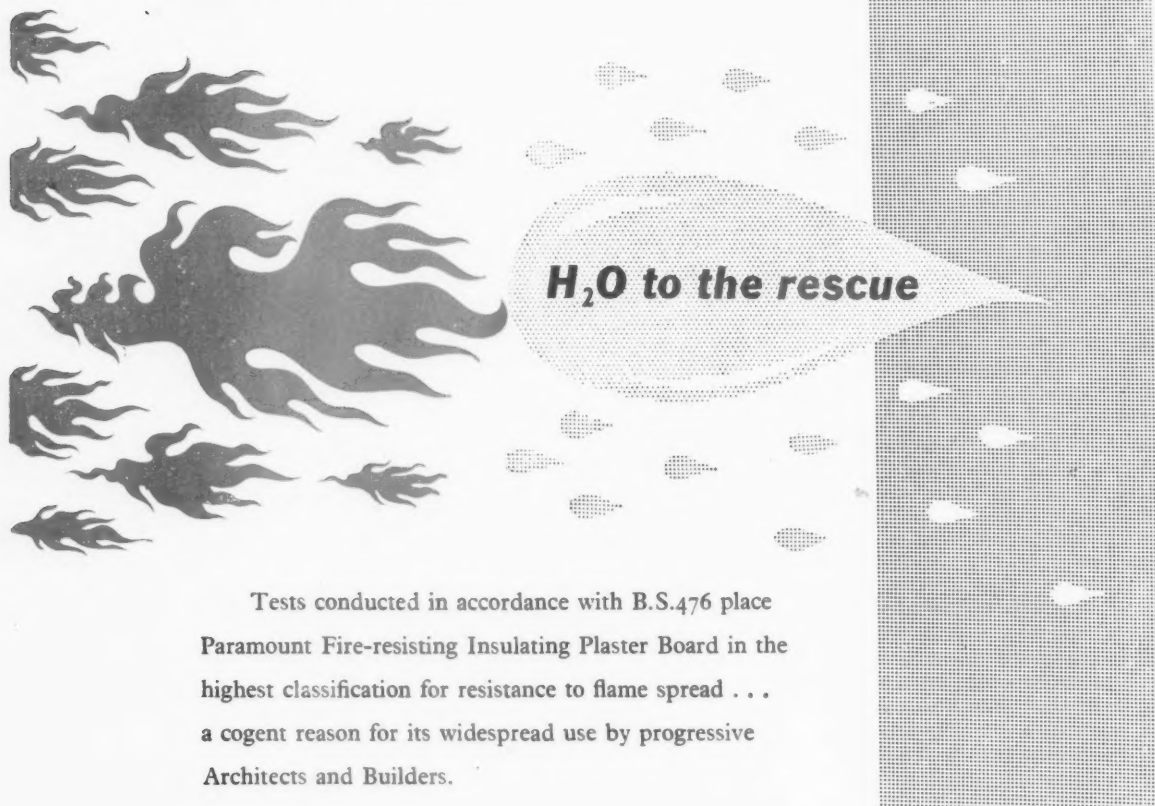
DUCTUBE Company Limited

REGENT HOUSE • 235-241 REGENT ST • LONDON • W.1

Telephone REGENT 2592/3/4

***In buildings of all types,
'Paramount' Insulating Plaster Board affords
a high degree of protection against fire***

Gypsum, which forms the core of Paramount Plaster Board, contains 20% of chemically combined water and, consequently, **cannot burn**. When attacked by fire, the process of calcination is so slow that flame spread is greatly retarded and the extent of loss appreciably curtailed.



Tests conducted in accordance with B.S.476 place Paramount Fire-resisting Insulating Plaster Board in the highest classification for resistance to flame spread . . . a cogent reason for its widespread use by progressive Architects and Builders.

Factory roofs and walls, lined with 'Paramount' Insulating Plaster Wallboard, fixed by the 'Paraclip' System, have greatly increased thermal insulation and fire-resistance. The capital outlay is quickly recovered by the fuel economy achieved.

THE BRITISH PLASTER BOARD LIMITED

SOUTHERN SALES OFFICE
MORRIS HOUSE,
1-5 JERMYN STREET, LONDON, S.W.1.
Telephone: Whitehall 9821



NORTHERN SALES OFFICE
BIRKENHEAD ROAD,
WALLASEY, CHESHIRE
Telephone: Birkenhead 4411

t
u
S
r
s
s
S

18

Ac
S C O T



CAVALCADE

"Nothing Shews" reads the supplement to ADAMSEZ 1907 CATALOGUE

"So strikingly, how rapidly old types are superseded by improved appliances than the fact that this Supplementary List is rendered necessary. It shows, too, that however elaborate and apparently up-to-date a Catalogue may seem to be, many of the appliances are in reality 'old types'. So, whilst we may regard the book itself as a reference containing valuable productions, yet we respectfully desire that our customers may communicate with us where possible, and avail themselves of any advantages Further Time and Experience may have secured, and thereby give us the satisfaction of supplying what we feel to be THE BEST."

So spoke our Fathers. Time brings its changes but Adamsez still keeps its motto "*Let Knowledge Grow*".

1888



Fig. 755



Fig. 6015 THE "KODE B"

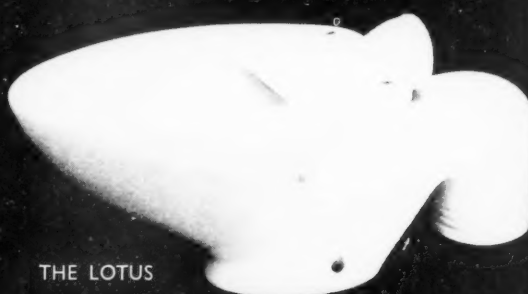


Fig. 439 THE LOTUS

1953



THE BEAN



THE LOTUS



THE LOTUS

Adamsez Ltd
SCOTSWOOD ON TYNE

Give much more light

with

GIRLINGS MAGNA LIGHTS



Girlings' pre-cast 'Magna Light' roof and pavement lights are scientifically designed to combine adequate mechanical strength with a strong and pleasing diffusion of light. The edges of the lenses are treated with a light-reflecting compound. This, in combination with the light-diffusing effect of the pyramid-patterned soffit, produces a delightful impression of brilliance.

Architects, engineers and contractors are invited to write for the Girlings Magna Light brochure. It gives full details of the wide range of sizes and patterns available, their construction and application, and contains all dimensional details.

GIRLINGS' FERRO CONCRETE CO LTD


By Appointment
Suppliers of
Ferro Concrete work
to the late
King George VI.

SOUTH : Great West Road, Feltham, Middlesex
MIDLANDS : Rothwell, nr, Leeds
SCOTLAND : Southbank Road, Kirkintilloch, Glasgow

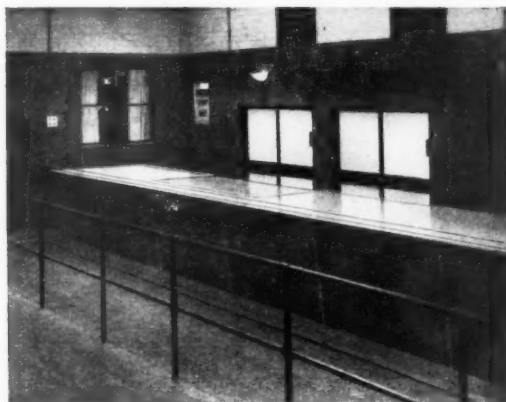
'Phone : Hounslow 1158
'Phone : Rothwell 3174 (Leeds Extension)
'Phone : Kirkintilloch 2244/5

See our exhibit at the Building Centre, 26, Store Street, Tottenham Court Road, W.C.1

* Hygienic



* Heat Resisting



* Durable



KLING DECOR

SUPER-HARD PLASTIC SURFACES for long term propositions

KLINGDECOR surfaces solve, once and for all, the most persistent problems of interior design. While introducing new life and colour and improved standards of hygiene, these super hard plastics virtually eliminate the need for renewal. Varied decorative schemes of lasting beauty become feasible at low cost—and tremendous savings are made in servicing.

Tough enough to withstand the wear-and-tear of schools and canteens, more than sufficiently decorative for homes and restaurants, Klingdecor has a host of uses. Wall panelling and ceilings, for example, kitchen units, shop counters, bar tops and factory benches . . .

Equally impressive are Klingdecor's constructional merits. Though strong and durable, it is light in weight, easily trimmed, and can be bonded to any base or veneered to almost any shape.

Made in a wide range of colourful, fadeproof designs, Klingdecor has a non-porous surface which is impervious to grime and germs. Food stains, grease and spilt liquids, including acids, are removed without the application of costly materials. Its surface hardness is so highly resistant to abrasion, that in most everyday conditions it is practically indestructible.

Boiling water and hot utensils will not mar its beauty. Besides being cigarette proof, Klingdecor withstands temperatures up to 150° C.

* Tough



MAIN DISTRIBUTORS: Arnold Laver & Co. Ltd., Wharf Street, Bradford; also Sheffield, Hull and Chesterfield · Brownlee & Co. Ltd., City Saw Mills, Port Dundas, Glasgow, C.4, Scotland · C. V. Creffield & Co. Ltd., Leyborne Wharf, Horton Bridge Road, West Drayton, Middlesex · Eustace & Co. Ltd., 54, Middle Abbey Street, Dublin, Eire · Lytle & Pollock Ltd., Duncrue Street, Belfast, N. Ireland.

A COMPREHENSIVE RANGE OF 13 AMP. FLAT PIN ACCESSORIES



FOR DETAILS OF THE FULL RANGE AVAILABLE,
SEND FOR A COPY OF THIS FOLDER HPL 2010

BRITMAC ELECTRICAL CO. LTD.

BRITANNIA WORKS

11A FIDALE ROAD TYSELEY BIRMINGHAM 11

TELEGRAMS: BRITMAC, BIRMINGHAM

SWANSEA

AND AT
LONDON

GLASGOW



TILES
most a
ception
need be



STRIP
areas v
appear
Phone:

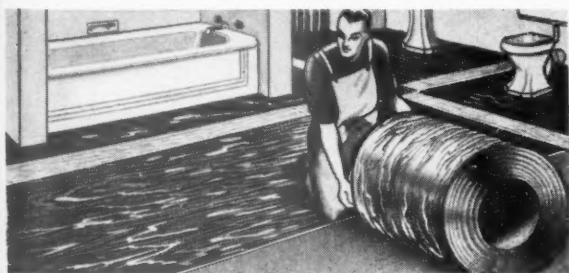


PHENCO

FLEXIBLE-PLASTIC FLOORING



TILES. Made in 9 in. and 12 in. squares. Cover the most awkward spaces neatly and simply. When exceptional conditions cause damage, only the tiles affected need be replaced.



STRIP. Supplied in rolls 36 ins. wide. Ideal for large areas where the join is so imperceptible that the floor appears to be covered in one piece.

Phone: London Wall 3564 and 1622. Grams: Phenrub Stock, London.

EMINENTLY SUITABLE FOR BATHROOMS AND LAVATORIES BECAUSE IT IS NON-SLIP, EASILY CLEANED AND IMPERVIOUS TO WATER, OILS, AND MOST FORMS OF CHEMICAL ATTACK.

Phenco is a tough, hard-wearing floor covering based on special blends of plastics, calendered to uniform thickness and size for easy laying on any level surface. In addition to its more obvious advantages, Phenco is naturally resistant to fire, is resilient and quiet to the tread and insulated against cold and damp. Whether in tiles or in strip form, Phenco is easily laid and fitted. Available in a range of 20 lovely colours in plain or marbled effects. Write now for further details and *put your foot down—insist on Phenco!*

Phoenix Rubber Co. Ltd.

91 BISHOPSGATE, LONDON, E.C.2

Works: 2K Buckingham Avenue, Trading Estate, Slough, Bucks.

Hangers *NEW* Emulso-Plastic Paint

FABRIGUARD

was chosen here . . .

This is a typical example of the use of **FABRIGUARD** on a new building, showing the successful decoration of **NEW** plaster surfaces. Walls and ceilings are in Ivory Matt with cornice picked out in Vellum Matt. **WORK WAS COMMENCED FOURTEEN DAYS AFTER PLASTERING WAS COMPLETED.** Primer-Sealer was applied one day and two coats of Matt Finish the next day.

Within forty-eight hours children entered the top floor and left a hose pipe flooding water through the ceiling for twelve hours. Immediate examination and subsequent inspection

after seven days revealed the **FABRIGUARD** surface to be intact.

For all buildings open for public use, **FABRIGUARD** affords a pleasing, durable and washable wall and ceiling finish.

FABRIGUARD, the remarkable new Emulso-Plastic Paint, is resistant to the destructive action of Alkali in new plaster, cement, asbestos cement or brickwork, and is acid resisting.

FABRIGUARD dries quickly to a rubber-like film, and is scrubable only 24 hours after application. Usually only 4 hours is necessary between coats.

Architects : J. W. BEAUMONT & SONS, MANCHESTER

Painting Contractors : JAMES FERGUSON & CO (Decorators) LTD., SALFORD.

FABRIGUARD can be used upon:

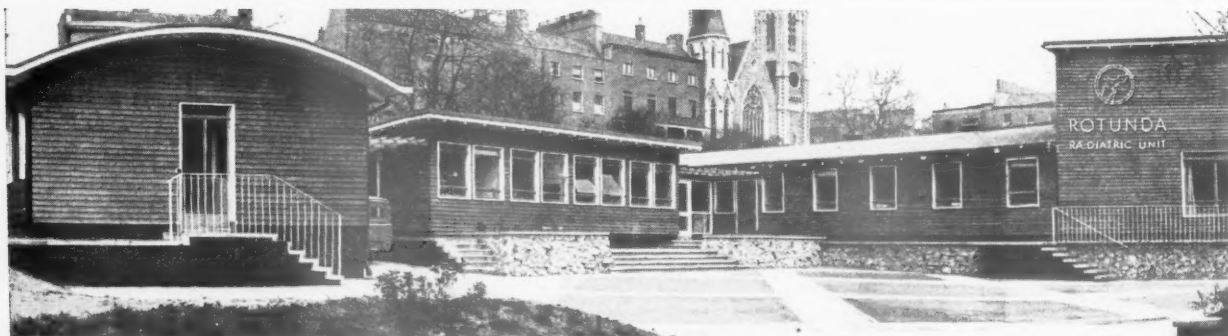
- New Plaster
- Old Plaster
- Hardboard
- Softboard
- Wood
- Creosoted Wood
- New Cement
- Old Cement
- Asbestos Cement
- Brickwork
- Roofing Felt
- Non-ferrous metals
- Linewash
- Previously Painted Surfaces
- Previously Distempered Surfaces
- Bitumen-coated Corrugated Iron

For Technical Bulletin and details of **FABRIGUARD** Contracts, write to :—
The Technical Director **HANGERS PAINTS LTD., HULL**

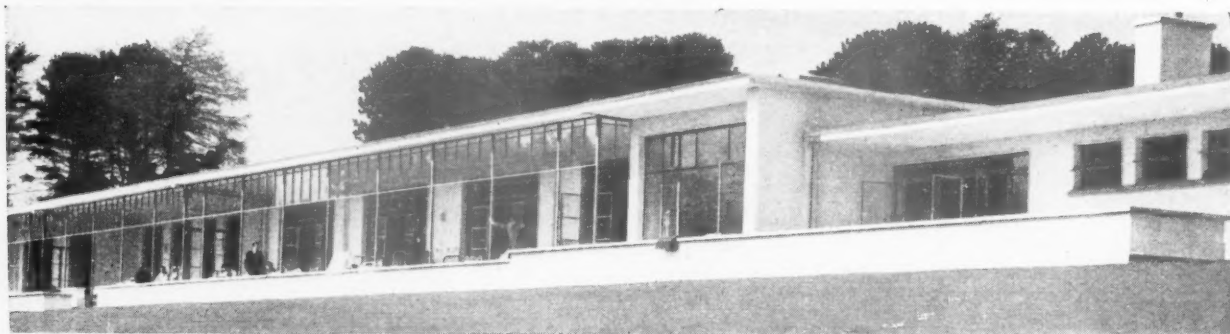
ALSO LONDON, LIVERPOOL
BIRMINGHAM, GLASGOW



The Banking Hall of the Manchester and Salford Trustee Savings Bank, Pendleton, MANCHESTER.



Rotunda Hospital, Dublin : New Radiatric Unit. Architect : Alan Hope, B.Arch., A.R.I.B.A.



Newcastle Sanatorium, Co. Wicklow. Architect : Alfred Phillips, M.R.I.A.I.

Building in Ireland . . . ? Steel Windows by

STRUCTURAL ENGINEERS AND
MAKERS OF FINE STEEL WINDOWS,
GATES AND RAILINGS.

SMITH & PEARSON LTD

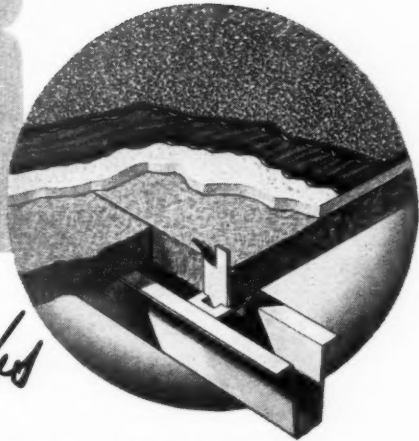
NEWCOMEN WORKS, OSSORY ROAD, DUBLIN

LONGER

Spans

using wood wool slabs

WITH ANDEK ROOFING SYSTEM



- SPANS UP TO 12 FEET BETWEEN SUPPORTS - UP TO 15 FEET USING THE MULTI-SPAN PRINCIPLE.
- ECONOMY IN STRUCTURAL STEELWORK IN ROOF.
- CONTINUITY OF INSULATION OVER SUPPORTS MINIMISES CONDENSATION RISKS.
- IMPROVED BEARING AND SECURE ANCHORAGE.

ANDEK Roofing is an improved decking system using steel Bar Sections and insulating slabs such as Wood Wool. Permanent waterproofing is obtained with Anderson's Flexible Roofing System (normally Green Mineral finish.) ANDEK can also be supplied with Aluminium Bar Sections.

Anderson's also specialise in systems incorporating Wood Wool fixed in channels or tees where this is desired.

Another of Anderson's Roofing Systems



D. ANDERSON & SON LIMITED
STRET福德, MANCHESTER. ROACH ROAD, OLD FORD, LONDON, E.3.



Protects the Goods

**"CORROPLAST"
CORRUGATED
SHEETING IS A
Phenol-Formaldehyde
LAMINATE**

The cost of roofing is low in relation to the value of goods and materials that it protects from the elements, but the expense of replacing roof sheets in terms of production loss and damaged merchandise is high. Obviously then it pays to install the best there is — a sheet that lasts — and protects the goods.

CORROPLAST

★ ★ ★ ★
**MAKES FIRST
COSTS LAST!**

MANUFACTURED BY

HOLOPLAST LIMITED

Sales Office : 116 Victoria Street, London, S.W.1
Telephone : VICToria 9354/7 & 9981.

HEAD OFFICE & WORKS: NEW HYTHE, NEAR MAIDSTONE, KENT.

See Our Stand No. B. 16 at the British Plastics Exhibition, June 8-18. |



"What happened to the horses?"

When horses (animal) were first replaced by horses (mineral) the coach builders of that decade recognised the race of progress by eliminating the shafts. Apart from this innovation, little else was changed. The passengers sat high, with, perhaps, a hard-stuffed cushion as a sop to comfort. It must have been sorely needed on the stop-go jolting and occasionally terrifying journeys that ushered in the age of the internal combustion engine. Abuse, irony and even (at times) physical violence failed to discourage them. Their temperamental automobiles might stop, run amok, or even blow up: but they persisted in spite of everything. Those brave pioneers deserved better. How they would have delighted in our modern transport, how they would have sighed in ecstasy when they discovered the superb, the princely luxury of Dunlopillo seating — seating which to-day is enjoyed not only in modern transport, but in homes, hospitals and public buildings of every kind.



DUNLOPILLO

Dunlop Rubber Co. Ltd. (Dunlopillo Division), Rice Lane, Walton, Liverpool 9

London: 77 Kings Road, Chelsea, S.W.3



At the Chesterfield Technical College.
A typical range of Flexometal cubicles.

FLEXOMETAL cubicles constructed with plywood faced with Galvanized Steel or Aluminium, sealed at the edges ; combine the advantages of a hygienic construction, great stiffness, and freedom from ledges.

FLEXOMETAL is also available for other purposes and veneered in other metals.

Architects :

F. Hamer Crossley, Dipl.Arch. (Liverpool) County Architect, Derbyshire.

Contractors :

Messrs. A. Heath, Old Road, Brampton, Chesterfield.

FLEXOMETAL

FLEXO PLYWOOD INDUSTRIES LTD., SOUTH CHINGFORD, LONDON, E.4
Telephone : Silverthorn 2666 (7 lines) (Associated with Cork Manufacturing Co. Ltd.)

**A £2 PENALTY
WILL BE IMPOSED
ON ANYONE FOUND
DEFACING THESE
WALLS**

Notices like this are quite
unnecessary on a wall surfaced with

Emalux
REGD TRADE MARK
GLAZED CEMENT WALL FINISH

It's glass hard . . . and will outlast
the wall itself.



Supplied in many
delightful
pastel shades.

JOHN ELLIS & SONS LIMITED, 21 NEW WALK, LEICESTER.
London Office: 29 Dorset Square, N.W.1.

Telephone: Leicester 56682
Telephone: AMBassador 1141



Everybody's Happy -

The factory inspector sees the hanging and drying arrangement for outdoor clothes, which the Acts call for.

The Manager sees productivity steadily increasing as a result of improved health and morale.

The operative sees his better clothes are safe and sound.

The housewife sees her man arrive home clean, dry and tidy.

All thanks to Speedwell Lockering!

Wherever you are on this globe, a call by telephone, post or in person, brings you into immediate contact with a Speedwell expert installation engineer.



SPEEDWELL GEAR CASE CO. LTD.
TAME RD., WITTON, BIRMINGHAM, 6
Phone B45 2261 Grams Speedwell 3 1/2 ton
COVENTRY
NEEDLES END LANE, BERRISWELL
Phone Berriswell 3227 Grams Speedwell Coventry
LONDON
35 RIVINGTON ROAD, S.W.1 Phone SLOane 6884

5

Some MEN don't seem to understand

the importance of the welfare side from
the woman's angle

By the simple depression of a lever the **Barrywald Sanitary Incinerator** will automatically and effectively destroy sanitary towels, surgical dressings, documents, etc., solving a vital and major welfare problem in

Factories, Offices, Institutions, etc.

▲ The only Incinerator incorporating our
Patent Safety Devices

REGD.
The BARRYWALD
Safety Automatic Incinerator

Patent Nos. 555062-621085 and corresponding Foreign Patents

Awarded the Certificate of the Royal Institute of Public Health and Hygiene

Supplied to—

SIR ROBERT McALPINE & SONS LTD.
SIR ALFRED McALPINE & SONS LTD.
GEORGE WIMPEY & CO. LTD.
RICHARD COSTAIN & CO. LTD.
CLEVELAND BUILDING & ENGINEERING CO.
LTD.
W. & C. FRENCH LTD.
HIGGS & HILL LTD.
MILLS SCAFFOLD LTD.
J. MOWLEM & CO. LTD.

NORRIS WARMING CO. LTD.
TUNNEL PORTLAND CEMENT CO. LTD.
MINISTRY OF WORKS
TROLLOPE & COLLS LTD.
I.C.I. LTD.
PERCY BILTON LTD., ETC.

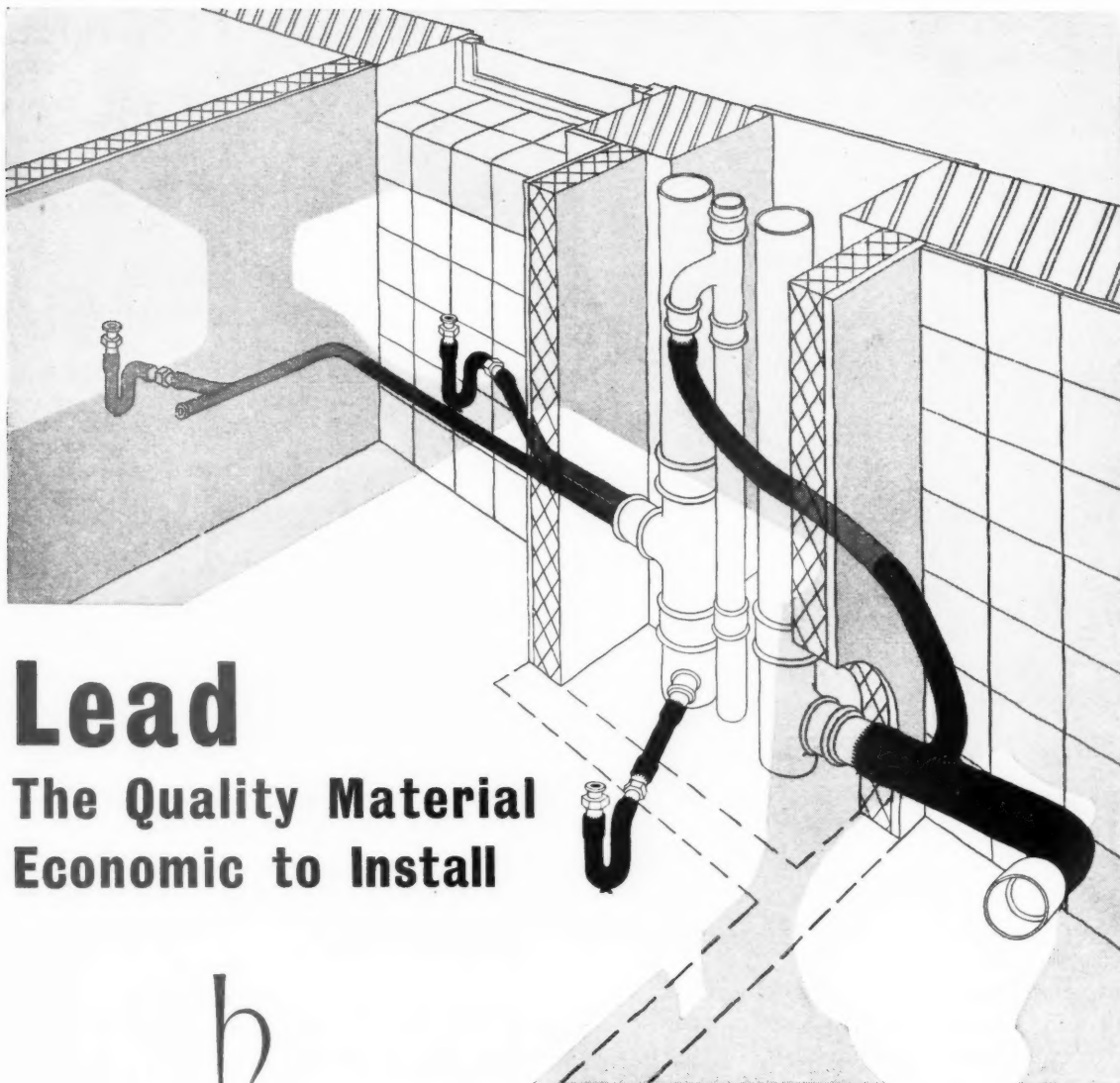


ECONOMICAL **FOOLPROOF**
EFFICIENT **INDISPENSABLE**

SANIGUARD APPLIANCES Limited
62, LONDON WALL, LONDON, E.C.2.

Telephones MONARCH 4922-4923

DIVISION OF ALLIED METALS LTD.



Lead

The Quality Material Economic to Install

h

LEAD LASTS

The Council's Technical Information Bureau will gladly help with problems on the use of Lead Sheet and Pipe in building work. Details of the main uses are given in a series of Information Sheets and Bulletins, which can be obtained by applying to the Council.

Well designed soil and waste pipe installations need LEAD PIPE, because LEAD is readily deviated to permit a compact arrangement, such as that illustrated.

LEAD is not corroded by soil and waste effluents. It can be readily worked—without the need of periodic annealing. Even with the most compact duct plumbing, the smooth bends essential for an efficient soil and waste disposal system are easily formed.

The flexibility of LEAD PIPE permits easy connecting up with sanitary appliances, with in situ adjustments to meet normal variations in building dimensions.

Sound practice is widely understood, since the skilled plumber is a craftsman in LEAD and knows how to get the best results from his material.

Lead sheet, lead pipe and lead traps can be delivered immediately for all building work.

LEAD TECHNICAL INFORMATION BUREAU, 90 EBURY STREET, LONDON, S.W.1

LEAD INDUSTRIES DEVELOPMENT COUNCIL, EAGLE HOUSE, JERMYN STREET, LONDON, S.W.1

TELEPHONE: SLOANE 0474

B101/1/53



Royal Doulton VITREOUS CHINA

*—the latest development
in Sanitary Ware*

Sanitary fittings in Royal Doulton Vitreous China are raising the standards of hygiene in hospitals, schools, factories and homes. The superiority of this ware lies in the fact that it is vitrified throughout; it therefore remains non-porous under all conditions of use. It is non-crazing, extremely durable in service and does not become discoloured or stained.

Apart from its great advantages from a sanitary aspect, Royal Doulton Vitreous China offers a unique combination of attractive appearance, excellent mechanical strength, and reasonable price.

Obtainable from leading merchant distributors.

**ROYAL
Doulton**

Write for Folder VC1/52/1, giving details of our current range, to
DOULTON & CO. LIMITED,
Dept. BE, Doulton House, Albert Embankment,
London, S.E.1.

Royal
DOULTON
SANITARY FITTINGS



Where a toilet block is called for, a Fordham Flushing Trough maintains a great reserve of water entirely adequate for high utilization at peak periods. A Fordham Flushing Trough only needs one ball valve to every four or five outlets and there is no limit to the length. The appropriate Information Sheets from the "Architects' Journal" will gladly be sent on request.

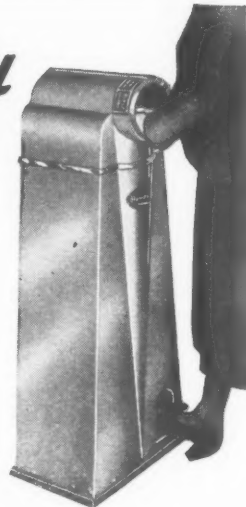
Fordham FLUSHING TROUGH

Fordham Pressings Ltd., Dudley Rd., Wolverhampton.
Tel: 23861

Handy-Andy WARM AIR TOWELS

DRY HANDS, FOREARMS AND FACES

swiftly, hygienically,
thoroughly at one quarter
the cost of paper towels at
less than one third the cost
of laundering. (The saving
is even greater if the cost of
replacements is included).



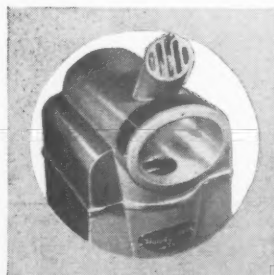
Handy Andy is the most
hygienic and economical
means of complying with
Section 42 of the Factory Act.
What you save will pay for
your Handy Andys in less than
a year.

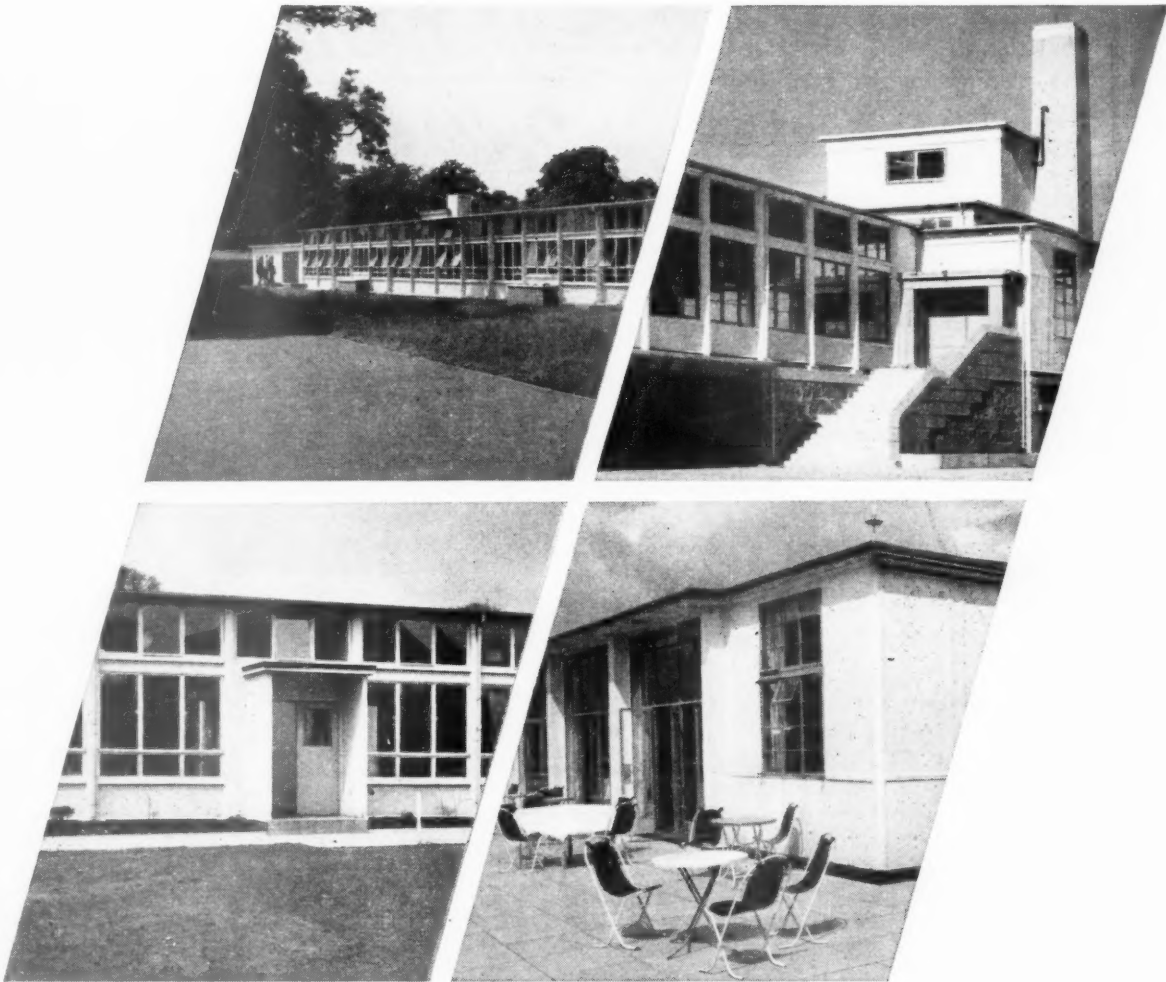
Write for full details to:

QUIZ ELECTRICS LTD

160, High Street, Teddington,
Middlesex

Representation is required in some areas





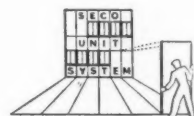
SECO CONSTRUCTION

FOR IMMEDIATE BUILDING PROGRAMMES

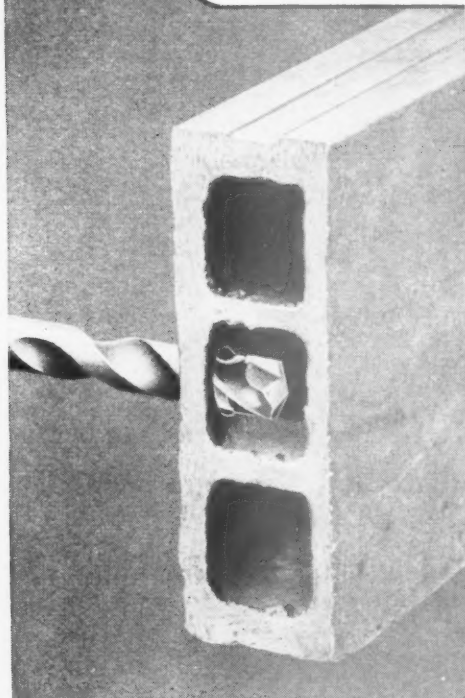
The SECO system of prefabricated construction is designed to combine the advantages of factory produced units with flexibility of planning. The erection of SECO Buildings is simple and quick and costs are competitive. Component parts to meet the needs of widely differing development schemes are available from stock. Full particulars on request.

UNI-SECO LIMITED

SPECIALISTS IN THE DESIGN, MANUFACTURE AND ERECTION OF
BUILDINGS ON THE PRINCIPLE OF UNIT CONSTRUCTION
11 UPPER BROOK STREET, LONDON, W.1 Telephone: MAYfair 9080



TILE, STONE or CAVITY BRICK



Drill Faster with RAWLPLUG **DURIUM** (REGD) TIPPED DRILLS

Look how this Durium-tipped Drill is working almost at the edge of the pot—without fracture! This sharp, clean-cutting quality of Durium-tipped Drills makes them specially valuable for many a tricky cavity job, quite apart from their extraordinary speed and silence in operation.

Durium-tipped Drills are made in all Rawlplug sizes from No. 6 to 30, in Rawlbolt sizes C. D. E. & G., and in the long series for drilling through walls. Look for the special inset Durium tip, and for the name DURIUM on the shank. Almost diamond-hard. No other is a genuine Durium Drill.

Free literature gladly sent on request—write today.

B427

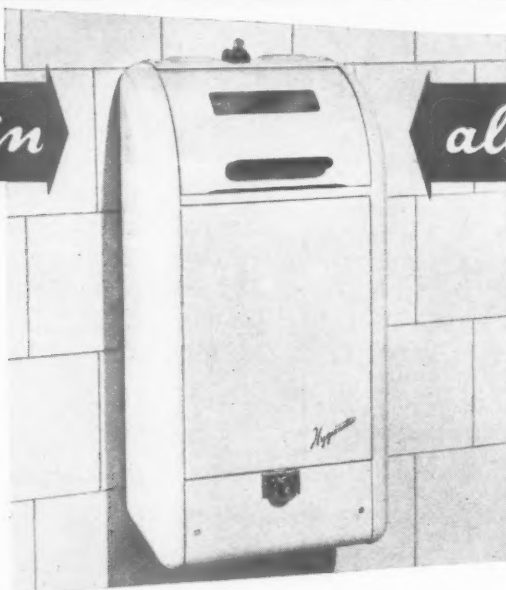
Durium-tipped—that's the point!



THE RAWLPLUG CO. LTD • CROMWELL RD • LONDON, • SW7

Essential in

all specifications



The "HYGIENETTE" range of installation accessories provides for:—

Top outlet (exposed) for
Flue pipes
Extractor systems

Back outlet (concealed) for
Built-in flue pipes or
flue blocks
Brick flues
External flue pipes
Extractor systems

Detailed installation drawings will be provided on request and we shall be pleased to advise on any installation problems.

ABRIDGED DATA

NOMINAL CAPACITY: 30 towels per hour (continuous) to 120 per hour (intermittent). VOLUMETRIC CAPACITY: 20 to 25 towels. The "Hygienette" takes either single towels; or can be loaded to capacity from 'sanibins' or dressing trays. DIMENSIONS: 20 x 6 x 10 inches. FLUE OUTLET: 3 inches internal diameter. WEIGHT: 30lbs. (Excluding Installation Accessories). FINISH: Ivory enamel with contrasting handle and catch. Black and silver instruction plate. ELECTRICAL DATA: A.C. or D.C. Element loading 940 watts. Please state voltage when ordering.



"HYGIENETTE" Incinerators have been supplied to Ministry of Works, Air Ministry, General Post Office, Ministry of Supply, Municipal, Educational and Hospital Authorities as well as to Industrial and Commercial Organisations, large and small, in the United Kingdom and overseas

FOR SANITARY FACILITIES IN HOSPITALS, SCHOOLS, COLLEGES, FACTORIES AND PUBLIC BUILDINGS.

The "HYGIENETTE" is safe, silent and fully automatic. It provides the most effective way of disposing of septic dressings, sanitary towels, documents, etc. Its self-closing access door covers an opening, free of baffles and similar obstructions, into which the soiled waste is dropped. The destruction cycle is automatically initiated when the door is opened and even the wettest article is quickly reduced to clean, dry ash. No electric motors or complicated mechanisms are used and there is only one simple moving part. No maintenance is necessary other than the periodical emptying of the ashtray. We will gladly send fullest information and data on request.

"Designed for Safety and Efficiency"

THE *Hygienette*
AUTOMATIC
ELECTRIC

TOILET AND HOSPITAL INCINERATOR

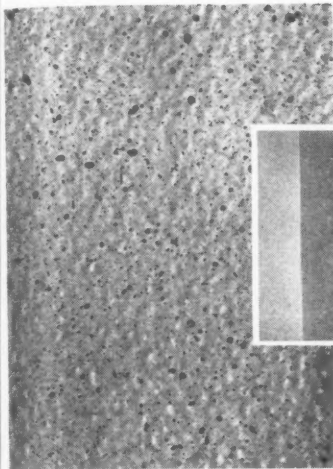
Awarded the Certificate of the Royal Institute of Public Health and Hygiene

THE HYGIENETTE MFG. CO. 'Phone: Abbey 5173
39 VICTORIA STREET, LONDON, S.W.1, ENGLAND

GLAZEMENT

CEMENT GLAZE FINISHES

for Permanent Protection at Low Cost

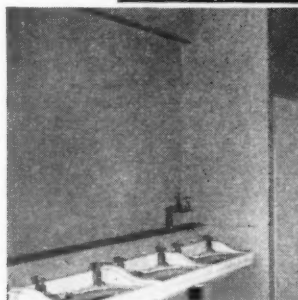
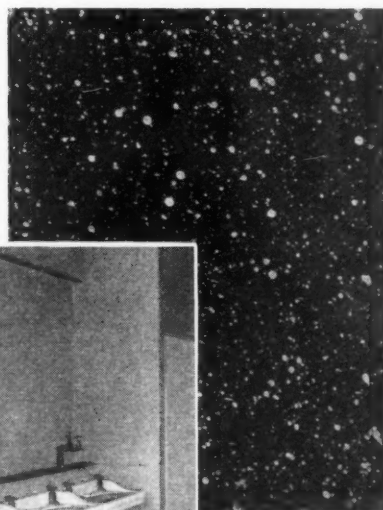


Waterloo Air Terminal, South Bank
Architects: Sir John Burnett, Tait and Partners.

The colours used were light blue, mottled dark grey, black and coral pink. This stipple finish on cement and sand renderings is recommended for Schools Lavatories.

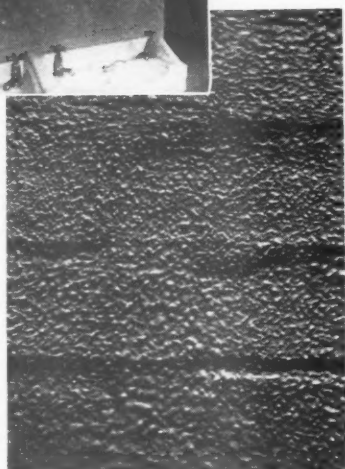
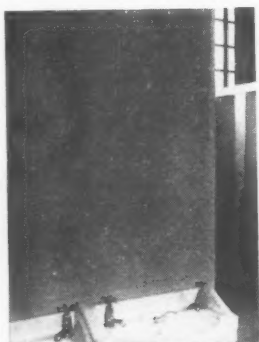
Dunster House, Mincing Lane, E.C.3.
Architects: Howard, Souster and Partners.

Colours are beige, mottled grey and white. Semi-smooth finish applied to cement and sand rendering. A high class finish for Hospitals, Hotels, Restaurants, Canteens and Offices.



Bankside Power Station.
Architect: Sir Giles Gilbert Scott,
O.M., R.A., F.R.I.B.A.

Colour, light grey.
Stipple finish direct on to brickwork, recommended for Industrial Premises, Prisons and other institutions.



IDEAL FOR PUBLIC LAVATORIES

Permanent • Easily washed down • Non-Stainable

Wall writing discouraged by a ripple surface, and/or a mottle finish

Naturally hygienic and durable, **GLAZEMENT** will withstand the hardest wear and should give a minimum of 12 to 14 years' service without maintenance beyond an occasional wash down.

GLAZEMENT is today giving first class service in Hospitals, Schools, Colleges, Factories, Flats, Offices, Power Stations and Public Lavatories.

Samples and Literature forwarded on request.

Inspection by Architects and Surveyors of pre-war treatment with **GLAZEMENT** of Schools and Colleges gladly arranged.

ROBBS CEMENT ENAMEL FINISHES LTD.
245, VAUXHALL BRIDGE ROAD, LONDON, S.W.1. TATe Gallery 0091-2

HOLLIS FLOORING

A TRADITION OF SERVICE

Despite the difficulties of this post-war era, HOLLIS BROS. LTD., in their capacity as direct importers, manufacturers, and contractors, are fully maintaining their traditional service in the installation of wood floors in numerous important buildings under prominent Architects.



The floors at
77/91, New Oxford St. W.1
are typical examples of
HOLLIS craftsmanship

HOLLIS BROS. LTD

HULL, CRAVEN HALL LONDON, 150 HOLBORN E.C.1.
and at
CAMBRIDGE STREET, BIRMINGHAM 1
and
ULVERSCROFT ROAD, LEICESTER

The Architects: Messrs. Lewis Solomon & Son,
F.R.I.B.A.

The Contractors: Messrs. F. G. Minter Ltd.

The Specification: 10,000 yards super 1" nom. West
African Mahogany wood block flooring.

WOOD BLOCK, HARDWOOD STRIP AND PARQUET FLOORING

Approved Contractors for SEMASTIC decorative tiles
(Product of a Dunlop Company)



Oh-the **NOISE!**

...clatter-zip-bang, clatter-zip-bang, clatter-zip-bang..

How can anyone stand those typewriters? Nobody escapes — they all get jumpy, irritable, forgetful, then everybody suffers.

All kinds of unnecessary sounds, quite insignificant to those who make them, merge into a nerve-racking din that pours in confusion upon minds vainly trying to concentrate on their own business.

How can you stop noise? Call in Cullum.

Cullum have dealt many shrewd blows at unwanted noise — all of them successful. They are *the* acoustic engineers, you know. Why not have a word with Cullum now?

Sound control by

CULLUM

THE ACOUSTIC CONSULTANTS
AND CONTRACTORS



PROGRESS WITH QUIETNESS

HORACE W. CULLUM & CO. LTD., FLOWERS MEWS, LONDON, N.19. Tel: ARC 2662-3-4-5

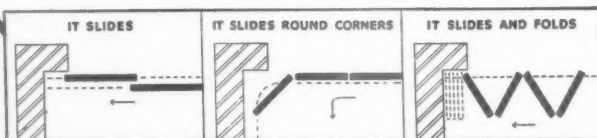
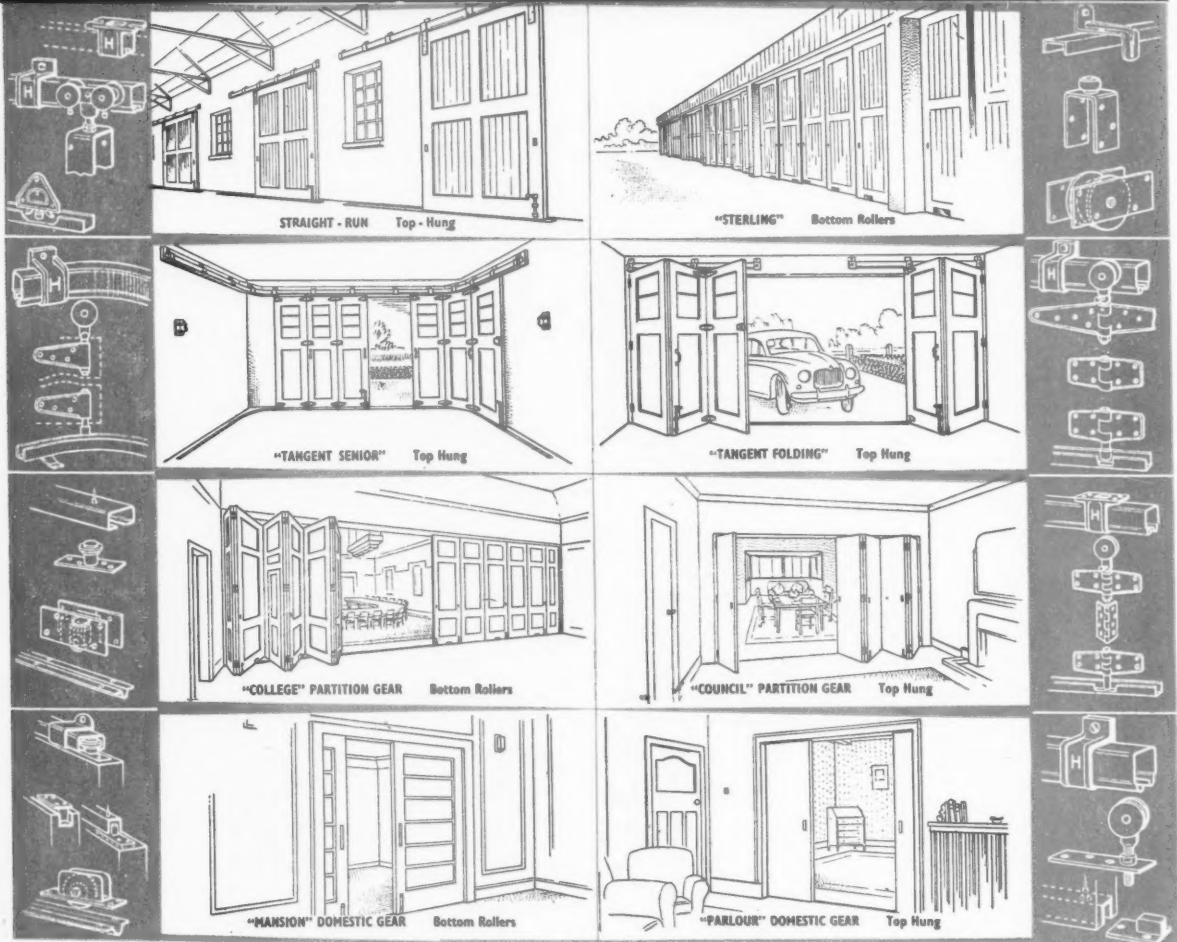
OUR LATEST AID TO ARCHITECTS & BUILDERS!

A NEW AND REVOLUTIONARY PRICE LIST

48 pages containing the PRICES PER SET of
every type of SLIDING DOOR GEAR

SEND FOR YOUR COPY NOW....ASK FOR PRICE LIST NO. 1

NEW GEAR · NEW STANDARD SETS · NEW PRICES



Henderson

SLIDING DOOR GEAR

for any Door, Partition or Window that slides or folds

P. C. HENDERSON LIMITED · TANGENT WORKS · BARKING · ESSEX



THE ARCHITECTS' JOURNAL

EDITORIAL BOARD: (1) *Consulting Editor*, F. R. Yerbury, O.B.E., Hon. A.R.I.B.A. (2) *Town Planning Editor*, Dr. Thomas Sharp, L.R.I.B.A., P.T.P.I. (3) *House Editor*, J. M. Richards, A.R.I.B.A. (4) *Executive Editor*, D. A. C. A. Boyne. (5) *Technical Editor*, R. Fitzmaurice, B.Sc., M.I.C.E., Hon. A.R.I.B.A. (6) *Editor Information Sheets*, Cotterell Butler, A.R.I.B.A. (7) *Editorial Director*, H. de C. Hastings.

GUEST EDITOR: (8) Prof. Ian Bowen.

SPECIALIST EDITORS*: (9) Planning (10) Practice (11) Surveying and Specification (12) Materials (13) General Construction (14) Structural Engineering (15) Sound Insulation and Acoustics (16) Heating and Ventilation (17) Lighting (18) Sanitation (19) Legal.

ASSISTANT EDITORS: (20) *Chief Assistant Editor*, Kenneth J. Robinson, (21) *Assistant Editor (Buildings)*, L. F. R. Jones, (22) *Assistant Editor (Information Sheets)*, H. N. Hoskings, A.R.I.B.A., (23) *Assistant Editor (News)*, Sam Lambert, (24) *Assistant Technical Editor*, M. Jay, (25) *Photographic Department*, E. R. H. Read, H. de Burgh Galwey, (26) *Editorial Secretary*, Monica Craig.

* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous.

9, 11 & 13, Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

No. 3037 May 14, 1953 VOL. 117

Subscription rates: by post in the U.K. or abroad, £2 10s. 0d. per annum. Single copies, 1s.; post free, 1s. 3d. Special numbers are included in Subscriptions; single copies, 2s., post free 2s. 3d. Back numbers more than 12 months old (when available), double price. Half yearly volumes can be bound complete with index in cloth cases for 25s. 0d.; carriage, 1s. extra.



BIF PRE-FABS

Having spent some time at Castle Bromwich without finding much that was excitingly new, ASTRAGAL went to Earl's Court to have a look at the pre-fabs. The export business in buildings seems to have become quite a major industry. It has reached an annual total of something like £7,000,000 within four or five years. Most of the houses look as though the designers have done some hard thinking, and we have certainly got well away from the temporary housing era, when there was a completely standardized house and nothing else. Nowadays we have systems of building which are produced not only with varying plans but

for different building types as well. We must now wait and see whether quantity production can ever make these methods cheap enough to compete with traditional building in this country as well as overseas.

BED-SITTERS ONLY

ASTRAGAL was shown the plans for some new college rooms at Cambridge the other day and was appalled to see that they were all bed-sitting-rooms. This seems to be the post-war rule at Oxford and Cambridge. Virginia Woolf is to have a revenge of a kind. The young ladies of Girton and St. Hilda's will never enjoy the elegant surroundings of many pre-war male undergraduates. Instead, there will be divans and gas rings, not to mention the outgoing laundry bulging from the cupboard.

*

This New Inevitability strikes ASTRAGAL as a thoroughly bad thing. As a planning solution to a special problem the traditional set of rooms is about as good as it could be. It comprises—as you, sir, will remember—three rooms—living-room, bedroom and pantry-kitchenette—arranged two sets to a floor, one on each side of a staircase. On one side the living-room is insulated from a noisy neighbour by two pairs of doors and the staircase, and on the other side by a party wall, the bedroom and the pantry. Given thick floors and suspended ceilings, this arrangement guarantees tolerable quiet when you want it.

*

Reach for your scribbling pad and try to do anything as good with bed-sitters. Do I see a *corridor*? What

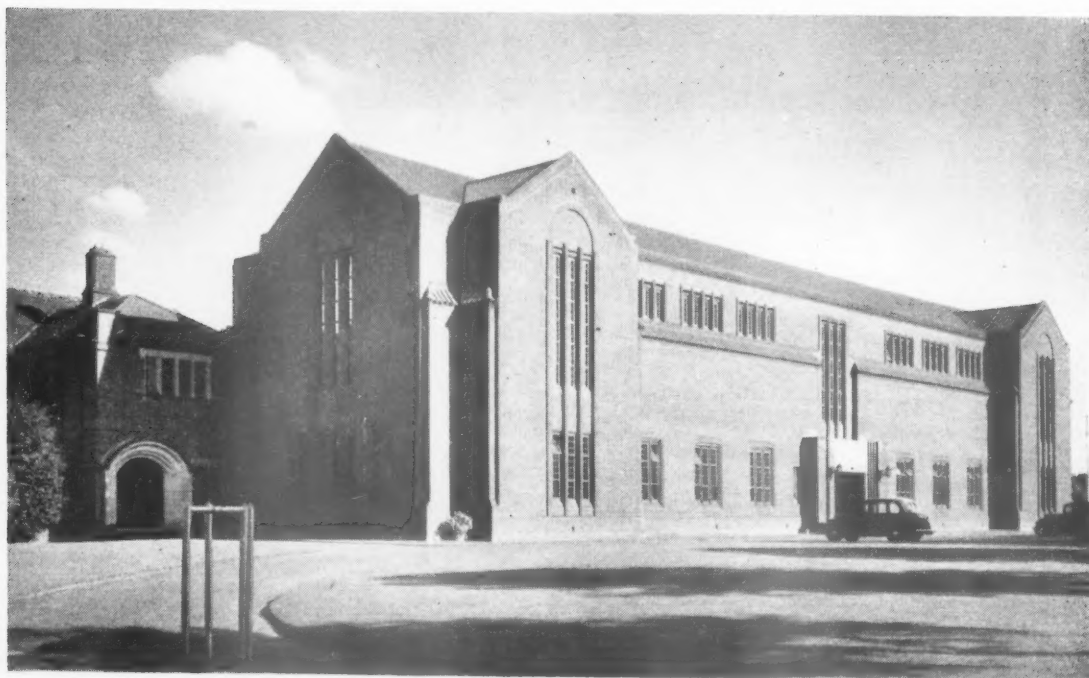
about indoor hockey? But perhaps you were going to “sound-proof” three walls of each room.

DISILLUSIONMENT

ASTRAGAL, who was brought up in a “strict Functionalist” home, stood recently in a sunlit wooded valley, not a hundred miles from Farnham, Kent, trying to believe he had been told the truth at his mother's knee. It was difficult for him to hang on to his childhood faith, as he looked down on a loop of tarmac road where a number of characters were doing an unsteady 70 m.p.h. in the smallest class of racing car. The trouble was this. Although the functional problem could hardly be simpler—to hurtle round a one-mile circuit as fast as possible with an engine of a given size—the vehicles were as unlike one another as the common factor of having a wheel at each corner would permit. It seemed that all sorts of different axles were employed, with about equal success, and the body-work, in which one would have thought streamline form to be important, ranged from glistening teardrops to a sort of milk-float with most of its oily machinery exposed to the air.

*

Convinced that some of these solutions to the functional problem must be wrong, ASTRAGAL took counsel with a knowledgeable-looking person with a slide-rule and a stop watch, and emerged from the consequent cloud of high-pressure Lifemanship technicalities (negative roll-resistance, inertial couples, unsprung weights, etc.) with the disquieting information that practically every answer was as right as possible, and that all depended on



THE UNIVERSITY OF SOUTHAMPTON
Gutteridge & Gutteridge, Chartered Architects

HOPE'S

HOT-DIP GALVANIZED

WINDOWS

SUB-FRAMES · DOOR FRAMES · LANTERN LIGHTS
GEARING AND BRONZE DOOR FURNITURE
THROUGHOUT UNIVERSITY BUILDINGS AND
HALLS OF RESIDENCE

HENRY HOPE & SONS LTD., *Smethwick, Birmingham & 17 Berners St. London, W.1*
Local Office: 53 Bassett Green Rd., Swaythling, Southampton

quite art
of-thumb

You m
about th
ASTRAGA
and try
when yo
person a

WHEN IS

3", 4",
18", 24",
—

Reader
how th
building
(particu
the idea
of Plat
few se
cussing
lar Co-o
you are
dington
above
is, very
(and ne
ence bo
lar Soc
tion as
lations

Com
ments
not a
pages
Will
terms,
Modu
being

At la
Guy
diffide
explo
Modu
shoul
ence
leagu
could
ing s
again
oh ye
the S
that
gated
BRS.

quite arbitrary decisions or vague rule-of-thumb practices.

You may, of course, have worried about this before. But if you have ASTRAGAL asks you to bear with him, and try to remember what it felt like when you first heard there was no such person as Santa Claus.

WHEN IS A MODULAR?

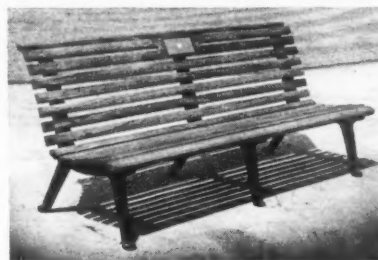
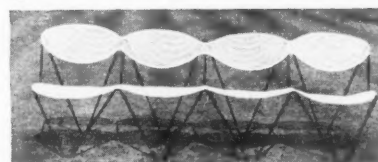
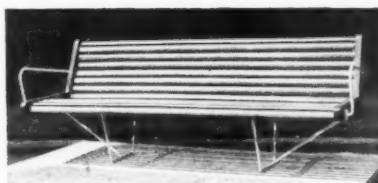
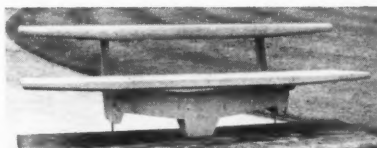
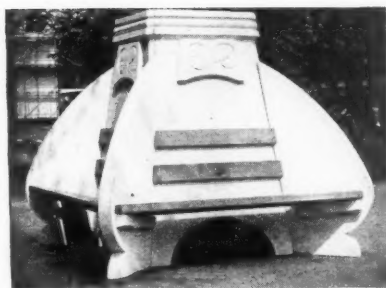
3", 4", 4½", 6", 8", 9", 12", 13½", 16",
18", 24", 27", 32", 36", 40½", 48", 54", 64",
— — — — — — — 72", 81", 96"

Readers will no doubt have observed how these figures relate to various building dimensions and concluded (particularly if they are familiar with the idea of proportion in the Lambda of Plato's "Timaens") that the next few sentences will be devoted to discussing aspects of our old friend Modular Co-ordination. How wrong, dear sirs, you are. I leave that to Sergei (High Paddington) Kadleigh, who worked out the above for the Modular Society, and who is, very reasonably, making heads spin (and nervous fingers flick through reference books) by insisting that the Modular Society considers scales of proportion as well as the mere dimensional relationship of building components.

Components? Or should it be elements? Or parts? And when is a grid not a module? Alas, some very vital pages are missing from my dictionary. Will someone produce a glossary of terms, please? And then the Babel-Modular tower might stand a chance of being built.

At last week's meeting of the Society, Guy Oddie, expertly and somewhat diffidently, proposed: "that in order to explore the detailed implications of Modular Co-ordination, the Society should adopt a 4"/40" frame of reference as a working hypothesis." A colleague tells me that no vote (that he could detect) was taken and the meeting seemed evenly divided for and against. It's stalemate, boys, except—oh yes, this splendid news (by letter to the Society from Minister, David Eccles) that the whole subject is to be investigated in cool and scientific calm by BRS.

ASTRAGAL



*Above, two "also rans" in the outdoor seats competition. (See news note below.) Right, three seats which won first class awards. For details see footnote in next column.**

N E W S

RIBA

London Bronze Medal

The RIBA London Architecture Bronze Medal for 1952 is to be awarded to Farquharson and McMorran, for their LCC Open Air School, Bow Road, E.3, which is shown below.

The Medal—the second won by these architects—will be presented on November 3 at the RIBA headquarters, 66, Portland Place, W.1.

COMPETITION

Outdoor Seats

At the top right-hand side of this page are three of the designs for which first-class awards were given in a competition for

manufacturers, organized by the COID, in association with the Corporation of Birmingham. The other two were "also rans. The assessors for this competition, entries for which may be seen in the Embankment Gardens, London, until May 16, were Herbert J. Manzoni, C.B.E., City Engineer and Surveyor, Birmingham; G. E. E. Ross, General Manager, Parks Department, Birmingham; A. G. Sheppard Fidler, City Architect, Birmingham; Brenda Colvin, president of the ILA; Gordon Cullen; Basil Spence, O.B.E., Gordon Russell, C.B.E., Director, COID, and Mark Hartland Thomas, O.B.E., Chief Industrial Officer, COID.

There were 17 first-class awards and 24 second-class awards. The 28 remaining entries received no awards.

*A: Designer, A. M. Pennington. Manufacturer, Kent Concrete Products, Sturry. B: Designer, J. B. Lambert. Manufacturer, Harris and Sheldon, Ltd., Birmingham. C: Designer, Gordon Symondson. Manufacturer, Walker-Symondson, Ltd. D: Designer, Nigel Walters. Manufacturer, Andrew A. Pegram, Ltd. E: Designers, John Morton and Tom Lupton. Manufacturers, L.M. Furniture, Ltd., Wallingford, Berks.



The RIBA London Bronze Medal for 1952 is to be awarded to the designers of this school. See first news note.



Inconvenient Aedicules

This public lavatory for men can be matched for appearance and quality by lavatories in any major town in Great Britain. The one above serves to introduce this special issue of the JOURNAL on public lavatories because it has—literally—pride of place. It is at Hyde Park Corner and is one of the very few to remain open all night in the heart of London. In its day—it was built in 1896—with its glazed brick walls and stone-trimmed urinals, it was no

doubt considered the last word in luxury. But now with worn floor, smell-impregnated walls and gutters, and appallingly antiquated wash bowls, it has passed its prime, and, together with so many of the public buildings left us by our wealthy Victorian forefathers, is due for rebuilding. In this issue of the JOURNAL we attempt to show what the public expects to find, and how the architect should provide it, in this most important, and neglected, type of building.

ACO

Inter

A con-
Delft.
Internat
special
Union
scope
sound
acousti
audiom
applied
insulat
and la
archite

The l
sympos
sound
Dutch
Danish
it is
have b
work
perime
in bui
BRS s
been r
weight
porary
consid
from
of cou
at this
A rep
the co
Techn

CO

Doc

The I
archit
for a
assess
F.R.I.A.
and A
be £7
are o
J. P.
19, W
must
be se

Com
hibiti
Street
days,
1 p.m

Pain
Tape
the I
Daily
6 p.m

Cor
Chair
Dove

The
Arts.
Park
Facu
days
and

ACOUSTICS

International Congress

A congress on acoustics is to be held in Delft, in June, under the auspices of the International Commission on Acoustics, a special commission of the International Union of Pure and Applied Physics. The scope of the congress is wide, covering sound recording, public address systems, acoustic measurements, hearing aids and audiometers, ultrasonics, electro-acoustics applied to musical instruments and sound insulation. Of the above sections the second and last will be of particular interest to architects.

The last section is to be in the form of a symposium, to deal with the problem of sound insulation in lightweight structures. Dutch, German, French, Swedish and Danish workers are to give papers, and it is known that much valuable data have been collected during recent intensive work on the subject. Theoretical and experimental papers of great practical interest in building acoustics are promised. The BRS states that "some good progress has been made in the practical design of lightweight partition (e.g. windows, doors, temporary partitions), so that their insulation is considerably greater than would be expected from the 'mass law.' These designs will, of course, be fully described and discussed at this conference."

A representative of the JOURNAL will attend the congress; his report will appear in the Technical Section in due course.

COMPETITION

Docks Board Office

The Dublin Port and Docks Board invites architects to submit designs in competition for a £500,000 head office building. The assessors will be John M. Fairweather, F.R.I.A.I., Vincent Kelly, B.A.R.C.H., F.R.I.A.I., and Alfred E. Jones, F.R.I.A.I. Prizes will be £700, £500, £200 and £100. Conditions are obtainable, on deposit of £3 3s., from J. P. Murphy, secretary to the Board, at 19, Westmoreland Street, Dublin. Questions must be sent by June and designs must be sent by November 2.

DIARY

Contemporary Furnishings. Travelling exhibition. At Ebbutt's Ltd., 53-59, High Street, Croydon. (Sponsor: COID.) Week-days, 9 a.m. to 5.30 p.m.; Wednesdays, until 1 p.m.

UNTIL MAY 16

Paintings, Drawings, Sculpture and Tapestry, 1918-1953. By Le Corbusier. At the ICA Gallery, 17-18, Dover Street, W.1. Daily, 11 a.m. to 6 p.m.; Sundays, 2 p.m. to 6 p.m.

UNTIL MAY 17

Coronation Decorations. Sir Hugh Casson, Chairman, J. M. Richards. At ICA, 17-18, Dover Street, W.1. 8.15 p.m. MAY 28

The Christian Theme in Contemporary Arts. Exhibition at Park Lane House, 45, Park Lane, W.1. (Sponsor: International Faculty of Arts.) 10 a.m. to 10 p.m. Sundays 2 p.m. to 10 p.m. (closed June 1, 2 and 3). UNTIL JUNE 18

Executive Editor : D. A. C. A. BOYNE

TIME TO RAISE OUR SIGHTS

TO a good doctor there is no physical or mental aspect of his patient which should embarrass him. He may be worried or shocked by what his diagnosis reveals, but, if he's any good, he is not embarrassed. Correspondingly, therefore, there should be no type of building, and no human function related to it which should embarrass the architect. When preparing this special issue of the JOURNAL on public lavatories, we were somewhat disconcerted, however, to discover architects who had designed lavatories by the score and yet were acutely embarrassed by the subject. Even more disconcerting were those who hid their embarrassment beneath a hearty cloud of vulgar humour. What finally completed our unease and confirmed our decision to publish an article on the subject was the discovery that some, at least, of the men who produce and sell lavatory equipment were embarrassed, and, even worse, not aware of the reasons for the variations in the designs of the equipment they made. So in presenting this all-too-short article on—for its size—an extremely complicated subject, it is our hope to provide an opportunity for the bashful architect to get over his embarrassment; we try to point out some of the mistakes which are made, and some of the discoveries which have been made, too. And finally, we want to remind the architect of the target at which to aim when he has the chance: a men's lavatory which is free from smells of either odour-deadening disinfectant, or urine, and which by good design inspires good behaviour; a women's lavatory which deals really satisfactorily with the disposal of sanitary towels, for instance, as well as fulfilling its other functions; and lastly, an environment which will improve the well-being of that unnecessarily lowly person, the lavatory attendant.

Inevitably we have had to leave a lot out. Some of the missing information will be found in the relevant JOURNAL Information Sheets listed on page 624. The only other sources of factual material of which we are aware are *Planning*,* *Specification*† and the wholly admirable *Works Lavatories*, compiled by the APRR for the Industrial Welfare Society. If there are other books, we would be glad to hear of them. We do not claim that the recent examples illustrated include the best available. It has been singularly hard—such is the shyness of architects—to find good examples of public lavatories, and we hope that architect readers, and manufacturers, will draw our attention to new buildings and new equipment which make a contribution towards higher standards in design. At this moment, in preparation for the Coronation and summer visitors, local authorities are busy painting and repairing worn-out lavatories. Even though the public purse is light, it is to be hoped that local authorities will soon stop this practice and once again set a standard by scrapping the old and building anew.

* Published for *The Architect and Building News*.

† Published by *The Architectural Press*.

The humble public lavatory, which provides an exacting, intricate, though much neglected, design problem is the subject of this week's special issue, introduced below by F. L. Barrow, M.Sc., A.M.I.C.E., M.I.Struct.E., F.R.San.I. He also contributes articles on the social, hygienic and economic considerations, on the fixtures and fittings required and on the plumbing, and he advised on the format. Clare Fry writes a short history and states what, as a woman user, she wants improved in public lavatories, and Thomas R. Bilbow, architect to the London Transport Executive, deals with problems of layout, construction, ventilation and finishes.

PUBLIC LAVATORIES

Introduction

THE subject of public lavatories has had precious little treatment in literature. Maybe this is one reason why our public lavatories are not all they might be; and why some problems connected with them seem to hang about for a long time waiting for a solution.

What is meant by a "public lavatory"? The thing in the street, open to all comers, is certainly a public lavatory; but there are many other lavatories provided for, and used by, large numbers of the public. For instance, those in offices, railway stations, hotels, theatres, and so on. The only real difference between these places and the street lavatories is that the former are supposed to be used only by that section of the public which happens, at the time, to have the right to be in the building in question. This does not set up a basic differentiation. Nearly everybody who uses a street lavatory is also, from time to time, a member of a limited section of the public using the other places. Hence it is quite reasonable to define a public lavatory as a lavatory provided for the use of the public—however limited in numbers that "public" may be. The subject therefore embraces almost any place, other than in a private dwelling, where people ease themselves, wash their hands and faces, and tidy themselves generally.

As now defined, the subject is wide enough to affect many architects, even those who may have had no ambitions, as yet to produce what is commonly called a public convenience.

A good deal of quite interesting material has had to be discarded because of lack of space. Priority has been given to those things which concern the architect most directly, and those aspects and problems which it is the business of other people to manage—even if they do not always do it—have largely been skipped.

Anybody who tries to write about public lavatories—or in fact any branch of sanitation with a plumbing flavour—is up against it when it comes to terminology. He has to abandon any quaint ideas he might have had about words always being descriptive of the things they stand for. Some of the words we have to use here convey their meaning only by association. For example, "lavatory" properly belongs to washing and only attaches itself to a place fitted with water closets because washing facilities are sometimes provided in the same place.

"Water closet" is a poor description of the thing it stands for because a closet is merely a room—and water is just water. Hence logically a water closet could be any room in which water is used—shall we say a laundry, a pump room or a kitchen? The American "toilet" is no more definite, because toilet articles are quite respectable things. Obviously we do not always mean by "toilet" what toilet would mean if it meant what water closet is taken to mean—if you follow. Perhaps the prize word is "convenience"—a nice example of the English gift for under-statement.

Yet it is doubtful whether it is any use whatever worrying about these terms or seeking more realistic ones. If the reader does not agree, let him try it out and see what sort of a reception he gets from his fellow men and women.

PART I

Clare Fry gives a brief history of Public Lavatories and puts forward the clients' requirements

WHEN Sir John Harington presented the first Elizabethans with his *Metamorphosis of Ajax* he divided the book into three parts, and explained the purpose of the parts in this way:

"The first justifies the use of the homliest words;
The second proves the matter not to be contemptible;
The third shewes the forme, and howe it may be reformed."

In this manner he attempted the task of presenting the English with a new invention—the water-closet—and prevailing upon them to install such a system.

Despite Royal patronage Sir John's invention suffered the usual fate of brilliant ideas coming to the Englishman; it was followed by insufficient development. Had the country seized on the invention with the speed it warranted we should indeed have led the world (by several centuries) in our plumbing arrangements. As it was, it was not until the nineteenth century that the English acquired the reputation for excellent sanitary arrangements, a reputation which they have already lost to the Americans.

It would have been an easy step for the households of the periods succeeding the Elizabethan to advance to the provision of public conveniences.

But one has only to read Stow's description of Houndsditch to find a reason for the succession of plagues that swept through the towns of Europe. Or again, the indecorous little story that Aubrey tells of Sir William Fleetwood, Recorder of London, "who was surprised in Cheapside," makes one fear that our towns must even in those days of smaller distances have been

quite ins
Health
Boards
closets,
accomm
an amer
speedy t

The su
public
Conven
of Heal
docume
centena
inaugur
public
the twe
dered i
theless,
and ext
of table
conven
the res
City of
had 57
popula
term v
the da
table g
wich s
fort, w
Woolv
ditch
acres.

unfair

The
for m
men l
233 c
in the
The n
times
for w
had a
pub
lities,
which
The
was
prov
and
the c
distr
direc
insta
new
adeo

surv

It
be
mus
nee
it i
visi
eco
by
tion
Wo
ma
Re
it f
me
the

quite insalubrious. It was not until 1848 that the Public Health Act first provided general legislation enabling Boards of Health "to provide and maintain urinals, water closets, privies and other similar conveniences, for public accommodation." The railway age apparently demanded an amenity that had not been needed in the days of less speedy travel.

The subsequent history of legislative action relating to public conveniences is summed up in a Report on Public Conveniences in London, drawn up by the Medical Officer of Health in 1928. This report is the most recent official document to deal with the matter. (It is a pity that our centenary-hunters failed to mark the occasion of 1948 by inaugurating a survey covering the first hundred years of public activity in this field.) Much must have happened in the twenty years since the Report was written to have rendered its facts and findings obsolete. They are still, nevertheless, of great interest. The MOH examined the nature and extent of the existing provision and drew up a variety of tables, among them one relating the distribution of public conveniences and urinals in the metropolitan boroughs to the resident and migrant population. For instance, the City of London, with its influx of workers during the day, had 57.42 urinal places for each 1,000 of the male night population (presumably a synonym for a resident, but a term which carries a strange aura of indelicacy). During the day the figures became 1.31 for each 1,000. Another table gave the acreage served by each convenience; Woolwich scored the highest figure and lowest degree of comfort, with 103.4 acres to each. In those days the people of Woolwich must have been winners of Marathons. Shore-ditch was most considerate in having one to every 7.1 acres.

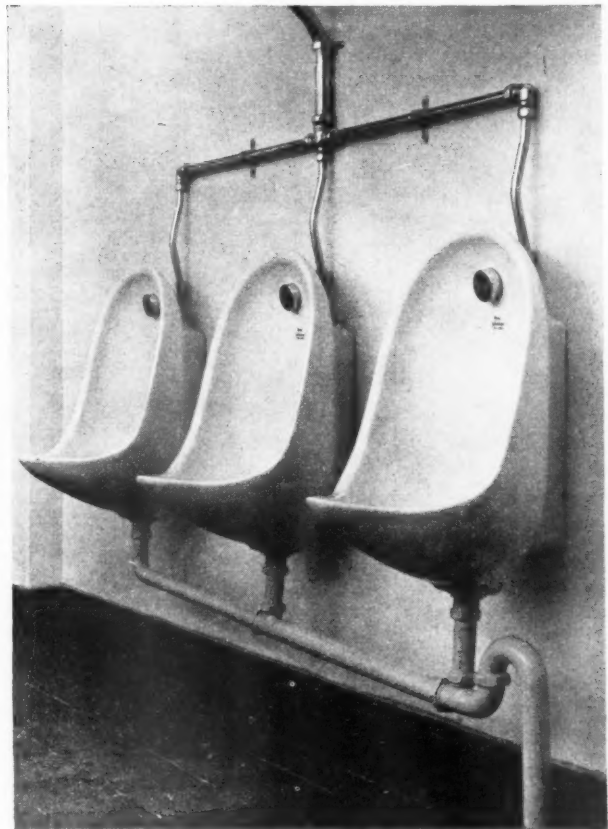
unfair to women

The provision for women was considerably less than that for men. The number of public conveniences provided for men by the borough councils of the metropolitan area was 233 compared with 184 for women. The number of w.c.s in these buildings was 1,260 for men and 876 for women. The men, however, also had 2,610 urinal stalls, so that four times as much accommodation was provided for men as for women. Moreover, the men, more easily than women, had a supplementary service during licensing hours, with pub accommodation, which was a notable provider of facilities, with an estimated accommodation of 6,891, many of which could be approached from the street direct.

The main conclusions of this 1928 report were that there was quite inadequate free provision for women; that the provision for men was being diminished by curtailed hours and "the suppression of redundant public houses"; that the closing hours of conveniences needed revision in certain districts; and that there should be an improvement in the directional indications of the lavatories. Apart from these instances of insufficiency, and any that might arise in the newly-developed areas, the report concluded that there was adequate accommodation.

survey needed

It is obviously time that a new survey and report should be made. Obsolescence and changing social conditions must make these findings of doubtful relevance to today's needs. Without a number of individual detailed inquiries it is impossible to know, for instance, whether the provision for women has been improved. Both their altered economic position and the increased mobility brought about by improved transport must have made an almost revolutionary change in demand within the last quarter century. Women themselves, despite a strange modesty in this matter, feel that their needs are far from adequately met. Recently a women's committee in a Midland town, when it found that representations to the authorities for improvements were met coldly, determined to provide evidence of the abuses. They formed themselves into a panel of



The most odorous feature of all public lavatories is the men's urinals. The smell is largely due to the evaporation of the urine lying on the sides of the urinal slab, in drops on the floor, or in the urinal gutter. The range of urinal bowls, above, at Wokingham Secondary School, architects: MOE Development Group; manufacturer: Adamsez, attempt to alleviate the trouble. A projecting lip has been designed to catch drips, and the waste trap has been inverted so as to ensure that a fair amount of water remains in the waste pipe to keep the urine in a weak solution. The rear wall and floor should be washable and impervious.

visitors, each of whom paid four visits a day to a selected lavatory to observe the progressive state of deterioration (if such a phrase can be used). Their report disclosed sufficient horrors for them to gain their wishes to the extent of having one lavatory rebuilt, the whole staff of cleaners replaced and an official inspector appointed. Moreover, the local theatre was refused renewal of its licence unless it reformed its ways in lavatory provision. But this is not the only group of women who are taking action. A sub-committee of the Medical Women's Federation is also undertaking an investigation into the sufficiency of conveniences and their condition. At the moment they are confining their inquiry to women's conveniences, but the Chairman of the Committee is very firm in her view that the need is for a general cleaning up of both men's and women's. It is certainly a simpler matter to take the whole subject in one, as the majority of considerations are common to the two kinds of user. Several of these considerations were scarcely touched upon at all in the 1928 report, which dealt, for instance, in the most cursory way, with all matters of internal arrangement and equipment, and also with the siting and structure of the buildings.

no fear of complaints

The greatest number of users of public lavatories is always non-resident. This, in itself, is a powerful inducement to a lowering of standards on the part of those who are in charge, since there is no effort made to retain the

custom of one's users, and little fear to be felt of complaints. This attitude is notoriously short-sighted even for the ordinary retailer, but it is equally so in the matter of providing lavatory place. Adequate provision in a small town may well lead to a drawing-up of tourist traffic and consequently contribute to the financial takings of the town (and not only in its slot takings). That the public convenience can be classified as an attraction is only too plainly shown by the attitude of the large department stores and of the roadside filling-stations. The latter in particular give every evidence of seeing where private interest and public benefit combine to the trader's advantage. Another matter for investigation is the extent to which private enterprise has filled the gap. But it would have to be borne in mind that department stores and garages are not open all the time and that they are not necessarily in the places where the need is greatest.

sign-posting

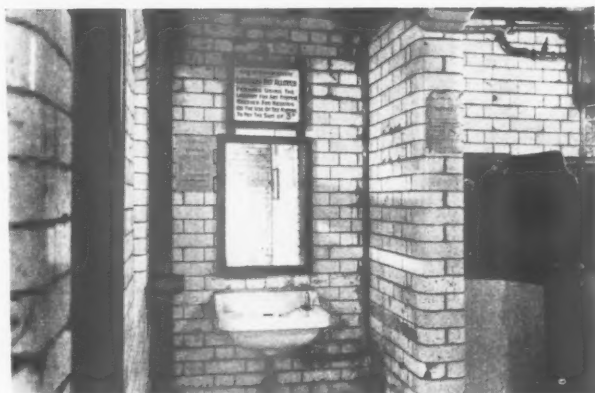
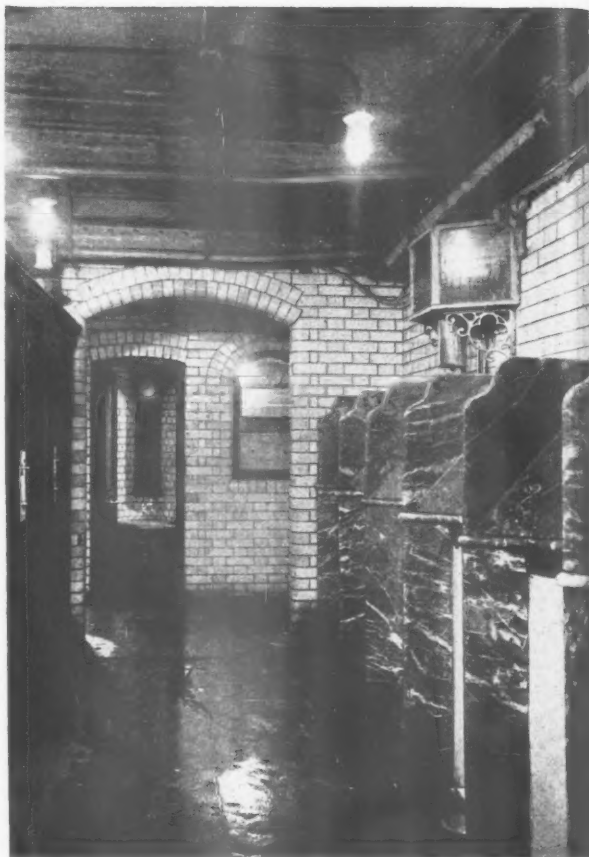
There is a need for some co-ordination on a national scale for sign-posting. One symbol that was valid throughout the country would be of incomparable assistance to travellers, and a standardized nomenclature would save one from the embarrassment of thinking a toilet was by its nature a w.c. Unimaginative nomenclature can be as bad as the adolescent hostess who takes you at your word when you ask to wash your hands. In addition to a standardized sign there might also be a recognized place for posting this sign, as for instance on all pillar-boxes or at all bus-stops. The much-visited towns must have learned through painful years the places where harassed travellers look for guidance, and might combine their experience on this point. Best of all, of course, is the plan followed by both Canterbury and Littlehampton, and doubtless a score of others. It is to have maps of the town placed at a number of strategic points with the interesting sites marked on them. Another useful sign which might be installed is an "alternative accommodation" one, which should not confine itself to giving the name of the street, but should be explicit in indicating which turning to take.

siting of public lavatories

The actual siting of public conveniences leaves much to be desired. The 1928 Report pointed out the difficulties of choosing sites which are "sufficiently prominent to attract the attention of those desirous of using them," but not "at the same time objectionable to the public or those living near." Many of the sites in use now were probably chosen long ago; the legacy of such a choice can be seen in the island site at Cambridge Circus. Only when the traffic has jammed itself to a standstill is it advisable to venture to the island.

The question of payment is another for consideration, particularly for women. As the MOH said in 1928: "It is not in the public interest that a tax upon slender resources to which men are not subject should continue under the altered conditions of modern life." And the days of equal pay seem still as far off as ever. On every ground there is as much to be said for a free lavatory service as for a free medical service. And the objection to the one—that it is so amazingly expensive—could hardly be levelled at the other.

The 1928 Report paid little attention to the structure and the interiors, beyond classifying the main items of equipment, and discussing the possibility of providing for women an arrangement equivalent to the urinal for men, which, by doing away with the necessity for physical contact, lessens the need for the expense of attendants. Constant experimenting still goes on, and the Americans for their part have not given up hope of discovering a suitable piece of equipment. In this country our experiments have concentrated on effecting variations in the seat of the ordinary w.c. by providing a gap at the front. It is, by the way, not established that infection is passed on in this way; there seems to be no authentic case of venereal



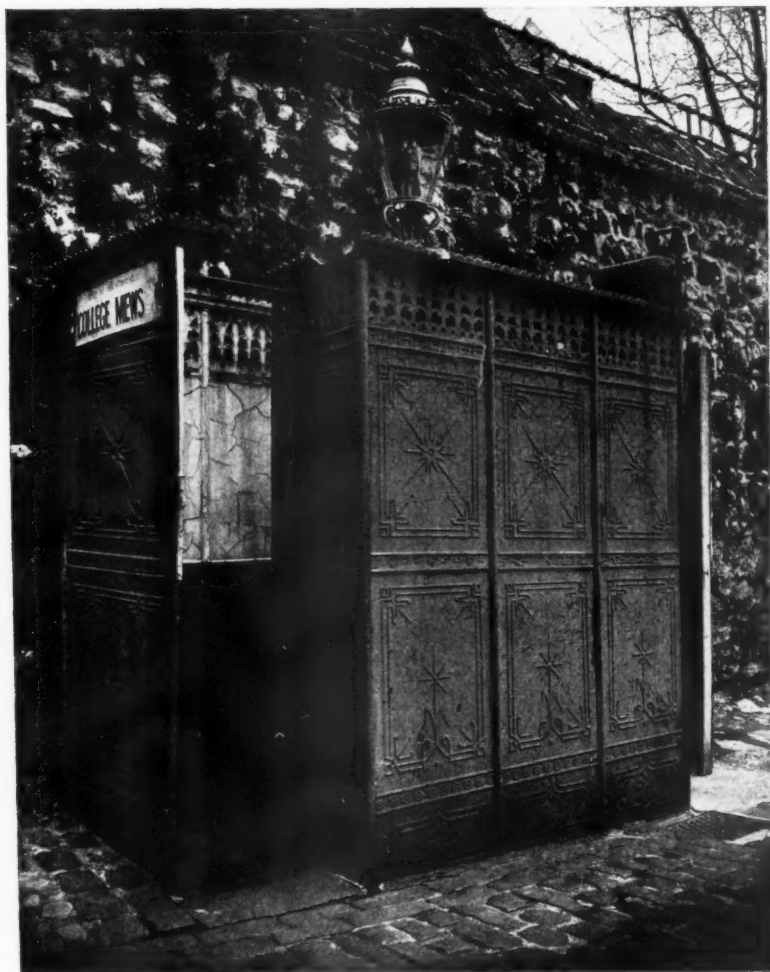
Left, opp
ground n
Bridge R
of worn-
the atten
solitary u
"Persons
whether J
pay the

By fe
lavator
above,
Westm
but fu
urinal
close
at a t
inside
show
elegan
privat
Colle
minst
street
cast-
facil
inade

Left, opposite page, three views of an underground men's public lavatory in Vauxhall Bridge Road, Westminster. A typical example of worn-out sanitary accommodation. Note the attendant's gloomy compartment and the solitary washbasin with the notice above saying: "Persons using the lavatory for any purpose whether for washing or the use of the mirror to pay the sum of 3d."



By far the most numerous type of public lavatory is the men's urinal. The example above, in the centre of Horseferry Road, Westminster, is not only unpleasing to the eye but functionally inefficient. Planned with four urinal stalls within a hexagon, the stalls are so close that there is only space for three occupants at a time. The words and illustrations on the inside face of the walls makes it impossible to show an interior view. Right, an example of elegant, if somewhat inadequate (from a privacy point of view) design, a urinal in College Mews, close to the Palace of Westminster. It forms a most elegant piece of street furniture, with its delicately moulded cast-iron panels and frieze, but the drainage facilities, and the urinal stalls, are quite inadequate by present standards.



The examples on the left and above stand within a few hundred yards of each other on the "nicer" end of the sea-front at Yarmouth. It is interesting to note that these buildings, unlike the usual run of public conveniences, make no bones about proclaiming their purpose. They do not hide behind shrubbery or crouch at the bottom of steps. In fact, the building above is assisted in its monumentality by being sited on rising ground. The inscription, "Ladies' Cloak Room" (left), shows decent reserve on the part of the designer, but—after all—such a work of art could hardly be defaced by an indelicate word.





Figure 1. One of the latest developments in lavatory pans (Adamsez), showing, above, a clean-lined and attractive shape (which could be even further improved by corbelling), and left, the rimless bowl. The force of the flush can be adjusted at the inlet, so that the water cleanses the maximum area of the bowl without splashing over the edge. Thus any fouling is immediately detected, instead of forming under the rim, as in normal bowls.

disease having been spread through unclean lavatories. This, however, does not mean that all sorts of other unpleasant results may not be the outcome of unclean w.c.s. Certainly an examination of the public convenience of today should go into the details of equipment and the possibilities of improvement, not only in the individual items, but in their fitment and surrounds. One result of careful study can be seen in figure 1.

detail planning

There is need for much greater thoughtfulness in all the details, not only of the individual items of equipment but of their relative position in space. Is it possible to reach the toilet roll from a sitting position, or does it need an arm 1½ yards long? Is there anywhere to put hats, coats, and shopping apart from the floor?

Most important of all—is it possible to wash one's hands? It is difficult to find a public convenience that provides a washbasin placed in such a position that it is an easy and automatic gesture to include the rinse of the hands that is normal home practice. The ideal, if expensive, arrangement would be what I have seen in Barcelona—a small washbasin included in each closet. The cost of putting in this kind of fitment in older buildings would probably be prohibitive, but it should be an automatic arrangement for new planning. Barcelona had not solved the difficulty of arranging for towels, but it should be a simple matter to provide a paper-towel dispenser above the washbasin. The arrangements in England are bad and becoming worse. It seems now to be normal practice for the strong-minded caretakers of these places to pursue intending washers with furious cries of "Don't touch the water" until another 4d. or so has been handed over for the use of a towel.

The sale and disposal of sanitary towels is another

necessity of this underground life. As so many women do not care for the so-called "disposable" types it is important to behave, in the matter of disposal, as though none were soluble and arrange for incineration as soon as possible. Women in business and industry are accustomed to using a small incinerator serving a row of closets, and the possibility of extending this practice might be considered.

So much for the out-and-out necessities. There remain the general fitments, such as mirrors, preferably at least one full-length, and others for assisting general brushing and combing. These should always be placed out of what may be a stream of traffic from closet to washbasin and out again. Various slot-machines for such things as towels, and perhaps emergency supplies of safety-pins, must also be provided, and should be placed where they can easily be reached. A disposal-bin, or waste-paper basket, ought to be somewhere in the place. And so ought an infants' pot, or a special infants' w.c. The general appearance of the interior wants much further consideration. Attention paid to colour schemes is not wasted. I don't think any statistical experiments have been conducted into the matter, but there is a general impression that the standard of behaviour of people in a place which looks good is good. Where it is possible to use fresh, clean colours without extra cost of maintenance, every endeavour should be made to do so. Lighting, too, should be much improved. It is usually both inadequate and badly placed. Both these faults make it impossible to maintain an easy spotlessness.

The problems of cleaning and caretaking need a chapter to themselves. Is constant supervision really too expensive a price to pay for scrupulous cleanliness? If so, in what ways can the cleaning be so simplified that much of it becomes semi-automatic and the rest a matter of moments instead of hours. Are lavatories sufficiently near together for it to be possible to institute "lavatory squads," for instance, with the right sort of equipment, to go through the place thoroughly, instead of having kneeling-mat, scrubbing-brush techniques? Public conveniences suffer badly from the fact that nobody, not even the caretakers, take a pride in their possession and improvement. Aldous Huxley ought to write us a novel, in his early manner, of an architect who became known for the splendour and variety of his contemporary public conveniences: the subplot could deal with the cleaners who dwell in the marble halls surrounded with works of art and every refinement of taste and imagination. There is probably a future in this field for any architect looking for scope for specialization.

PART II

F. L. Barrow refers to social, hygienic and economic considerations in the design of public lavatories.

THE British are supposed to be reserved at love-making, talking to strangers, and raising the voice in public; and a good thing too. But our people are also shyer than most other nations about plumbing; and this is not so good when it complicates planning and gets in the way of hygiene.

SHYNESS

Local authorities sometimes receive complaints about public lavatories from indignant residents. It is significant that often enough these complaints are not (as perhaps one might think) about the state of the lavatory, but something to do with it being built so that men and women can "see one another going in." The planner has not to argue with this point of view but to meet it. It is unwise, in this country, so experience has shown, to have

Figure 1951, a lavatory

a com done i between exampl Ther the m exampl it lea about To go indig public doing we ha them

PLAYC

Figure Park Mish

Th all b tical prop the the (Fig the sam fem dev the wor affe sar sho par cau oth and in per con der cru

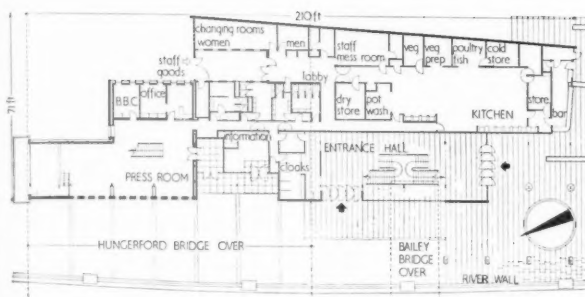


Figure 2. Plan of the Regatta Restaurant and Pressroom (FOB, 1951, designers: Misha Black and Alexander Gibson), showing lavatories off a common passage.

a common passage-way leading to Men and Women as done in Fig. 2. And it is desirable to have thick shrubs between the two points of entry, as in the Parks Lavatory example in Fig. 3.

There is a suggestion that women are shyer than men in the matters with which we have to deal. This seems a nice example of a proposition supremely difficult to prove; but it leads one to think (for reasons which may become clear) about women having to pay a penny when men do not. To go into this matter, about which some women feel very indignant, raises a number of factors which lie behind public lavatory design and specification, so it seems worth doing. By the way, there are times in this article when we have to throw delicacy to the winds. This is one of them.

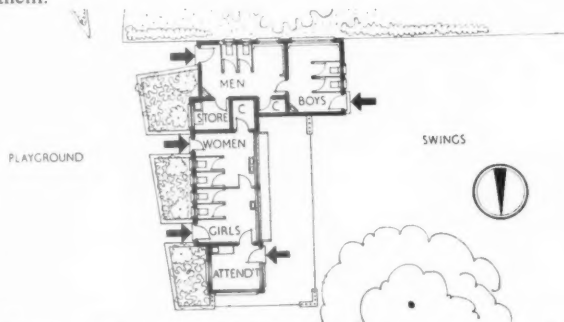


Figure 3. Plan of a public lavatory at Newington by the LCC Parks Department. Note bushes screening the entrances (designers: Misha Black and Alexander Gibson).

The man avoids paying a penny for urination because all he wants is a vertical surface and it would be impracticable to make a charge for this. Urinal stalls are quite proper and decent for male use because the physiology of the male ensures a large measure of privacy, even when the stalls have no partitions. The fitment called a urinette (Fig. 5) might be regarded as a female counterpart of the urinal, but it cannot be used with anything like the same privacy simply because of the physiology of the female. The urinette is better regarded as a *hygienic* development (and is discussed as such a little later on in these notes) than as a device which could save the woman's penny. The penny is to secure the privacy afforded by a lockable compartment, and this is as necessary for a urinette as a water closet. As to why *anyone* should pay a penny for occupying a water closet compartment, there is a strong case for retaining the fee because of misuse, particularly by children. They say that otherwise the little cherubs would just run in and out—and no doubt they would. The penny, though so small in value these days, is still money and not readily expended in public lavatories except on business. So my conclusion about the woman's penny is that it is a fee demanded by Nature and not an imposition sustained by cruel or indifferent man.

Our shyness about public lavatories places unfortunate restrictions on proper signposting. Notices telling you "where it is" are often so discreet as to be invisible to the anxious seeker. It is a pet idea of mine that signposting generally in our public services is hopelessly amateur (so that in travel, for example, people are put to a great deal of quite unnecessary trouble) but when shyness becomes handmaid to inefficiency the result is deplorable. They say that women assistants in departmental stores are continually telling customers where the lavatories are. Many a person has suffered when help was

Figure 4. A statue of a child seated on a pot points to a public lavatory, an example of Continental practice.



really near at hand, if only the local authority or other owner of the place had had the courage to say so. This is a result of shyness which we should not tolerate: we should contest it. There are ways of getting over the difficulty without offence. Look at the picture in Fig. 4—an example of Continental practice. The standard sign is 00 (used, by the way, on the w.c. door in hotels because 00 could not be a room number). The child, comfortably seated on the pot, points the way with the arrow. What could be nicer—and plainer? In Britain perhaps we could omit the child.

propaganda

Good social habits can be encouraged by propaganda (posters, press advertising, etc.) issued by central or local authority. When it is a question of trying to bring about better *sanitary* habits the propaganda is severely limited by the distaste of people for having sanitary matters thrust under their noses. Sanitation propaganda must therefore operate under this heavy handicap, and it is no good expecting anything else. Design and specification have to be based on a realistic view of people's present habits and the fact that they will not *rapidly* become more "sanitation conscious."

MISUSE

Enough of "shyness." Suppose we go on to the problem of misuse. This means, in our subject (a) damage to sanitary fittings and fixtures—by accident, by general clumsiness or carelessness, as a result of mischief or by malicious intent, (b) theft or mischievous removal of anything removable, (c) unnecessary leaving of fixtures in an insanitary condition, (d) the use of public lavatories for immoral purposes or "purposes other than those for which they are provided," (e) general misbehaviour.

The risk of misuse has a very considerable effect on design and specification. It is *not* practicable, in my view, to go ahead with hopeful hearts and trust in fellow man, accepting patiently any betrayal of such trust and its effects. We know that a certain measure of hope and tolerance is necessary so that all people may learn to appreciate, and eventually use properly, what is provided for them, but there are limits to what is reasonable. This is especially the case when the client is not a government or local authority. Community bodies might perhaps be expected to share the cost of educating the public. But not, to the same extent, the private client.

Agreed, it is only the very small minority which misuses public lavatories. But only a very small minority go in

for stealing, yet precautions must everywhere be taken at great expense, because of these few. It is the same in sanitation.

the only private place

As to why the few awkward people do damage in public lavatories, I suppose a significant thing is that the w.c. compartment, with door bolted, is the one place above all others where people are alone, unobserved and in no expectation of being observed until they choose to open the door. While people in the higher income groups can usually have solitude at will, large numbers of our population are virtually never alone, day or night. The public lavatory is therefore to many a very special place, and it is not really a matter for surprise that the odd person will use the opportunity to express his peculiarities—or resentment against society—by taking it out on the plumbing. So we get scribbling on walls, wastage and theft of toilet paper, wrenching of brackets and coat hooks, detachment of seats, and so on. Some people also deliberately make insanitary messes.

In Parts III and IV of this article we go into design and specification according to types of user—or perhaps one should say, more fairly, types of user to which the few badly-disposed persons are likely to belong. It will be seen that as one goes down the scale (you will come to this on page 612) one makes the equipment more robust, brings in protection for vulnerable parts of the installations, and omits certain fittings to save them from being removed later on. Planning takes a hand in the problem by facilitating supervision by lavatory attendants. Sometimes there is quite a considerable gap at the bottom of w.c. compartment doors and partitions, which reduces the degree of privacy; and the same effect is produced by a small high level window in the door. However, local authorities recognize that a limit to this sort of thing is soon reached, partly because of the occasional "peeping Tom" among the customers—incredible as this may seem to the delicately nurtured.

Children should preferably have their own public lavatories, although this can rarely be done except in schools and in the parks. This is not only because the equipment should be scaled down to suit them (particularly as regards lower w.c. pans), but because of the off-chance of immoral behaviour of men towards boys and undesirable behaviour of women towards girls. (Some women users of public lavatories are indiscreet in their manner of sanitary towel disposal.) Also, in "children only" places the supervision can be organized accordingly and, as in the parks, the duties of the attendant widened (and indeed elevated) to include First Aid.

HYGIENE

Naturally people begin thinking about infection when they have to share sanitary fixtures with strangers. So long as



Figure 5. Part of an advertisement which appeared in an issue of *Progressive Architecture* describing a woman's urinal. It is produced by the American Radiator and Standard Sanitary Corporation, Pittsburgh. Note the foot-operated flush and the corbel fixing, a technique which has much to commend it as regards floor cleansing, but little used over here except in hospitals, due partly to the growing prejudice against heavy partition walls. A pedestal type is also made.

you have no bodily contact with anything used in common there is nothing to worry about. This makes the urinal stall a "carefree" fixture. The urinette represents an attempt to do the same thing for women. Fig. 5 reproduces part of an advertisement from an American architectural magazine. The user need not touch the appliance. Urinettes have been made in this country, but they are hardly a stock line and are certainly not being pressed by the manufacturers as they are in America. The cost of fitting w.c. compartments with urinettes as well as water closets would be considerable.

People hesitate to sit on the w.c. seat in some public lavatories, often with good reason. (And does the attendant's wipe of the cloth render them immediately germless?) Some spread toilet paper and sit on that. I have seen (in Canada) a special paper cover, new for each user, to fit over the rim of the seat. It is supplied from a flat pack

Figure 6. An example of a plastic, open-fronted seat (manufacturer: Robert McArd). This type of seat should always be used in unattended lavatories, particularly women's.



like toilet paper. After use it goes down the pan. This seems a useful treatment of the problem. I have no information about it as regards this country. The open-front w.c. seat (Fig. 6) eliminates that part of the seat most likely to get fouled.

washing hands

Presumably infection can be passed from hand to hand (literally) by way of the chain pull (why is the foot-operated flush seen only on board ship?) and the door and bolt handles; but, of course, if our lives depended upon never handling anything in common with unwashed strangers, the human race would probably have become extinct long ago. To wash after using the w.c. is of no value in preventing cross infection in public lavatories, since washing is normally the last thing the user does. The value of hand washing at public lavatories lies mainly in preventing the passage of infection through food handled later. The accent is more logically laid, therefore, on washing before handling food than washing after using the w.c.—though it may come to the same thing. They say that the present campaign in public conveniences for hand washing was started because of the barrow boys and their fruit; it was felt that they, of all people, should have the opportunity to wash in a public convenience. Do they do it? No answer, as yet. Reports are that a great number of people still do not wash in public lavatories, even when it is made easy for them to do so; and that the men neglect the precaution more than the women. Although it is quite impossible to assess how far this hand washing (or the lack of it) affects public health, those who do it, or learn to do it, are likely to become more particular about hygiene generally. Which adds to the desirability of hand washing becoming more common than it is at the moment.

sanitary towels

Now we have to come to the disposal of sanitary towels. Much has been said in various committees about this problem. There is only space for a few comments, but we shall try to state the essential points. By far the simplest way of getting rid of a sanitary towel is to put it down the w.c. pan—a fact that has occurred to users over the years, who have acted accordingly. The trouble is when the

plumbi
into the
passed
cause a
user sic
I shoul
dence,
towels,
of pipe
to flush
crease
takings
plumb
ducing
and re
uniform
age of
Pend
it is e
user fr
the th
not id
ful en
who c
lem g
towel
met e
To h
hardl
ventil
used
twent
cums
for be
such
pract
their

COST
To
good
the l
hygie
we a
ture
An u
it br
peri
amp
whic
to l
of c
gati
rese

PA

F.
the
lav

W

T
me
cas
als
U
typ
no
fo
sto
fa
pe

plumbing will not take it. Once a sanitary towel has got into the horizontal run of drain (or at any rate when it has passed the 4-in. branch into the 6-in. pipe) it is unlikely to cause a stoppage. The main trouble area is between the user side of the pan and the first length of horizontal drain. I should like to see some research conducted on the incidence, nature and cause of stoppages set up by sanitary towels, and then the work continued to the special design of pipework and practical trials to see whether it is possible to flush sanitary towels away every time. Perhaps an increase in flushing water could be allowed by water undertakings for women's w.c.s. Perhaps special care in the plumbing work (adding, no doubt, to initial costs but reducing maintenance) could eliminate interior projections and recesses in the pipe line. A completely smooth and uniform bore could hardly set up the initial check to passage of fibrous solids upon which blockages usually build up.

Pending a happy result of investigations as suggested above it is essential at many public lavatories to discourage the user from doing what she is most inclined to do, *i.e.*, to put the thing down the pan. The bin in the compartment is not ideal for the job in all cases because users are not careful enough in their disposal to avoid offence to others who come after them. Proper servicing can ease the problem greatly. For the user to have to carry the sanitary towel outside the w.c. compartment is not a perfect arrangement even if it can immediately be deposited in an incinerator. To have an incinerator in every compartment would be hardly practicable. Incinerators need care in fixing and ventilating. Vertical ducts, like refuse chutes, have been used for the disposal of sanitary towels. The choice between bins, incinerators and ducts will depend on the circumstances of the case; and it seems that, pending research for better things, we should continue as at present, making such improvements as we can along the lines of current practice and taking advantage of new products which do their job properly.

COSTS

To build and equip a public lavatory properly costs a good deal of money. So long as that money can be found the lavatory can be made very pleasing and elegant and hygienically satisfactory. In so many cases, however, we are on the utility wagon. Sometimes heavy expenditure is required even for minimum standards of sanitation. An unfortunate result of sanitation being expensive is that it brings about postponement of schemes, maybe for long periods, during which bad conditions continue. An example is the long delay in rebuilding public conveniences which were destroyed by bombing. Any sensible scheme to lower the cost of fixtures, fittings, materials and forms of construction without loss of efficiency is worth investigating and should be included in programmes of national research.

PART III

F. L. Barrow continues by giving a guide to the specification of equipment for public lavatories.

WE have now to proceed to practical specification and design for public lavatories.

The controlling factors, apart from cost, are user requirements balanced against the possibility of misuse. It is a case of giving people what most people want, which it is also safe to let *all* of them have.

Under our definition of public lavatory nearly every type of building in which people spend their time when not at home comes within our scope. Examples are as follows: offices, hotels, restaurants, cafés, department stores, public houses, theatres, cinemas, assembly halls, factories, clubs, rail and bus stations, schools, mental and penal institutions, and street lavatories.

One way of developing the practical side of our subject would be to commence with the general planning of public lavatory accommodation, and then proceed to layout within buildings, construction, materials and, finally, equipment (fixtures and fittings). It is as logical, however, to go at it the other way round, beginning with the fixtures and fittings, since it is these which (themselves determined by the needs and habits of users) largely control layout, and so on. To begin with, the equipment has the added advantage of bringing into focus straight away the differences, from our present point of view, between the various types of buildings. So we shall begin with equipment, after saying a few more words on the various types of buildings.

At the beginning of the tables for fixtures and fittings, page 612, buildings are sorted into three grades. Grade I is "top," Grade III is "bottom," and Grade II is "intermediate." The basis of the grading is explained in the Table. There are, of course, innumerable grades into which buildings might be grouped in order to relate them to the fixtures and fittings appropriate to them. Even in Grade I we may expect some difference in money available and type of user. In the bottom grade (Grade III) there is a wider range because the users and conditions vary more, and so does the money available. The intermediate group (Grade II) is the most variable of all, and could be cut up into many sub-groups, not so much because there are more types of buildings in the Grade but because within any one type of building there must be great variations in requirements, users and money available which specification must take into account. For example, one cannot talk of suitable public lavatory equipment for a theatre if "theatre" is to range from, say, the Ladies' Room provided for the Dress Circle for a new West End theatre to the equipment which would meet the demands of gallery customers at a variety theatre in one of the less stylish districts. (You may be feeling that Democracy and Sanitation are rather uneasy bedfellows.)

It is hoped, therefore, that the reader will not be expecting to run a horizontal line across our tables and get the answer for any given building, like a ticket from a slot machine. It might have been more prudent to cover the matter in numerous pages of text, with all the "ifs" and "buts." The form of tabulation adopted should be less of a tax on the reader and may serve its purpose if too much is not expected from it. It is meant as a general guide.

It will be obvious that the dividing lines between the three grades are not rigid barriers. For any building in Grade II where something rather better than the usual can be afforded, and seems acceptable in the particular circumstances, the specifier will probably invade Group I. He might also feel pressed to invade Grade III if he feels that some of the users of his building may be liable to misuse the provision rather more than would normally be the case for the type of building in question. For similar reasons specification for Grades I and III may invade Grade II.

A final note about fixtures and fittings before we proceed to the tables. It concerns the use of manufacturers' catalogues when specifying equipment.

It should not be assumed that the manufacturer's catalogues necessarily give an accurate picture of suitable practice. It must be said that this is not in any way a criticism of the manufacturers. The manufacturers make what their customers demand. If, for example, a local authority insists that all their w.c. pans for schools shall have access opening and covers, for clearance purposes, the manufacturers have to produce pans with this rather expensive feature. And if many purchasers require these pans so fitted, the manufacturer has to make them as a general line and show them in his catalogues. As to whether the fitting is necessary, or always necessary, that is the responsibility of the man who orders the product, not the supplier who is merely meeting a demand.

Public Lavatories

FIXTURES AND FITTINGS

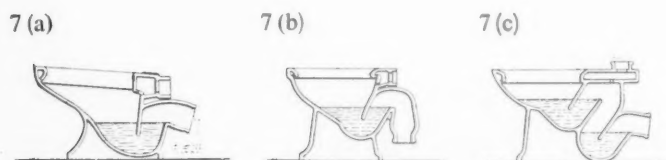
TYPE OF BUILDING	WATER CLOSET			
	Type of w.c.* (See Fig. 7)	Material for w.c.†	Colour**	Seat.††
GRADE I where best available "public lavatory" service is demanded and can be afforded ; and where, on account of the type of user and full-time lavy. attendant service, no special precautions need be taken (in specifying equipment) against misuse, damage or theft. <i>Examples of Buildings :</i> Luxury hotels, luxury restaurants, first-class clubs, offices (senior executives), high-grade departmental stores.	Siphonic	Vitreous china	Choice between white ivory blue pink green etc. } various shades and black White	Wood core, plastic covered Polished wood Plastic (solid section) [Closed front seats]
GRADE II where it is more important than above to economise in first cost, also to dispense as much as possible with services of lavatory attendant ; and where users contain a minority disposed to misuse or damage. This affects specification, robustness becoming more important, and limits the supply of removable fittings. <i>Examples of Buildings :</i> Offices, hotels, public houses, restaurants, cafes, department stores, theatres, cinemas, assembly halls, factories, clubs (institutional, sports, etc.), stations (transport terminals, etc.), schools. <i>Note that within any one of the above types of buildings the general requirements, money available, position re lavatory attendance and (particularly) type of user, can vary very widely, making it necessary to select appropriately from the fairly wide range of products shown for this grade.</i>	Wash-down	Earthenware Vitreous china Fireclay	White	Polished wood or solid section plastic [Open-front seats]
GRADE III where exposure of fixtures and fittings to hard wear and misuse must be controlling factors in specification ; and where economy in installation, though important, has to give way at various points to the need for special (and more costly) design and materials to prevent services going "out of order" or becoming insanitary (because of users' treatment) <i>Examples of Buildings :</i> Street pub. lavatories, some stations (rail, 'bus), some schools (e.g. "approved"), mental institutions, prisons.	Wash-down	Vitreous china Fireclay	White	As Grade II

* Siphonic pans cost more than washdown pans but removal of excreta is more positive and quieter. "Double-trap, full-bore" siphonic pans preferable.

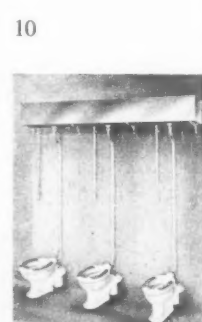
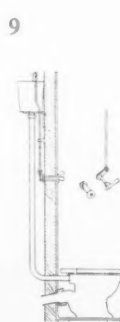
† Fireclay and earthenware are only glazed on surface. Vitreous china, glazed right through, is an advantage from a sanitary standpoint.

** To specify colour sends up the cost of the ware about 50 per cent.

†† Low level for appearance. Lids to seats are not required when the compartment contains only a w.c. Hardwood pads, in place of seats, are not mentioned here because of doubts as to their sanitary qualities.



Left, figure 7, cross sections of pans (a) wash-down, (b) siphonic, (c) double trap, full bore siphonic (Shanks). Below, figure 8, flushing cisterns, (a) close coupled (Alfred Goslett) (b) low-level, (c) high level, flat-bottomed, (d) high-level, well bottomed (Bolding). Figure 9, w.c. arrangement with flushing cistern behind wall (Adamsez). Figure 10, flushing trough (Farrer).



These fixtures and fittings are for public lavatories in various types of buildings. The items are arranged from top to bottom of the columns in a rough order of quality from the standpoint of the user of the lavatory. The first column on the left relates the items to the types of buildings for which they are suitable.

CLOSET SUITES

Flushing cistern*** (See Fig. 8)	Flush actuated by	Finish of flush pipe	Material of flushing cistern	Flushing cistern supports (Fig. 13)	Siphon mechanism (Fig. 14)	Silencing devices
Concealed behind wall (in access chamber) handle only in w.c. compt. (Fig. 9) Close-coupled low level	Handle	Chromium plated	Vitreous China If beyond wall, as Fig. 9, could be iron, galvanized or painted	Concealed screws to wall (to steady)	Plunger plate and cylinder (positive action)	Silencing inlet-tube Silent-acting ball valve Siphon-breaking pipe Water pressure reducing valves and flow restrictors.
Behind wall as above Low-level High-level (a) flat bottomed (b) Well- bottomed Flushing trough (Fig. 10)	Handle for low level or for high-level beyond wall Chain pull for high level Handles in porcelain brass galvanized iron	Chromium- plated Porcelain enamelled steel Painted or galvanized steel	Vitreous china Earthenware Fireclay Plastic Vitreous enamelled steel Iron porcelain- enamelled glass- enamelled inside, painted outside painted	Concealed brackets Exposed brackets porcelain- enamelled iron painted iron Troughs can be supported on top of w.c. partitions	As above Bell and standpipe (" pull-and- let-go " action)	Silencing inlet-tube only, except in special circumstances None
As Grade II except low level High-level flushing cistern in compt. with special guards (as Fig. 11)	Chain pull with guide tube, or rod in guide ring (galvan- ized) (Fig. 12) Push button	Galvanized or painted steel	Fireclay Cast iron painted galvanized Pressed steel galvanized	Painted or galvanized brackets Concealed brackets *** Flushing valves are appropriate for Grade I (and to an extent for Grade II) in place of flushing cisterns, but should be specified only after taking careful note of: (a) the requirements of the local water undertaking, who may not permit their use; (b) the performance of a given valve with a given pan; (c) the water pressure available and the size of supply pipe required. When a flushing cistern is fitted behind wall, appearance is better and misuse is minimised; note however, the need, in this case, to plan for proper access to the ball valve, etc.	As above	None

11



13



12

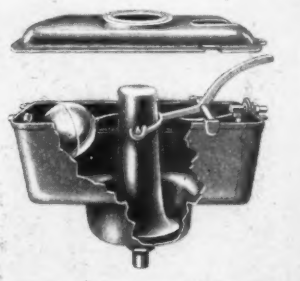


13

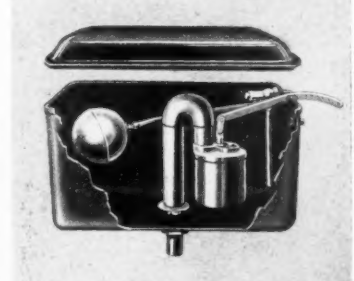


Figure 11, fitting suitable for prison or mental institution (John Slater, [Stoke]). Figure 12, guide tube enclosing cistern pull (Adamsez). Figure 13, exposed brackets and cantilever bracket for cistern. (Bolding) A concealed bracket is also available. Figure 14, (a) the simple bell-type flushing mechanism, (b) the plunger plate and cylinder type, with silent inlet-tube which discharges below water level, and silent siphon-breaking device. (Bolding).

14 (a)



14 (b)



FIXTURES AND FITTINGS



18

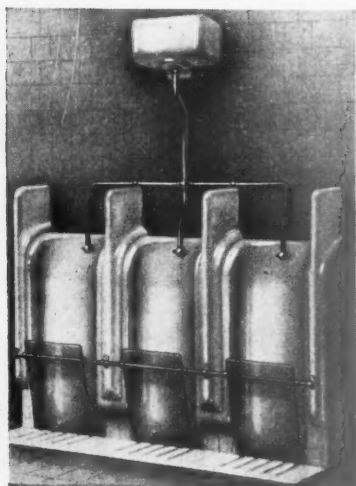


18

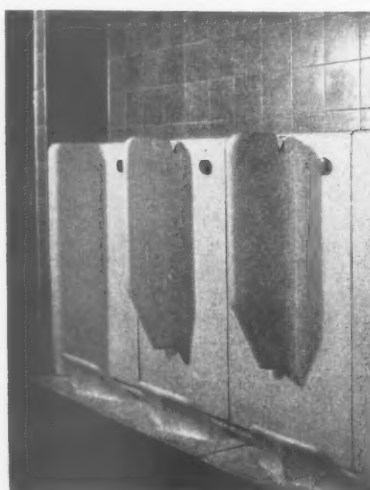


18

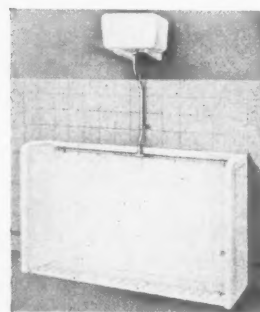
TYPE OF BUILDING (see page 612)	URINALS						WASHING	
	Type (Fig. 15)	Material	Width per user	Flushed by	Flush pipe finish	Flushing cistern material	Type (Fig. 16)	Material
GRADE I ..	Urinal bowls and partitions Urinal stalls and partitions Glass splash-guards or anti-splash lip at floor	Vitreous china Fireclay	2 ft. 6 in. 2 ft. 3 in. 2 ft. 0 in.	Auto- matic Auto- matic	Chromium	Vitreous china	Individual basins	Vitreous china
GRADE II ..	Urinal slabs with partitions Urinal slabs without partitions	Fireclay	1 ft. 9 in. 1 ft. 6 in. 1 ft. 2 in. (schools)	Auto- matic	Chromium Chromium	Fireclay	Basins in ranges Washing fountains Trough lavatories (for some factories)	Vitreous china Heavy earthenware Fireclay
GRADE III ..	Urinal slabs without partitions	Fireclay	As Grade II	Auto- matic	Galvan- ized	Painted iron Galvan- ized iron	Basins and fountains	Fireclay



15



15



15

Figure 15. Three types of urinal. Extreme left, fireclay stall urinal with partitions and glass splash guards. The latter need daily washing at least (Southhook Potteries Ltd.). Left, fireclay urinal slab, in Royal Festival Hall lavatory, with integral partition to simplify fixing. Note the anti-splash lip (Adamsez). Below, fireclay slab urinal without partitions (Adamsez).

ial

us

us

en-

y

y

reme
and
ash-
left,
wa-
ing.
ow,
l a y
uri-
ith-
rti-
Ad-
).

lea

ste

ast

co

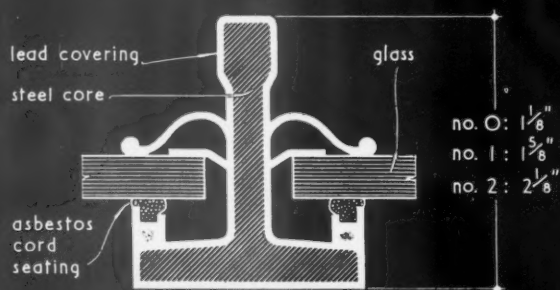
sec

F.S

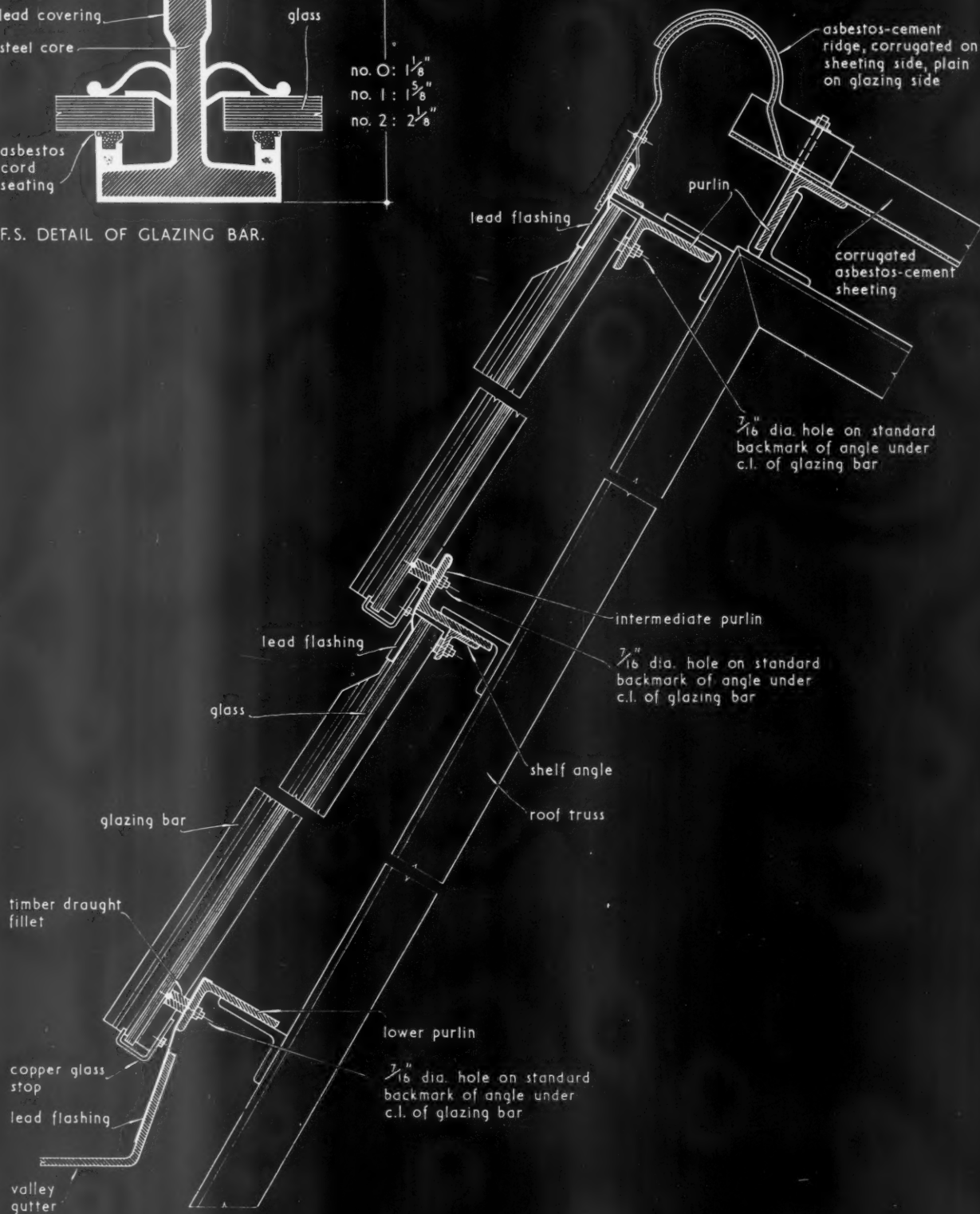
ROOF GLAZING | STEEL

24.N3

The Architects' Journal Library of Information Sheets 415. Editor: Cotterell Butler, A.R.I.B.A.



F.S. DETAIL OF GLAZING BAR.



SECTION THRO' NORTHLIGHT ROOF.

HEYWOOD'S PATENT GLAZING: LEAD-CLOTHED STEEL GLAZING BARS.

Manufacturer: W.H. Heywood and Co. Ltd.

24.N3 HEYWOOD'S PATENT GLAZING : LEAD-CLOTHED STEEL GLAZING BARS

This Sheet deals with Heywood's lead-clothed steel glazing bars and illustrates their application to steel roof structures. The drawing on the face show the treatment of a northlight roof. Sheet 24.M3 deals with aluminium-alloy glazing bars and shows their use for a glazed panel in a steel roof of normal pitch. The principles of construction are the same for both types of glazing bar in all the examples. Sheet 24.J2 describes Heywood's standard lantern lights in both steel and aluminium alloy.

Glazing Bar

Material : The bar has a core of galvanised steel, is covered by a continuous lead sheath, hermetically sealed, and has double lead glazing wings. Asbestos cord held in grooves in the bar provides a resilient seating for the glass.

Sizes : The following table gives the sizes of glazing bars and relevant data.

Section No.	0	1	2
Height	1½ in.	1¾ in.	2½ in.
Width (excluding wings)	1½ in.	1¾ in.	1¾ in.
Max. length obtainable	5 ft. 6 in.	7 ft. 6 in.	10 ft. 6 in.
Wt. per sq. ft. of glazing*	5 lb.	5.25 lb.	5.50 lb.

* This includes ¼-in. thick rough cast double-rolled or ¼-in. wired cast glass.

Centres: Bars should be spaced at 2 ft. 0-⅞ in. wherever possible for use with 2 ft. wide panes of glass.

Glass stop: This is of heavy gauge copper, set-screwed to the bar.

Application to Northlight Roof

Lower purlin: The glazing bar is bolted to the lower purlin which is drilled on the standard backmark of the angle with a 7/16 in. dia. hole under the centre of each glazing bar. A lead flashing is dressed over the purlin and into the valley gutter.

Intermediate purlin: The lower glazing bars are bolted to a shelf angle fixed back-to-back with the intermediate purlin. The upper glazing bars are bolted to the purlin, which is drilled as previously described. Lead flashing is dressed over the purlin on to the top of the lower glazing.

Top purlin: The upper glazing bar is bolted to the top purlin, which is drilled as previously described. Lead flashing is fixed between the ridge tile and the angle which supports it and is dressed down over the glass as shown in the drawing.

Treatment of end panel: The details shown on Sheet 24.M3 for aluminium-alloy glazing bars are applicable to lead-clothed steel glazing bars.

Further Information

The manufacturers maintain a technical advisory department available to answer questions dealing with this subject generally.

Compiled from information supplied by :

W. H. Heywood & Co. Ltd.

Head Office : Bayhall Works, Huddersfield.

Telephone : Huddersfield 6594 (5 lines).

Telegrams : Glazing, Huddersfield.

London Office : 54, Victoria Street, S.W.1.

Telephone : Victoria 2994.

Branch Offices : Belfast, Birmingham, Bristol, Coventry, Dublin, Glasgow, Leicester, Liverpool, Manchester, Newcastle-on-Tyne, Nottingham, Plymouth.

Copyright Reserved.

The Architects' Journal Library of Information Sheets.

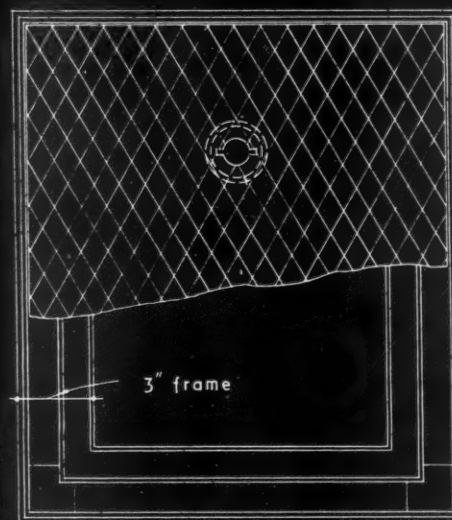
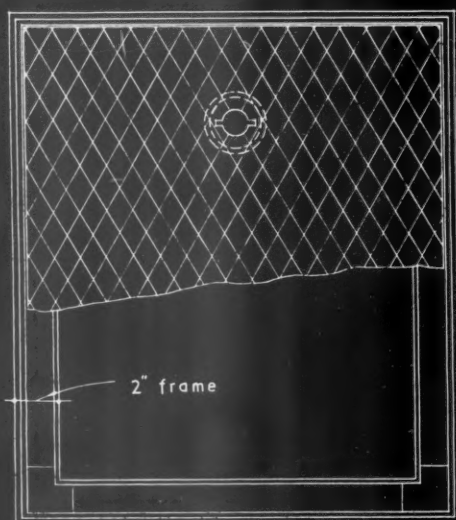
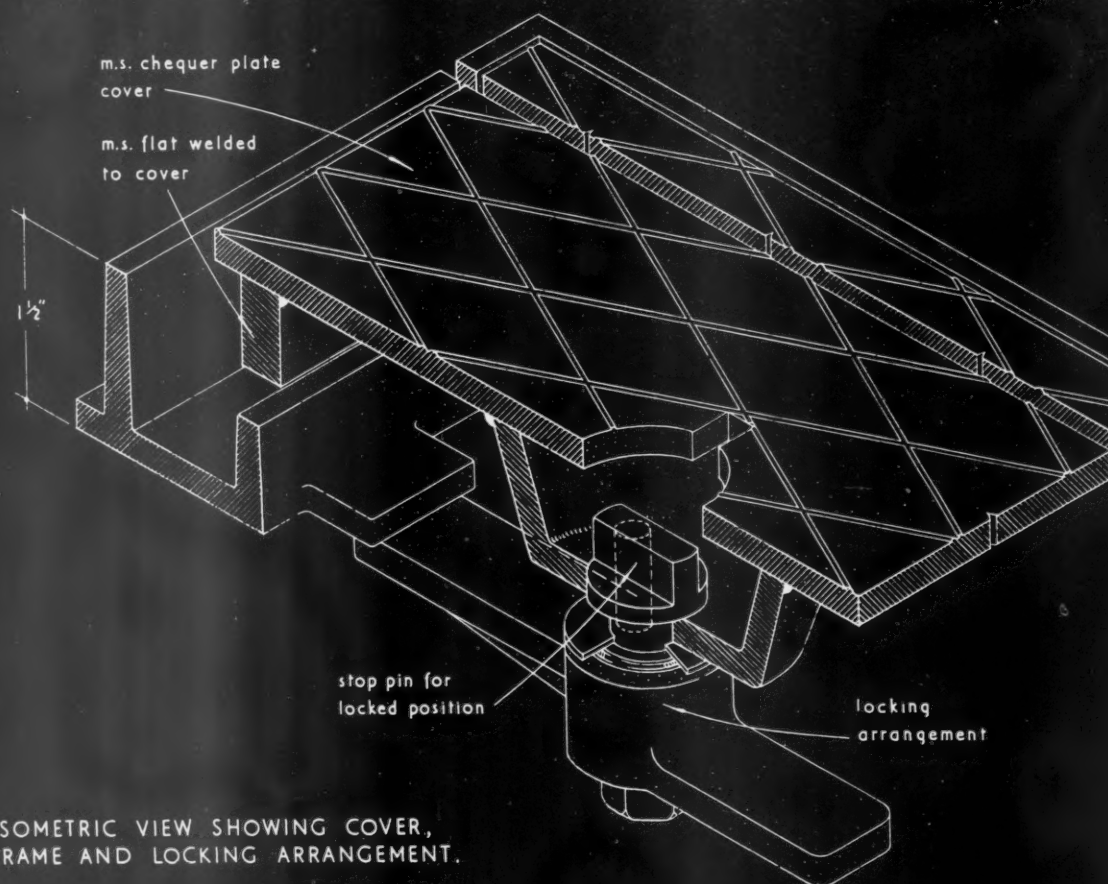
Editor: Cotterell Butler, A.R.I.B.A.

SANITATION | EQUIPMENT

33.P1

Revised 14.5.53

The Architects' Journal Library of Information Sheets 416. Editor: Cotterell Butler, A.R.I.B.A.



SINGLE SEAL TYPE.



DOUBLE SEAL TYPE.

STEEL MANHOLE COVERS.

Manufacturer: Robert Jenkins and Company Limited.

33.P1 STEEL MANHOLE COVERS

General

The shock-proof manhole covers illustrated on the face of this Sheet consist of a mild steel plate provided with an integral non-slip chequer surfacing and welded steel seating strips on the underside. The frames to receive the covers may be of cast iron or welded steel and are available in either single or double seal type. All covers fit flush with the top of the frame.

Carrying Capacity

Each size is available in two weights. Light pattern covers are all tested to withstand the equivalent weight of any wheel of a fully laden lorry up to 5 tons total weight, while heavy pattern covers will carry a load equivalent to that of any wheel of a 10-ton four-wheeler or a 15-ton six-wheeler.

Lifting

Two keyholes are provided in each cover and these are positioned over shallow, circular steel catchments welded to the underside of the cover. The lifting keys are inserted in the wings of the keyholes and a bearing is obtained by a quarter turn of each key. Handgrips can be supplied in place of keylifts. Locking gear may be fitted to the keyholes of any cover and special keys are then necessary. When these are inserted and turned through 90°, the cover is unlocked and may be lifted with the keys. When the cover is replaced, it is impossible to remove the keys without first locking the cover in place.

Hinged Covers

Steel chequer-plate hinged covers and doors are manufactured to the standard dimensions given below and to special requirements. Covers may have single or double doors, suitably reinforced with welded steel channels and provided with locks and standard lifting-keyholes. Hinged covers are supplied with steel frames only.

Size s

The following tables give the sizes of covers and frames available for both single and double seal types.

SINGLE SEAL				
Opening	Weight in lb.			
	Cover		Frame	
	Light Patt.	Heavy Patt.	C.I.	M.S.
12 in. × 12 in.	22	29	14	17
15 in. × 15 in.	29	34	18	20
18 in. × 18 in.	36	43	22	24
21 in. × 21 in.	51	59	23	27
24 in. × 18 in.	50	59	27	27
24 in. × 24 in.	63	73	28	31
27 in. × 21 in.	63	73	28	31
30 in. × 18 in.	73	83	36	31
30 in. × 24 in.	90	104	47	34
36 in. × 24 in.	103	119	52	38
30 in. × 30 in.	105	118	54	38
36 in. × 30 in.	119	135	56	41
36 in. × 36 in.	147	163	77	44

DOUBLE SEAL		
Opening	Pattern	Weight per set, lb.
24 in. × 18 in. Cast frame	Light	103
	Heavy	112
24 in. × 18 in. Steel frame	Light	122
	Heavy	132
24 in. × 24 in. Cast frame	Light	132
	Heavy	144
24 in. × 24 in. Steel frame	Light	144
	Heavy	157

Compiled from information supplied by :

Robert Jenkins & Co., Ltd.

Head Office : Ivanhoe Works, Rotherham.

Telephone : Rotherham 4201-6 (6 lines).

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

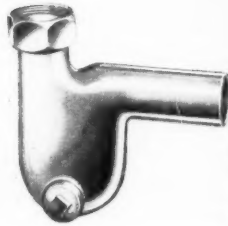
Telephone : Abbey 6327.

Copyright Reserved.

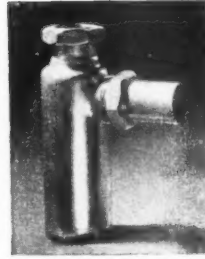
The Architects' Journal Library of Information Sheets.
Editor: Cotterell Butler, A.R.I.B.A.



19



19



19

Figure 18, opposite page, from left to right, two non-concussive self-closing spring action taps (Peglers Ltd. and Barber Wilsons & Co. Ltd.); screw tap, which can be re-washed without turning off the water supply (F. H. Bourner & Co.). Figure 19, this page, from left to right, P trap and anti-siphon bottle trap (Bolding) and deep seal bottle trap (Econa).]

FACILITIES

Colour	Size	Spacing of basins	Support*	Taps—Type	Taps—Covers	Waste fitting	Overflow	Trapping *
Choice between white and Ivory blue pink green etc. White	Basins (overall) 27 in. by 22 in. 25 in. by 18 in. (B.S.)	2 in. clear of wall 9 in. min. between basins	Pedestal Chromium-plated legs and porcelain-enamelled brackets	Screw-down	Facetted (Fig. 17), or round design	Pop-up (see Fig. 17) Plug and chain	Slot	At each basin Bottle traps (as Fig. 19)
White	25 in. by 18 in. 22 in. by 16 in. (B.S.) Also for schools 15 in. by 13 in.	2 in. clear of wall Flush with wall Basins without cover strips 1 in. between basins with cover strips Butted	Brackets and legs Brackets Legs and frames	Screw-down Self-closing (non-concussive)	Standard round	Plug and chain	Slot Weir or slot	At each basin Bottle traps Plain traps No traps to basins. Waste pipes discharge to floor channel which is trapped (Fig. 16)
White	As Grade II	As Grade II	* The method of support may have to be decided by the strength and stability of the wall to which attachment is made.	Self-closing (non-concussive)	Standard	Plug and chain "Careless Waste"		As above * Trapping immediately below each waste outlet is preferable because it eliminates smell from inside the waste pipe. Vertical runs of waste pipe keep cleaner than horizontal runs, so the collection of untrapped wastes in a common horizontal branch is omitted from the Table.

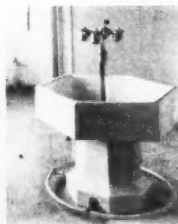
Figure 16, right, top, individual basins (Doulton) on pedestals, and bottom, individual basins (Adamsez) at the Wokingham secondary school. Centre, top, ablution fountains (Doulton) Nottingham. Extreme right, top, range of basins with cover strips, discharging into a floor channel from untrapped wastes, and bottom, a fireclay trough washbasin (Doulton) at Cadbury's works. Centre, bottom, figure 17, a diagram showing a "pop-up" waste and facetted tap covers (Bolding).



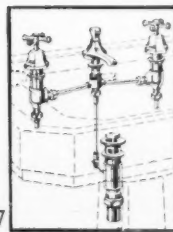
16



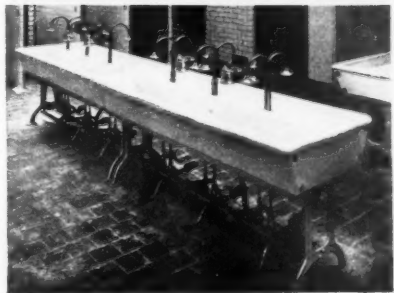
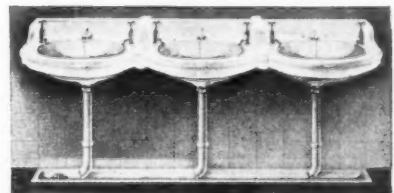
16



17



16



16

FIXTURES
AND
FITTINGS



Fig. 20



20

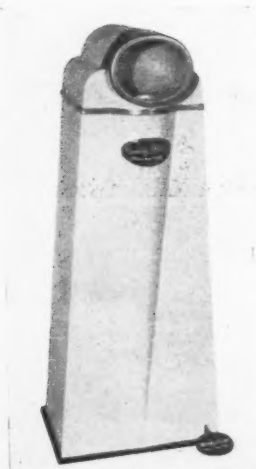


20

TYPE OF BUILDING (See page 612)	ADDITIONAL FIXTURES							
	Soap	Means of drying	Container for used towels	Toilet paper	Coathooks in w.c. compt.	Sanitary towel dispenser* (slot machine) (Fig. 23)	Sanitary towel incinerator* (Fig. 24)	
GRADE I	Individual—solid Liquid soap dispenser—glass bowl (Fig. 20)	Cloth towels	Yes	Flat pack in porcelain, or chromium-plated metal, holder	Yes	Yes	No	
GRADE II	Liquid soap dispenser—glass } bowl plastic } metal } (Fig. 20)	Hot air dryer (Fig. 21) Roller towel-time check	Yes	Roll in holder fixed to or built into wall	Yes	Yes	Yes	
	Liquid soap piped from common container (Fig. 20)	Paper towels (Fig. 25)		Roll in locked holder (Fig. 22)	Yes	No	No	
GRADE III	On the general lines of Grade II where practicable—having regard to the risk of theft,							

* The sanitary towel problem is discussed on page 610. Problems are simplified with plenty of lavatory attendance, expected in Grade I. Incinerators may be electric or gas.

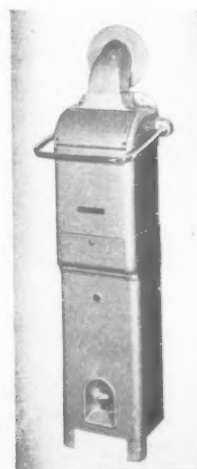
21



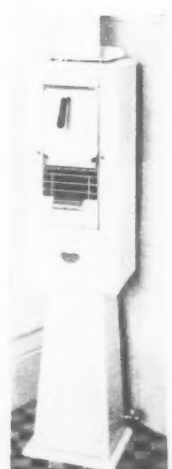
23



24



24



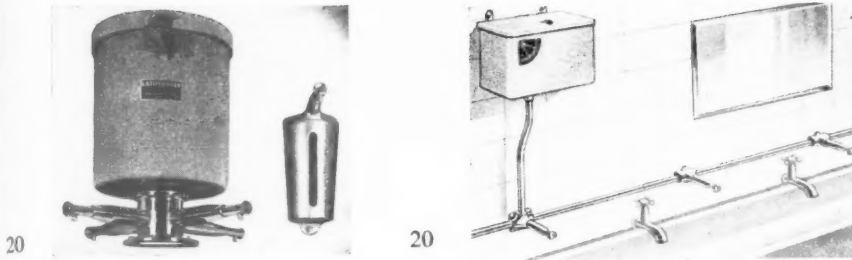


Figure 20, from left to right, soap dispensers. The first two are theft-proof (Newton, Chambers; Waddington & Duval; Horton Manufacturing; Valbania). Valbania make the equipment seen in two pictures on this page; liquid soap is dispensed by a piped supply from a central container to the troughs.

OR FITTINGS

Sanitary Towel bin*	Splashback to lavatory basin	Mirrors	Glass shelves	Ashtrays	Shoe cleaning machine	Clothes brushes	Table	Chairs
Yes	Yes unless impervious finish on walls.	Wall mirrors over basins and wall-tables For Women's rooms, on central table: also full length mirrors	Yes	Yes. Loose on tables and shelves Also as wall fitting in w.c. compt. and over urinals	Yes	Yes	Yes	Yes
Yes	Yes	Wall mirrors	Yes	Wall fitting in w.c. compt. and over urinal stalls	No	No	No	Yes
			No					No

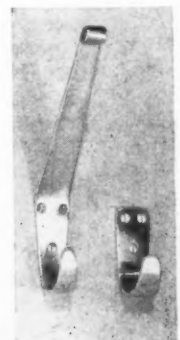
damage or misuse in particular cases.

25

From left to right, figure 21, hot air hand drier (Quiz Electrics). Figure 23, sanitary towel dispenser as used in Royal Festival Hall lavatories (Southalls). Figure 24, electric and gas incinerators for the disposal of sanitary towels (GEC and William Sugg). Figure 25, paper towel dispenser (penny-in-the-slot) and refuse bin (Hygiene Products). Figure 22, a pilfer-proof toilet roll which is so weighted that it is difficult to tear off more than one piece of paper at a time. Below, a chrome coat hook, combined with a door buffer (J. D. Beardmore) and a brass or malleable iron hat and coat hook (Dryad Metal Works).



22



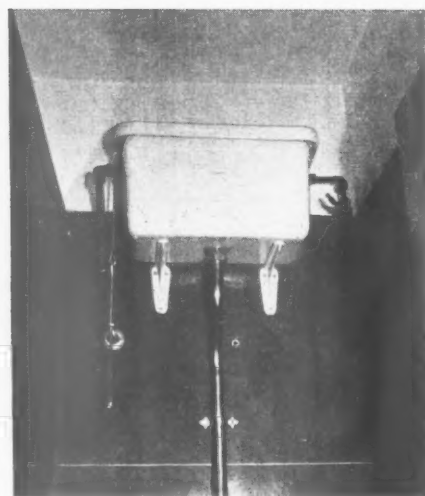


Of recent buildings the Royal Festival Hall can be said to be one of the best equipped as regards public lavatories. The above view of the women's powder room shows stools, shelf and mirrors. It would have been an improvement if one of the mirrors was full length. Most of the flushing cisterns in the w.c.s are concealed, and the cistern is operated by a lever handle, as shown below right. Where the cistern is exposed, however, as above right, the flush is actuated by a linked metal rod restrained by a metal ring and bracket. Walls and floors are of a dark terrazzo, which discourages scribbling and is easy to clean. A light metal rack is attached to the back of the door of the women's w.c., to hold handbags, etc. In matters of detail, such as lettering, below, the same high standard of design is maintained. There would appear to be only one small mistake: behind the wash basins is a painted metal panel covering the plumbing duct. To this panel is fixed the liquid soap containers. The soap has spilled on to the metal and damaged the paintwork, so that there are unsightly specks behind each basin.

ladies

gentlemen

Below, a coin-operated lock of a type used in the South Bank Exhibition lavatories (William Newman & Sons).



PART

Thom
section

TO

such a
can gi
impuls

Altho
industr
desiral
barras
ping a
diate
it app
dense
and c

Man
to inv
and r
funct
purel
indee
aesth

town

In t
thing
occu
cost
torie
stree
Lon
stati
such
take
min
offe
hav
wel
bei
atte
pro

If
the
bui
the
ha
lib
de
the
sig

I
tw
bo
of
tic
op
re
T
ev
an
ti
m
t

PART IV

Thomas R. Bilbow contributes the following section on layout, construction and finishes

TO the superficially-minded, the design of public lavatories may not seem a very inspiring subject, yet such an essential service, well and imaginatively performed, can give satisfaction to the architect's aesthetic and social impulses.

Although accommodation of this nature is an essential in industrial and other built-up areas, it is never considered a desirable neighbour. In a domestic district it causes embarrassment to the finer feelings, and in business or shopping areas it is accused of lowering the tone of the immediate neighbourhood. Even in our parks and open spaces it appears to be necessary to screen the structures with a dense growth of bushes and to approach them by a lengthy and circuitous route.

Many well-meaning and skilful designers have attempted to invest the exteriors of public lavatories with a charm and refinement of detail which, while expressing the true function of the building, yet leads the mind away from the purely utilitarian nature of its purpose, but it is rarely indeed that the result can truly be said to improve the aesthetics of the neighbourhood.

town planning aspects

In the central areas of cities underground sites have something to commend them and, as no valuable building site is occupied, the money thus saved contributes to the extra cost of building beneath the surface. Underground lavatories are particularly useful when they can be linked with street subway crossings and several examples exist in London where the subways often give access to a railway station as well as facilities for crossing the busy roads. In such circumstances the direction signs to the lavatories take their place with other direction signs, sufficiently prominently to satisfy the seeker yet not so dominating as to offend the fastidious-minded. But underground lavatories have severe disadvantages. They can be hard to ventilate well without creating a nuisance and without the risk of being overlooked. The working conditions for the attendant are made more unpleasant and drainage problems may be complicated.

If, however, the lavatories cannot be below ground, then there is an advantage in embodying them in some larger building (though functionally independent of it) so that they do not unduly assert themselves. They can very happily be incorporated in buildings such as public libraries, large stores, cinemas and railway stations without detriment to their hosts or loss of any essential publicity, for their entrances can be strategically placed and adequately signed without disproportionate emphasis.

It is very desirable that co-ordination be established between those who provide public lavatories, be they public bodies or private building owners. From the present state of things it seems very difficult to achieve this co-ordination, both as to the distribution of public lavatories and their opening and closing times. It might be said that this is really not the worry of the architect, which is quite true. This article therefore deals with it by only a mention. However, it is indeed an important matter to the community and one which might be brought more closely to the attention of those in whose duty and competence it lies. And maybe the public architect, at any rate, might be able to take a hand in bringing pressure to bear.

The cost of public lavatories has, of course, to be met

by the public purse and what is desirable has to be considered in relation to the financial aspect.

Certain facilities are essential to health and public decency, but over and above the elementary needs there are amenities which should be provided and for which it is not unreasonable to require the actual user to pay.

supervision

Unless a full-time attendant is in charge, premises will become unpleasant between the periods of cleansing. Continuous supervision is necessary to maintain proper standards of cleanliness.

The advantages obtained by constant supervision are of such moment that there is a strong case for centralized installations which are large enough to justify the cost of a full-time attendant. It may be argued that it is more convenient to the public to provide a number of small places, but unsupervised lavatories are a frequent source of complaint and misuse. They can rarely be kept in a constant state of cleanliness, and facilities for hand washing become impracticable. In many districts a certain number, if not all, of the w.c. cubicles are available without charge, but these facilities will remain hygienic only under constant supervision.

The larger installation should be relatively cheaper in cost, the wages of the attendant offset by the nominal charge made for use of the w.c.s and by the sale of toilet articles, whilst the user gains in a higher standard of sanitation and amenity.

collecting pennies

There are varying methods by which the pennies can be collected, the most common being the automatic slot lock fitted to the door of each w.c. cubicle. This calls for door springs to close and lock the doors and these must be of the check type, carefully adjusted to avoid undue noise slamming doors (which can become a serious nuisance to neighbours)—a severe strain on the locks and partitions.

An alternative is for the doors (self-closing and locking) to be opened with a key by the attendant, who gives a numbered ticket for the fee received. This has the advantage that the attendant has to visit the cubicle each time it is used and, if conscientious, will wipe the seat and see that all is clean and in order.

A third method is to provide a coin-operated turnstile giving access to an enclosure containing the w.c. cubicles. This, though simple in operation, tends to isolate the attendant and provides no incentive for him to visit the cubicles except at periodical times for cleaning. There is, however, scope in this method for further development by including washing facilities in the charge for use of the w.c.s, with perhaps a further charge for a towel delivered from a slot machine or for use of a hot air drier. It also prevents petty pilfering, as the attendant can have no opportunity to handle money.

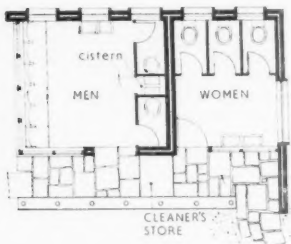
mis-use

Reference has already been made to those people who haunt public lavatories in order to indulge in immoral behaviour. It is the architect's task, in designing a public lavatory, to discourage these pursuits. The undivided urinal stall increases the risk of boys being interfered with by pederasts and renders the detection of such behaviour difficult to prove. To discourage communication between users, it is also wise to put an obscure screen to a height of about six feet from floor level above urinals which are placed back to back. In unattended lavatories it is preferable to ensure that it is not possible for the occupant of one w.c., by climbing, to overlook his neighbour's, and whilst the partitions are best kept clear of the floor the gap should not exceed 1½ inches, in order to prevent any form of contact between users.

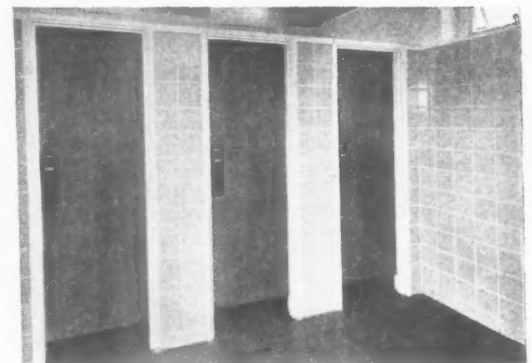
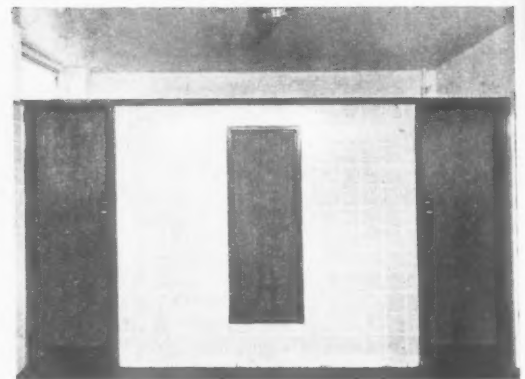
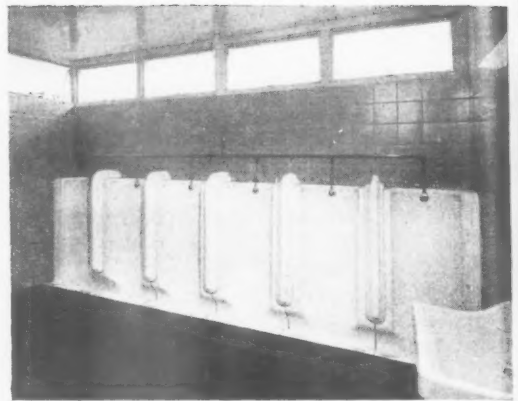


A lavatory for men and women at Sandwich, Kent, designed by L. R. Barlow. Top right, the range of urinals in the men's lavatory. Note the step, on which users must stand. This step is advocated by some as a means of reducing the dripping of urine on to the floor by compelling the user to stand close to the stall. It also prevents dirt on the floor from being swept into the urinal waste and thus causing a blockage. It is frequently used on ground floor lavatories because it allows more space for the waste trap, but it is also condemned as a cause of falls and stumbles. The whole problem is avoided by using urinal bowls. Right, the men's w.c.s, showing protective spikes along the top of the partition, and the door to the cistern duct.

Bottom right, the women's w.c.s. The fine tile walls and floor would have been improved by coving.



Floor plan [Scale: $\frac{1}{8}$ " = 1' 0"]



The presence of an attendant does not prevent abuse, although it may considerably reduce it. In the unattended lavatory, with only daily visits for cleansing, special measures are necessary to avoid abuse and annoyance. All floor and wall surfaces must be robust, all fittings must be securely fastened so that they cannot be unscrewed and removed, toilet roll holders must be of a type which will not allow the roll of paper to be abstracted. And it is not unknown for lead flushing pipes to be cut out and removed.

Wall drawings as executed in public conveniences usually lack in artistic or literary merit more than they gain in spirited expression. It is therefore wise to provide a wall surface which discourages their production, or at least allows for their easy erasure without trace. The door is more difficult to protect and lends itself to permanent disfigurement by pocket knife. An enamelled iron surface on the inner face of the door provides a satisfactory solution.

planning

To avoid offending the public sense of propriety the actual functional area should be well shielded from external view by a vestibule or lobby at the entrance. This applies particularly to urinals where the adjustment of dress is not carried out in the privacy of a cubicle.

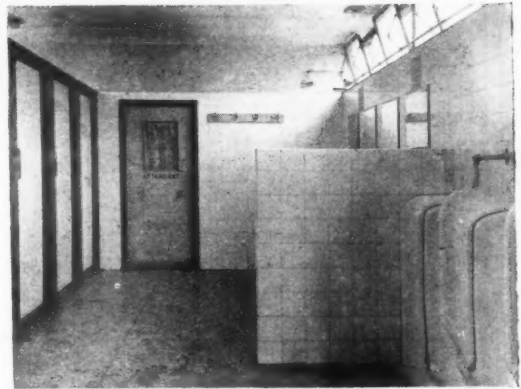
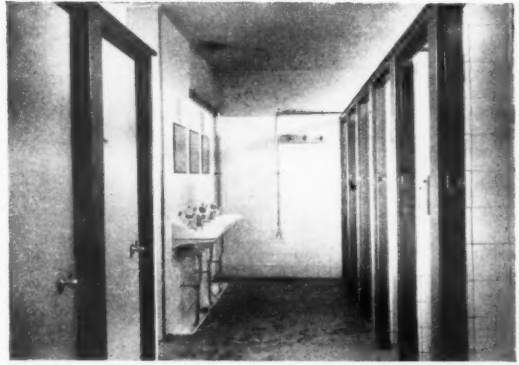
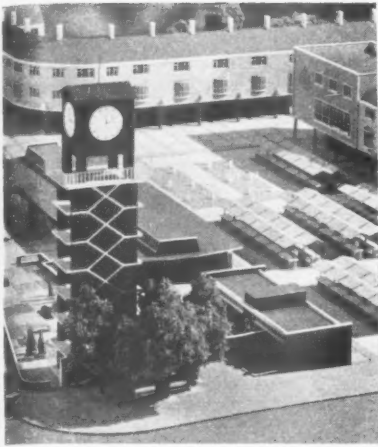
It is not necessary, or in some cases desirable, that the lobby should have doors at both ends. In many instances sufficient screen is obtained without a door at the outer entrance. The door into the convenience should have a small glass panel to avoid accident.

The premises must, of course, be dry, well ventilated and lighted. If they are above ground no special remarks are called for and no unusual problems arise, unless the lavatories are embodied in another building, when it is desirable to take special measures to prevent the transference of noise arising from the sanitary fittings or from door slamming.

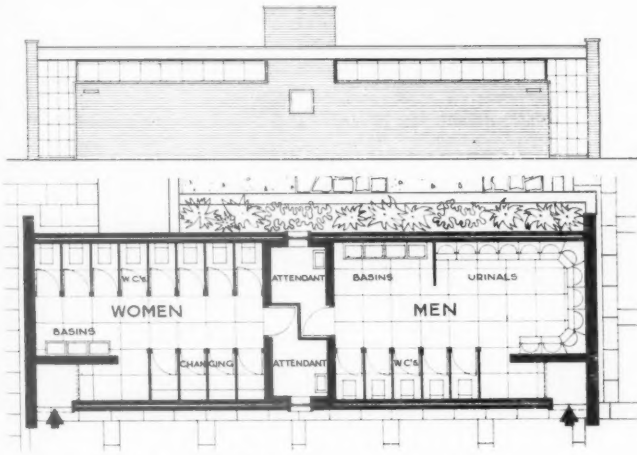
The ext
at Lans
illustrate
be seen
foreground
lavatories
to norm
surround
rear wa
stood ve

Entr

Bel
grou
are
be t
the
wat
of c
To
per
and
is p
a r
pro
oft
can
an
If
wi
be



The exterior of this attractive public lavatory for men and women at Lansbury, designed by Frederick Gibberd, is most inadequately illustrated below right. Its relationship with the market place can be seen in the photograph of a model above. The lavatory is in the foreground. Above, extreme right, the women's and right, the men's lavatories. Top centre, a detail of the entrance showing, in addition to normal rain stains, a dark smear on the inside corner of the wall surround, which contrasts oddly with the white tiling of the rear wall. In under two years this lavatory has successfully withstood very heavy use.



Entrance elevation, top, and floor plan [Scale: $\frac{1}{8}$ " = 1' 0"]



Below ground the nature of the sub-soil and levels of ground water will dictate what damp proofing precautions are necessary, and if water is present special care must be taken where drains leave the tanked area. The roof of the basement must be carefully waterproofed and the waterproofing protected from accidental damage by a layer of concrete over.

To attempt to provide natural light and ventilation by perforated pavement lights is inviting trouble from dirt and water leakage. Unless some form of clerestory light is practicable (as, for example, under the central island of a roundabout), artificial light and ventilation should be provided. The provision of intake and exhaust openings often presents difficulty, but, failing other means, they can usually be embodied in the construction of the entrance and exit stairways.

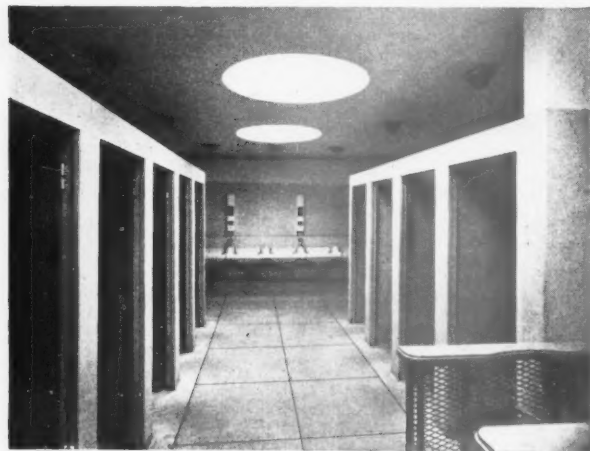
If there is any condensation it will be the ceiling which will give most trouble. It is advisable to avoid beams below the ceiling line and aim at a uniform level so that

there are no projections from which dripping will take place. A false ceiling may prove the simplest method to provide insulation and a flat ceiling. As sanitary needs call for a hard and smooth surface it may be necessary to tolerate some condensation on the walls in humid weather.

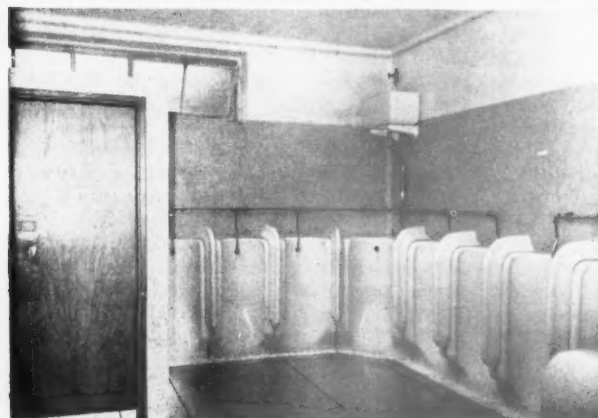
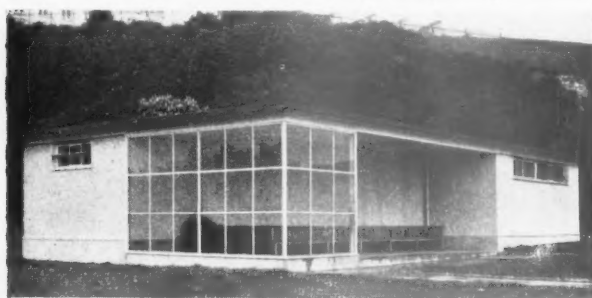
Floor surfaces must be non-absorbent and smooth, not only easily cleanable, but by their bright appearance reward the labour involved.

The best floor finish is probably one of non-absorbent clay floor tiles. If terrazzo is used it should be either in the form of tiles or laid in small squares. Granolithic, although much cheaper, never looks attractive, does not provide satisfaction for the labour expended in cleaning it, and, in consequence, tends to be neglected. Care should be taken that the floor is not slippery if wet, or accidents may happen.

Walls should be tiled for a height of at least 4 ft. 6 in., but preferably for the full height of the wall to avoid



Above and top, interior and exterior of a women's lavatory in Canterbury, designed by the City Architect's Department. Note the top lighting, and the use of a turnstile to collect pennies, instead of having slot machines on the doors, which have been hung on falling butts to stay open. Below, a public lavatory for men and women, designed by the City Architect's Department, on Plymouth Hoe. Its "status" has been raised by incorporating a shelter.



the ledge caused by the top edge of the tiling if it stops short of the ceiling. A glazed brick dado would not present this difficulty, but glazed bricks are expensive and not so easily replaced if damaged. Soft glazes, fired at a much lower temperature than the harder types, should be avoided in lavatories owing to their tendency to craze. In designing the finish of the walls, apart from housing mirror and shelf, provision should be made for warning notices and by-laws to avoid the untidy appearance of fly-posting. High-gloss tiles will be found to be more easily cleaned than eggshell glaze. All internal angles, and preferably external angles also, should be rounded, particularly at the junction between walls and floor.

Floors should be laid to falls to drain into trapped channels or gullies to facilitate washing down. The practice of draining into urinal channels has the objection that if rubbish is swept in it may cause a stoppage and put them out of action until attended to.

A suitable size for w.c. cubicles is 2 ft. 9 in. wide by 4 ft. 9 in. in length (internal dimensions). The door need not be wider than 2 ft. and if placed to one side leaves room for a small shelf which, while accommodating small parcels, can also act as a stop to the door and avoid damage to the wall or partition. There is a temptation to fix the toilet roll holder on the door as it is more easily fixed thereto than to the partition, but the latter is a more convenient position in practice. Hat and coat hooks can be fixed to the door provided they will not damage the walls when doors are opened. Excellent partitions for cubicles are made precast, tiled both sides, and can be as little as 1½ in. in thickness, being therefore economical in space occupation. The door jambs can be precast in a similar manner, with a terrazzo finish. If this is done it is advisable to have the door hinges cast in.

Low-down closet suites are too costly to be provided normally in a public convenience, therefore the position and cill height of windows in the cubicles should be considered in relation to the flushing tanks to avoid the need for placing them on a side wall with the consequent untidy flush pipe. The risk of "overlooking" in designing windows should be taken into account as circumstances might prevent such windows being opened.

There is considerable advantage in planning an accessible duct behind a row of w.c. cubicles in which all services can be housed, including the flushing tanks and flush pipes. The flushing cisterns can be operated from the cubicle by a simple lever and, in addition to the tidy appearance of the cubicle, access to the flushing cisterns for maintenance is much simplified.

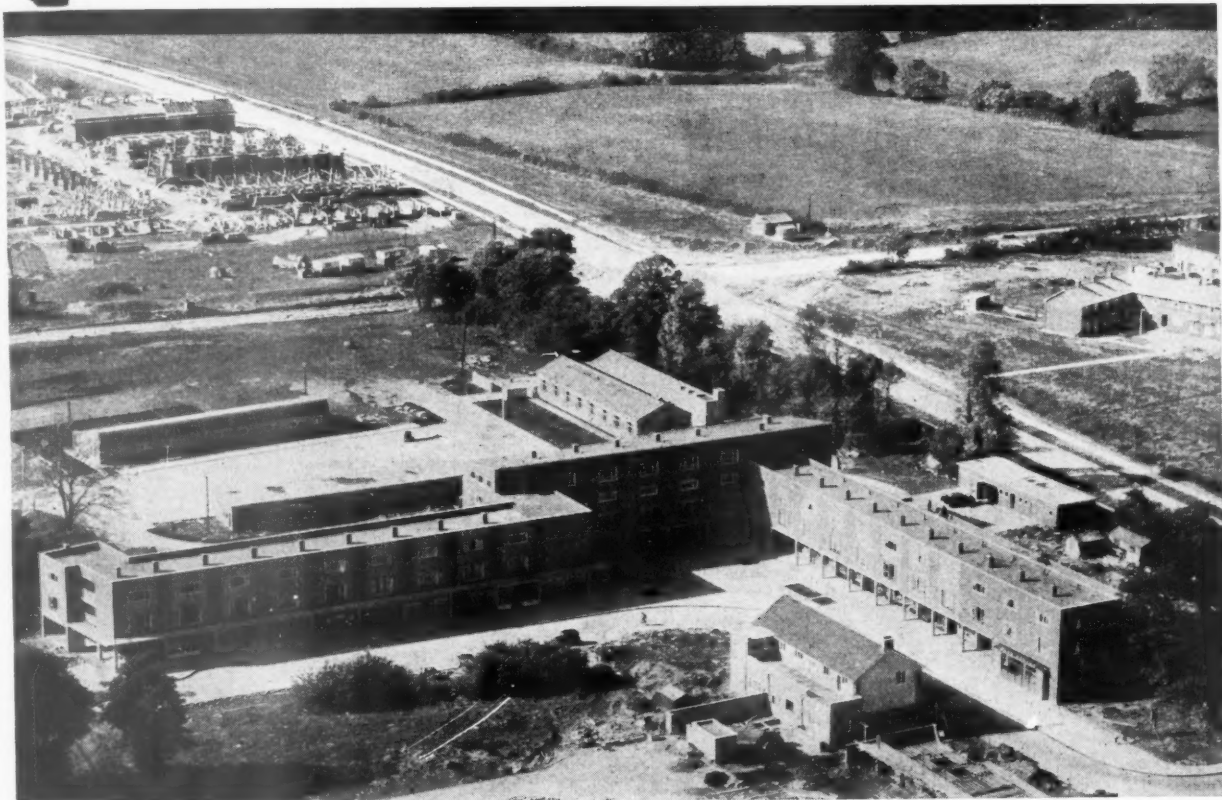
It is well worth while going to considerable trouble to select the best type of w.c. pan, for some are better designed than others to be self-cleansing. Although the more slender built may not feel that desirable sense of natural repose, it is wise to err on the large size for these fittings, as they will be less liable to soiling than smaller patterns. The seats should be of the horseshoe type, especially in women's lavatories.

There is, of course, a clear distinction between a hand rinse and a complete wash of hands and face. Whilst the former should be provided free of cost on grounds of public health it is fair and reasonable that the latter facility should not be a charge on public funds, but be paid for by the user so that a higher standard of amenities becomes available.

Where a free hand rinse is to be provided, the most suitable and sanitary fitting appears to be the type where washing is done under a fine spray of water controlled by a foot-operated plunger, the basin serving merely to collect and drain away the waste water. Small, single fittings are available, but where the size of the convenience necessitates a number of washing points, then the factory-type of washing-trough, acting on the same principle, is admirably suitable.

IBSTOCK

DUSTED PURPLES AND BUFF-MULTIS



AT *Harlow New Town* ESSEX



The Stow Shopping Centre Harlow Development Corporation.

Architect Planner: Fredk. Gibberd, F.R.I.B.A., M.T.P.I.

Executive Architect: Victor Hammett, A.R.I.B.A., A.M.T.P.I.

Bricks supplied through: Finnis, Ruault & Nicholls Ltd., London.

Contractors: Geo. Wimpey & Co. Ltd. (Essex Skipper: P. H. W. H. Gaze & Sons, Ltd.)

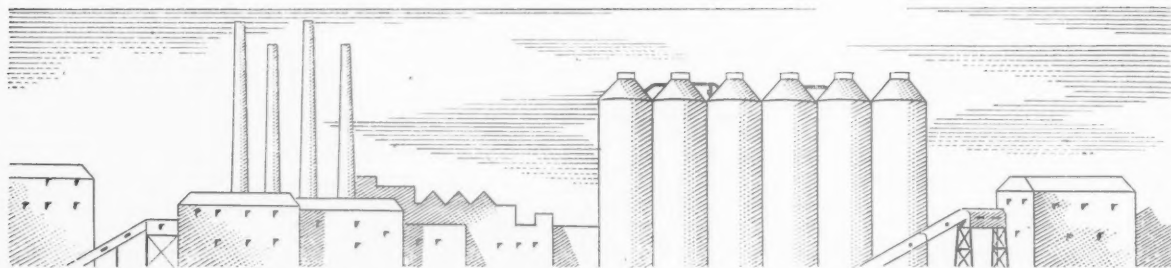
Ibstock facing bricks provide the colour and texture in a number of the residential areas at Harlow New Town. The shops and flats at Stow Centre, illustrated here, are built in Ibstock Dusted Purples, with panels of Buff-Multi rustics. The "Essex Skipper" public house, also at Stow, is faced with Ibstock Buff-Multis.

Owing to present heavy demand, supplies of facing bricks of most types are booked for a long time ahead and reservations for 1954 are now being made.

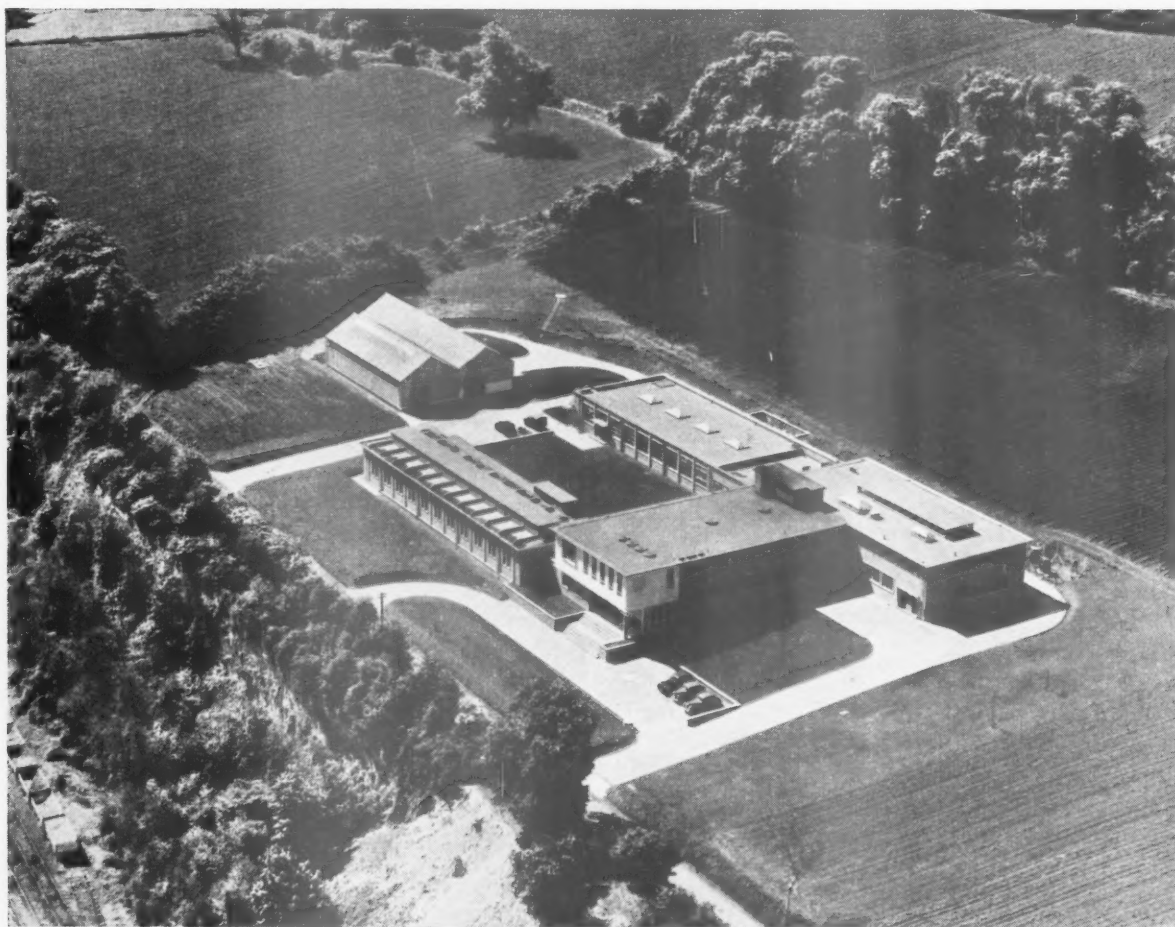
IBSTOCK BRICK & TILE CO. LTD., near LEICESTER

Phone: Ibstock 391 (2 lines)

LONDON: L.M.R. GOODS DEPOT, WRIGHT'S LANE, KENSINGTON, W.8 *Phone: Western 1281 (2 lines)*



Building for the Industries of the World



CEMENT

The new Research Laboratories of the Associated Portland Cement Manufacturers Ltd., recently constructed by Richard Costain Ltd. to the design of the Architects, Westwood, Sons & Harrison, FF.R.I.B.A.

RICHARD

COSTAIN
LIMITED

BUILDING & CIVIL ENGINEERING CONTRACTORS

DOLPHIN SQUARE, LONDON, S.W.1

VICTORIA 6624



urinals

In public conveniences the open and undivided stall is most unsuitable, although it is commonly found in the worst possible conditions—namely unsupervised lavatories. There are types of urinals built up of channels and flat back sections where the divisions are cantilevered slabs clear of the floor; these are relatively cheap and satisfactory from the nuisance aspect, but the round back urinal is preferable from a sanitary point of view, as the joints are less vulnerable. With the type of urinal where the channel is integral with the back and consequently capable of only limited adjustment, care must be taken that there are no interruptions in the general fall of the completed unit, which will retain any liquid.

There is a trend to re-introduce, on sanitary grounds, the foot splash baffle used by a past generation to protect polished boots. This is now being provided in porcelain as part of the urinal fitting, but it adds to the cost and some time will probably elapse before it becomes universal practice.

Generally speaking, all plumbing should be designed on paper to ensure efficiency and an attractive appearance.

incinerators

In all conveniences for women an incinerator should be provided, either gas or electric operated. In a surface structure fumes can be disposed of by a simple flue, but in underground premises the exhaust duct may prove more difficult to dispose of, as it is undesirable to link it with the normal ventilation system.

attendants' accommodation

Current standards of staff amenity call for something better than the old-fashioned "cubby-hole" under the stairs, when more often than not the storage of cleaning equipment was combined with the cooking and eating facilities for the despised janitor.

Modern requirements call for the best possible atmosphere for the attendant and an individually ventilated apartment is the solution. Glazed partitions and strategic planning should enable the attendant to see and be seen. Store cupboards should be included—but not for cleaning utensils which should be housed elsewhere in a cupboard. A cooking recess adequately screened and ventilated should also be provided, and a substantial lock-up for cash included in a concealed position. Where male and female accommodation is adjacent a form of inter-communication should be provided between attendants in case of emergency, a system of bells is usually adequate, but the old-fashioned speaking-tube can be effectively employed. Local heating apparatus is desirable, and may quite suitably be combined with the relatively small apparatus which supplies hot water for the wash-basins, together with a draw-off for cleaning purposes.

The enclosure should provide reasonable working comfort, but not of such an order that the attendant leaves it with reluctance and considers it a retreat from a more active life.

ventilation

The ventilation of public lavatories is of high importance. Adequate air change is of paramount importance, as the presence of any degree of odour conveys the impression of inadequate hygiene. For above-ground conveniences the availability of good cross ventilation by natural means is the obvious solution. A generous height is essential to give circulation above partitions. The inevitable consequence of frost risks to pipes must be borne in mind in these circumstances, especially as a fair proportion of the apparatus must be permanently open.

For underground conveniences this problem is more complicated and modern standards invariably call for mechanical plant with duplicated fans in case of breakdown. A system of extraction from the end of the struc-



Above and left, the unassuming exterior and interior of a new public lavatory designed for the Corporation of the City of London. It stands in Upper Thames Street, opposite Puddle Dock, and replaces an earlier iron one. The appearance of the interior is marred by the clumsy detailing above the tiles. Below, a post-war public lavatory for men, built underground in the approach to Waterloo Bridge, by the City Engineers' Department of Westminster. Free hand-rinsing facilities have been placed opposite the W.C.s.





**I tell you — by switching to
Finlock Gutters you'll save
£15 a house** (*says Mr. Fin*)

—and 3 days' construction time (*says Mr. Lock*)

EVERY time FINLOCK pre-cast concrete gutters are used a FINLOCK expert is ready to give advice and assistance. He'll take off his coat if need be, and give practical help as well!

He is a highly qualified technician and an essential member of the FINLOCK team which ensures that we don't just "supply gutters" but see that everybody is really satisfied—right through the job.

That is why the FINLOCK service is so admired by every customer we have—and that number is growing every day as this modern system is adopted by more and more architects and builders.

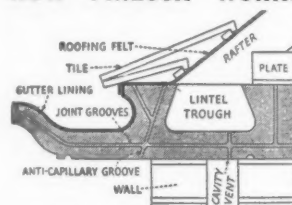
FINLOCK GUTTERS LIMITED

20 ST. JOHN'S ROAD, TUNBRIDGE WELLS, KENT (Head Office)

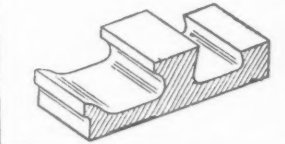
Telephone : Tunbridge Wells 20396/7/8

7 WORKS FOR SPEEDY DELIVERIES TO ANY PART OF GT. BRITAIN. IN DEVONSHIRE, LEEDS, YORKSHIRE; EDINBURGH, SCOTLAND; CWMBRAN, S. WALES; ROYSTON, HERTS; TUNBRIDGE WELLS, KENT; BELFAST, NORTHERN IRELAND

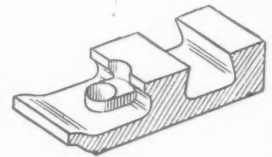
HOW FINLOCK WORKS



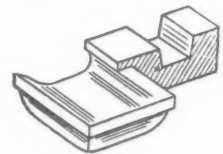
This sectional drawing shows the system in detail and illustrates the ways in which FINLOCK saves approx. 5 yards of brickwork, 80ft. of rafter, 40ft. of normal guttering, 40ft. of fascia, 40ft. of soffit and 80ft. super of roof tiling per single house. Painting is eliminated and a reduction in down pipes and drainage is obtained. The complete eaves for a building, with all fittings, can be fixed in one day. Some typical FINLOCK units are shown on the right:—



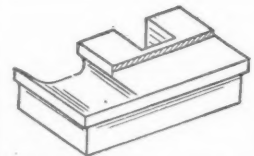
Finlock "N" Type Gutter block enabling lintels to be cast *in situ* if required.



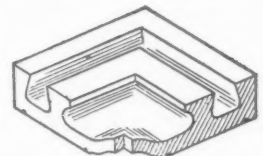
Finlock "G" Type Gutter block enabling lintels to be cast *in situ* if required, but illustrating soil vent.



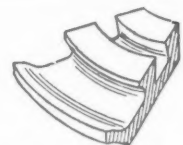
A typical standard stopped end for use on gable end walls, available for all type Gutters.



Illustrating a flush stopped end where this is also made with moulded return, available for all type Gutters.



Illustrates the typical internal angle for use with all Gutters. External angles also available.



Illustrating a special Gutter for quick curves. We manufacture fittings for special purposes to order.

*Fully descriptive
booklet gladly
supplied on request
from Head Office*

(A.J. Information Sheet No. 33010)

DH

ture remote from the entrances is the simplest solution, but the discharge of the consequent volume of concentrated foul air is often a problem. The alternative system of a pressurized input of fresh air is simpler, but may necessitate the inclusion of deodorizing equipment as a supplement. The system of ozoning by electrical apparatus has been developed to very successful proportions. Under this system the release of foul air is distributed through a series of smaller points of discharge where least offensive.

lighting

An adequate general intensity of artificial illumination is essential and the installation and choice of fittings should be particularly specified to cope with the condensation risk. Individual lighting of cubicles is desirable and automatic door switches provide for economic control. The general switches should obviously be under the direct control of the attendant when provided—but elsewhere a master time-switch is worth while incorporating. In unsupervised locations the actual lighting fittings should be of the locked bulkhead pattern where within reach.

There should be no dark or shadowy corners, and if any steps have been found unavoidable they should be lighted from the front so that no shadows are cast on the treads.

heating

It is unlikely that space heating is required for purely public conveniences, even as a safeguard against frost which must be dealt with by the adequate lagging of pipes. But the provision of hot water for fee-paying ablutions is best met by a form of storage heater, either gas or electric. This apparatus is best situated in the attendant's cubicle. Fumes from gas apparatus can reasonably be discharged into the normal vent ducts.

PART V

F. L. Barrow concludes by giving some brief notes on the plumbing and drainage of public lavatories

In a few words on the plumbing side of our subject, we are attempting to put across in a simple manner what the reader may wish to have in this issue regarding waste and soil traps, waste, soil and vent branches, trap ventilation, typical layouts, types of connection, water supply arrangements, etc.

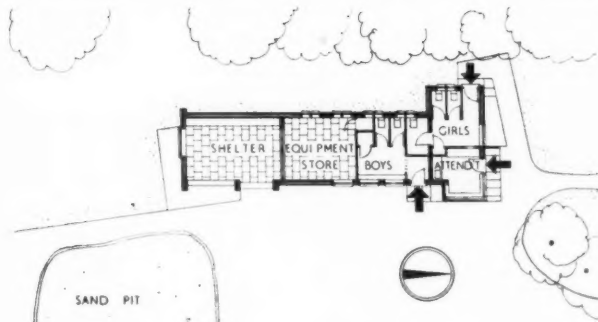
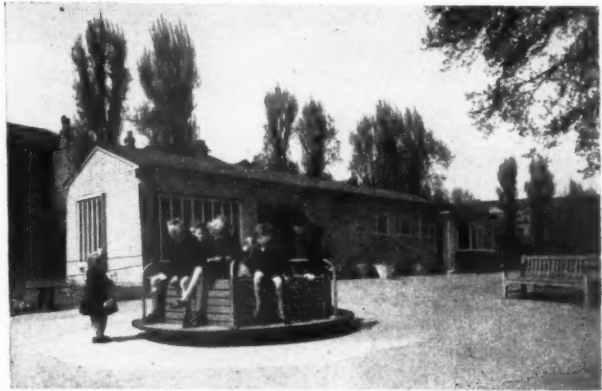
Water closet, urinal and lavatory basin ranges are each made the subject of a short paragraph. For all details and dimensions see AJ Information Sheets.*

British Standards are available for most of the pipes and fittings mentioned.

Pipework should be prepared off site as much as possible where the number of repetitions makes it economical to do so. Site joints should be simple.

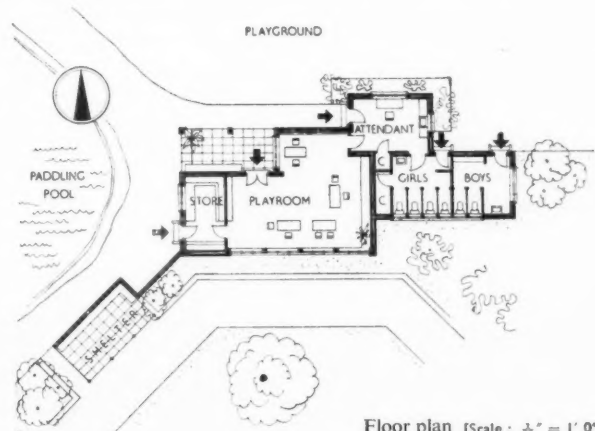
(Continued on page 627)

* The following is a list of AJ Information Sheets available. The first number indicates the class; the second is the sequence number.
 32.C1:86, 32.C2:90, New World Gas-heated Circulator. Details. 32.C3:157, "Main" gas water heater. 32.C10:308, Domestic instantaneous gas water heaters; typical installations. 32.C11:314, Domestic gas circulators and storage water heaters; typical installations. 32.C20:353, 32.C21:51, 32.C22:61, "Ascot" instantaneous gas water heaters. 32.C24:356, 32.C26:74, "Ascot" instantaneous gas water heaters. 32.C27:109, 32.C28:169, "Ascot" gas water heater; installation data. 32.C29:275, "Ascot" gas water heaters; commercial laundrettes, communal laundries and single family dwellings. 32.C30:283, "Ascot" instantaneous gas water heater operated by liquefied petroleum (bottled) gas. 32.C31:379, 32.C32:381, "Ascot" balanced flue gas water heater. 32.D1:290, 32.D8:345, 32.D9:151, 32.D10:126, "Sadia" automatic electric heaters. 33.B1:328, 33.B2:359, 33.B3:397, Plumbing: Copper. 33.C1:48, 33.C2:64, 33.C3:88, 33.C4:113, 33.C5:124, 33.C6:133, 33.C7:170, 33.C8:219, 33.C9:225, 33.C10:54, 33.C11:234, 33.C12:293, Plumbing: Lead. 33.K1:278, Gas-fired incinerators. 33.P1:—, Manhole covers (to be published soon). 33.Q1:407, Elsan chemical closets. 33.Q2:209, Flushing cisterns. 33.Q3:202, 33.Q4:323, Flushing troughs. 43.B2:341, Cisterns and cylinders. 43.Z2:205, 43.Z3:331, Lavatory cubicles. 43.Z4:393, Swimming pools (reference to wall and floor tiling for lavatories, etc.).



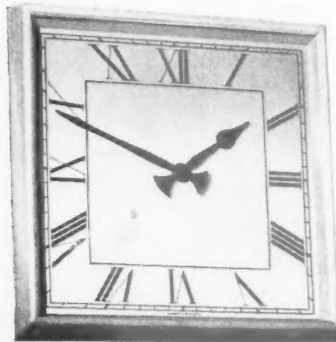
Floor plan [Scale: $\frac{1}{4}$ " = 1' 0"]

London would appear to be the only city in Great Britain whose park lavatories and shelters merit the title of modern architecture. Above, store, shelter and lavatories for a children's playground in Hurlingham Park. Below, similar accommodation at Normand Park. The designs are by the LCC's Parks Department, under Chief Officer L. A. Huddart.



Floor plan [Scale: $\frac{1}{4}$ " = 1' 0"]

Gibson CLOCKS STAND THE TEST OF TIME



No. 516

Designed for INDUSTRY AND COMMERCE, Gibson Clocks are correct in factories, workshops, mills, offices or schools—in fact wherever time indication is required.

A Master Clock impulse system operating any number of Slave Clocks, and independent of the mains, ensures perfect reliability.

For those with a single office or showroom a battery-wound clock will give perfect service—and no winding, wiring or maintenance is necessary, except to change the 4.5 volt torch battery about every twelve months.

Clocks for special purposes made up to client's specification.

Master Clocks • Slave Clocks • Battery Wound Clocks
Synchronous Clocks • Time Recorders • Job Costers

Illustrated Brochure available on request

Baume & Co. Ltd

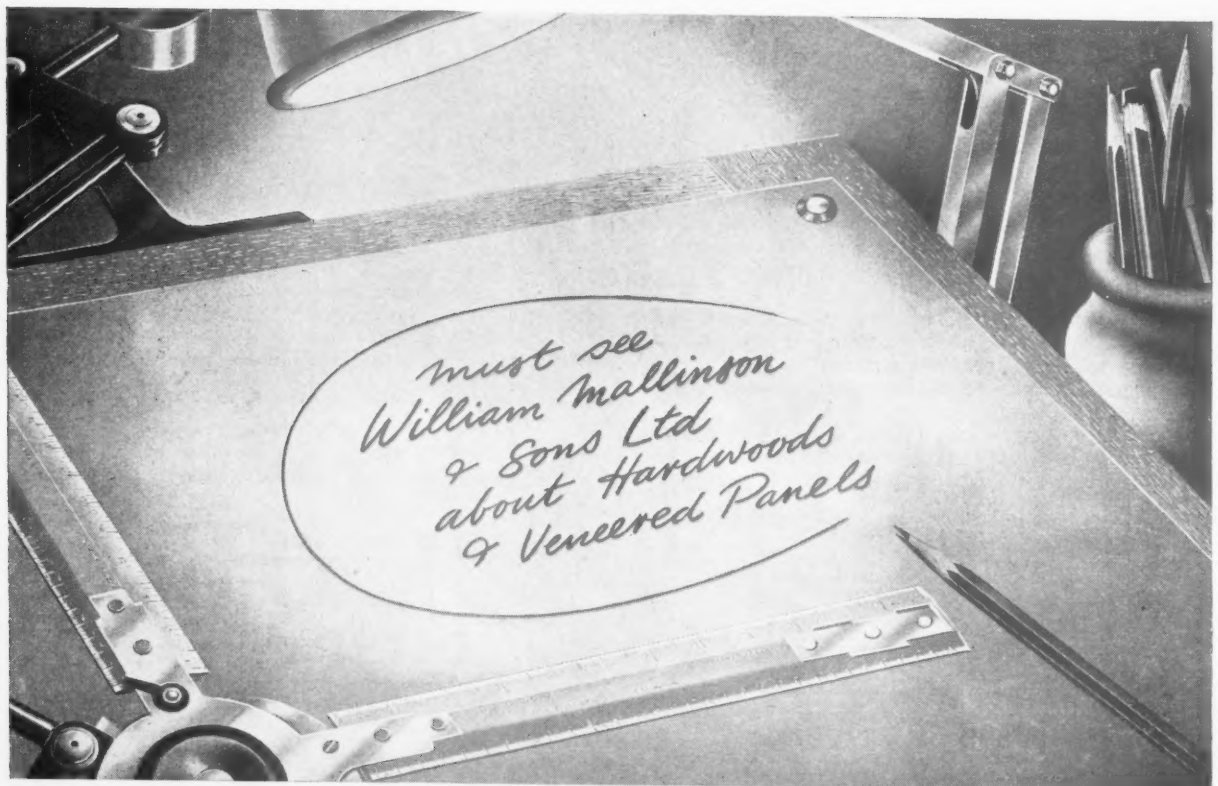
1, Hatton Garden, London, E.C.1. & La Chaux-de-Fonds.
Established 1834

BAUME
WATCHES

Longines
WATCHES

HEUER
TIMERS

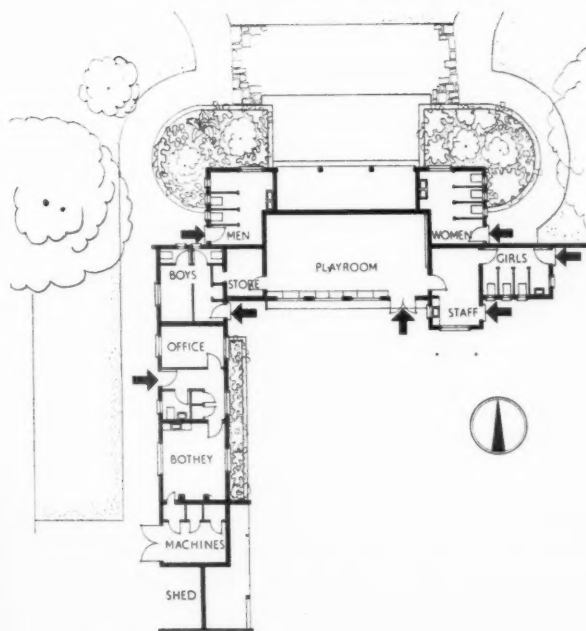
Gibson
CLOCKS



WILLIAM MALLINSON & SONS LTD. 130-150 HACKNEY RD. LONDON E.2. Tel: SH0reditch 7654 (10 lines)

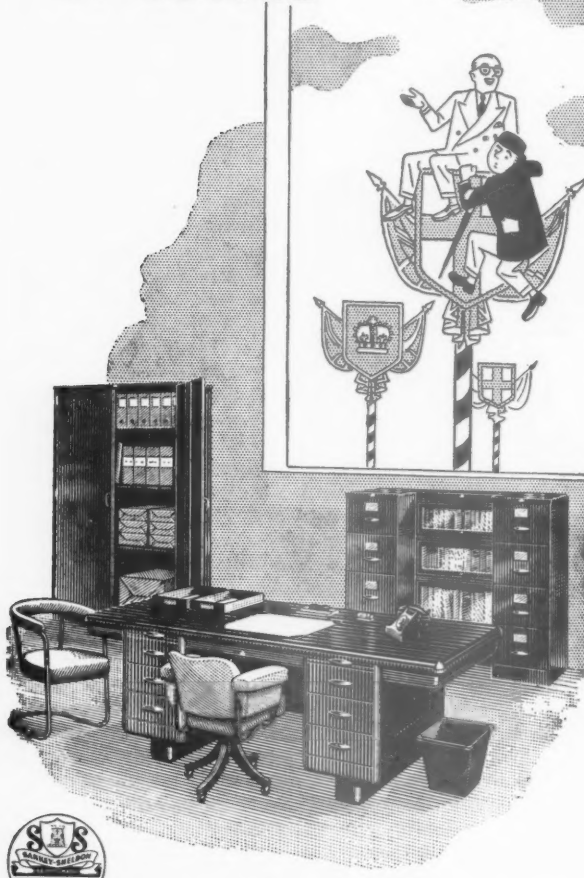


Another design by the LCC Parks Department, under Chief Officer L. A. Huddart. It is at Sayes Coast, Greenwich, and consists of stores, playroom and lavatories for both sexes, adult or child. Top, from the south-east. Below, from the north-west. Above right, part of the playroom. Above left, a w.c. compartment in the men's lavatory, showing the wire barrier above partitions, an open-fronted seat, and a somewhat unsatisfactory detail treatment of cistern, down-pipe and window.

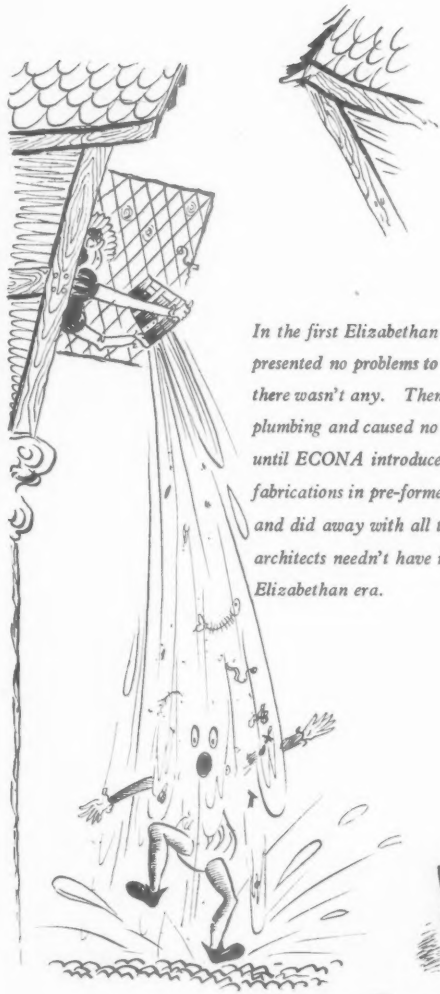


Floor and layout plan [Scale: $\frac{1}{4}$ " = 1' 0"]

"BEFORE THE PROCESSION
COMES ALONG —
TAKE A LOOK AT
OUR NEW OFFICES.
ALL THE
FURNITURE
IS **STEEL-BY**
Sankey-Sheldon
OF COURSE"



SANKEY-SHELDON LIMITED, 46, Cannon Street, London, E.C.4



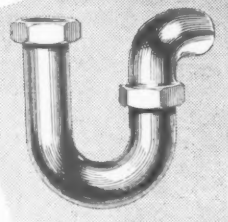
In the first Elizabethan era, plumbing presented no problems to the architect—there wasn't any. Then somebody invented plumbing and caused no end of trouble, until ECONA introduced their famous fabrications in pre-formed copper tube and did away with all the bother architects needn't have in the second Elizabethan era.

... and *First Things First* in the embryo stage of your plans...

Econa

can help
you .

pioneers in pre-formed copper tube plumbing



ECONA MODERN PRODUCTS LIMITED
AQUA WORKS, WARWICK ROAD, TYSELEY, BIRMINGHAM 11
TELEPHONE AND TELEGRAMS: ACOCKS GREEN 2211-2

ranges of water closets

W.C. pans have to be connected to the sockets of their branch pipes by means of the conventional "wet" joint, using yarn and cement. Flush pipes can be connected to pans with a "dry" joint, using a special rubber sleeve.

P- and S-traps are used according to circumstances. The floor construction of a building may render S-traps impracticable. P-trap branches have to commence their run at 14" to the horizontal, this being the BS slope of the pan outgo.

Each W.C. trap is vented by vent branches taken to a vent stack. Vent branches slope upwards so that they will drain should flooding occur.

Rodding is facilitated by access caps on the pipework.

A 3-gallon flush for W.C. pans is preferable. Otherwise 2½ gall., with 2-gall. minimum. The decision as to which is used rests with the water undertaking.

The flush to low-level pans is sometimes improved by using a larger flush pipe than the usual 1½ in.

Water supply pipes to flushing cisterns, and also overflow pipes, look better if taken in at the bottom of the cistern. Overflow pipes must, by regulation, find their way to and through outer walls. Stop cocks are required at each W.C. cistern.

ranges of urinals

Urinal channels fall to the waste outlet. Maximum run of a fall is 7 ft.

Waste outlets are protected by a domed grating.

A trap is required immediately below the grating. The

waste then slopes to the soil stack. Trap venting is commonly required. All parts of soil stacks receiving urinal wastes should be flushed by other wastes, e.g., from W.C.s, to keep them "clean."

Waste systems for urinal basins are much the same as those for lavatory basins.

ranges of lavatory basins

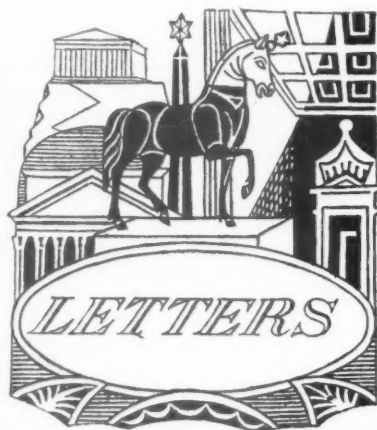
Waste tails (the lengths of vertical pipe between waste outlets and traps) should be as short as construction and pipe fitting will allow. This is in order to minimize the area of fouled internal surface of the waste pipe which is open to the room. Long waste tails are accepted, however, for economical construction in which untrapped wastes discharge to floor channels. Risk of offensive smell is not so great with untrapped vertical pipes as with untrapped horizontal ones.

When traps must be vented the vent branches from individual basins are collected in common vent branches which slope upwards to enter vent stacks at a point higher than the basins. This is to prevent the vent system acting as a waste system in the event of flooding due to blockage.

Waste branches fall to waste stacks and have access caps for clearance of stoppages.

To facilitate clearance of stoppages in traps these should either be removable (with spanner) or have a clearing eye.

Water supply for hot and cold taps is taken by short branches from horizontal distributing pipes. Stop cocks are required.



J. H. W. Turner, B.Sc. Civil
Engineering; B.Sc. Econ.

E. M. Hobbs, A.R.I.B.A.

"Lancastrian"

E. S. W. Atherton, A.R.I.B.A.

Eric M. Monk

Contracting Procedure

SIR,—In commenting on the survey of tendering methods, so excellently set out in your issue of April 23, you favour competition in reputations rather than in financial estimating, in the belief that a higher level of professional ability would thereby emerge and enhance the status of the general building contractor.

I welcome this attitude of mind, and congratulate you for giving public expression to it. The mature minds in the building industry no longer view the profit motive as their dominant driving force. There must certainly be profit if firms are to stay in business, but profit is now viewed as but one of several factors of production for providing worthy buildings for the nation.

The traditional methods of competitive tendering through priced bills of quantities have, by and large, served the country well, but their indefinite retention will henceforth hinder the further growth of a more enlightened view amongst building executives. Moreover, the scope for competition is today very restricted. Labour rates are fixed, the prices of many of the more important building materials are similarly fixed, and plant hire rates vary little. The standardization of all these rates has many advantages but it does mean that competitive tendering is narrowed to that element in a tender where, under severe competition, it can be most harmful—namely, methods and management.

The time is, therefore, most opportune for encouraging a change of attitude towards contracting procedure, and for experimenting in cost reimbursement methods with contractors selected for their high reputations. Procedure along these lines would reveal higher levels of ability and integrity than can always be maintained under the harsh economic strains of present methods.

Selection by reputation would also facilitate an earlier collaboration between designer and contractor and would thereby possibly eliminate the greatest of all hindrances to constructional efficiency—namely, extensive alterations in design after the letting of the contract. If this running sore could be cured by a new contract procedure, then a great advance would indeed be made in providing an essential basis for reliable forward planning, costing of operations, preparing incentive schemes, and for improved efficiency generally.

Selection by reputation combined with the cost reimbursement contract should, never-

theless, be applied with discrimination and should probably be restricted to the larger and more complex projects. To provide for the new entrant to industry, traditional competitive tendering should be retained for the simpler items of construction; otherwise there will be no means whereby a new firm can make a start to establish a good reputation.

J. H. W. TURNER.

London.

Sculpture or Architecture?

SIR,—ASTRAGAL refers to Reg Butler's "Political Prisoner" entry as an "abstract monument." I cannot help being puzzled by the fact that this work is usually referred to as "sculpture." Surely it is a piece of monumental architecture, and all the entries were models? In which case, why were architects not invited to take part in the competition? (or am I wrong about this?).

Perhaps it is significant that the winner has enjoyed an architect's training.

E. M. HOBBS.

London.

Pirate Architects

SIR,—Mr. Adkins, writing about pirate architects, says that assistants, doing private work in their own time, are tired in the office next day. Does he consider that night school, home studies, and all other part-time work necessary if one wants to get on in the architectural world, are any less tiring?

When I was looking for a position three years ago there was one word that haunted me—"experience." I'm getting experience now—the hard way, through hard work in my own time.

"LANCASTRIAN."

Pirate Architects

SIR.—Mr. Adkins has raised a very important point. "Pirating" by employees of local authorities has reached very large proportions since the end of the war, and in particular in suburban areas.

ARCUK and the RIBA should give this matter their attention, as neither the client who employs the "pirate" architect nor the authority who employs him get proper service for the fee and salary paid.

Not only is the majority of the work done by those assistants acting for private clients done on a cut fee basis, but the work and supervision of the private jobs is often done during normal office hours. This is to the detriment of the public.

E. S. W. ATHERTON.

Harrow.

Wanted: Protection for Architect and Client

SIR.—The irksome problems of the small private dwelling, professional services, fees, qualifications and overcrowding in the profession continue to receive much prominence in articles and correspondence in all the appropriate magazines and journals. If an attempt is made to review the situation impartially, what a fantastic state of affairs is revealed!

On the one hand we have the architect, bemoaning the dearth of commissions, condemning "unfair competition from unqualified persons," deploring the return to "jerry building" and expressing concern at overcrowding.

On the other side there is the layman, confused by a multitude of obscure "qualifications," looking for somebody to help him through all the complications and pitfalls of home-building, yet refusing the architect's service (mainly from a genuine

inability to meet the fees).

Between the two there thrive the "building consultants," estate agents, surveyors, local authority draughtsmen, builders, "plan services," and even the officially employed architects (dog eats dog!), all competing to meet the layman's demand for professional services at a price he can afford. It is small wonder, therefore, that the results are, in the main, mediocre, to say the least.

Surely, sufficient printer's ink has now been expended in bemoaning, bewailing, deploring, sneering, condemning, and criticizing from all sides. Now is the time for some positive and rapid action.

There has been one suggestion for a completely new body—an "Institute of domestic Design"—to provide a public service specifically for the client requiring a small dwelling. There have been suggestions for a simplification of procedure on the lines adopted by quantity surveyors in dealing with small domestic work. The idea of architect-designed "package plans" has been put forward. A scheme of architect's panels has been mooted. And, of course, there is the ever-present demand for compulsory architect's services (development charge No. 21).

The noise of battle must, by now, have reached even the highest levels of those two powerful bodies, the RIBA and the ARCUK. The prime function of these organizations is, surely, to protect and foster the interests of both architect and layman. It is indisputable that neither of these latter is faring particularly well at the moment. I would respectfully suggest, therefore, that some form of committee be convened with representation from all interested parties, to examine these pressing problems, the suggestions so far offered and any others submitted, in an endeavour to establish some satisfactory solution.

ERIC M. MONK

Crawley, Sussex.

Announcements

Blackburne, Norburn & Partners, F.F., L.R.I.B.A., have taken into partnership P. B. A. Browning, A.R.I.B.A. The name of the firm remains unchanged, and continues to practice at Kenwood House, Nairobi, Kenya.

The Architect's Department at Taunton has removed to Flook House, Station Road, Taunton (Tel: Taunton 4695).

Denis Burke-Collis, F.R.I.C.S., F.I.A.R.B., F.I.A.S., has taken into partnership Brian R. Hiscoe, A.R.I.C.S., A.I.A.R.B. The practice will be continued under the name of Burke-Collis & Partners at 25, Chester Street, W.I. and 9, West Parade, Lincoln.

J. D. Tetlow, B.A.R.C.H., A.R.I.B.A., A.M.I.P.L., former area planning officer, Staffordshire County Council, has joined Mrs. B. Y. Tetlow, DIP.A.R.C.H., A.R.I.B.A., A.M.I.P.L., in private practice. They will practice under the style of J. D. and B. Y. Tetlow at 31, Townfields, Lichfield, Staffs. (Tel: 3003).

W. P. J. Grose, A.R.I.B.A., A.I.A.S., architect & surveyor, has moved to 10, Quay Street, Truro, Cornwall, where he will be pleased to receive catalogues and information.

Grimwade & Ainsley, quantity surveyors, have removed their office to 5, Victoria Street, S.W.1 (Tel: Abbey 5016-7).

Aygee Limited have opened a branch office and works at City Wharf, Brewery Street, Birmingham, 6.

R. D. Hamer, vice-president and director of Aluminium Laboratories Ltd., was elected president for the ensuing year at the annual general meeting of the Aluminium Development Association which was held at 33, Grosvenor Street, W.I., on April 10.

Correction

The flats in West End Lane, N.W.6, illustrated in the JOURNAL for April 30, were designed by E. B. Glanfield, not E. B. Glenfield, as announced.

Quality is Essential



For Durability

ENSO Standard and EXTRA HARDBOARD

Thickness		Widths	Lengths
$\frac{1}{8}$ in.	$\frac{3}{16}$ in. $\frac{1}{4}$ in.	4 ft. & $5\frac{1}{4}$ ft.	6 ft. to 18 ft.

Available in Flush Door and Special Sizes

Product of the ENSO-GUTZEIT Industries FINLAND

Samples, Literature and List of Distributors

INSULITE PRODUCTS CORPORATION LTD

41 KINGSWAY, LONDON, W.C.2

Telephone: TEMPLE BAR 9385-6-7



It is fashionable, it is sensible to make shops and showrooms brighter and more inviting with

Pilkington's "ARMOURPLATE" Glass Doors



Consult the Technical Sales and Service Department of Pilkington Brothers Limited at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephones: St. Helens 4001, Whitehall 5672-6. Supplies are available through the usual trade channels. "ARMOURPLATE" is the registered Trade Mark of Pilkington Brothers Limited.

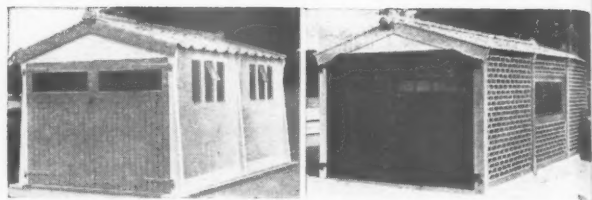


- with the
ACROW
UP & OVER Garage
Door
Fitting

You can now buy this beautifully made mechanism which converts your old-fashioned garage door into the luxury "Up and Over" type at the amazingly low price of £10.6.2.

Send now for fully descriptive leaflet AJ/DF

ACROW (Engineers) LTD., SOUTH WHARF, PADDINGTON, LONDON, W.2
Telephone: AMBassador 3456 (20 lines)

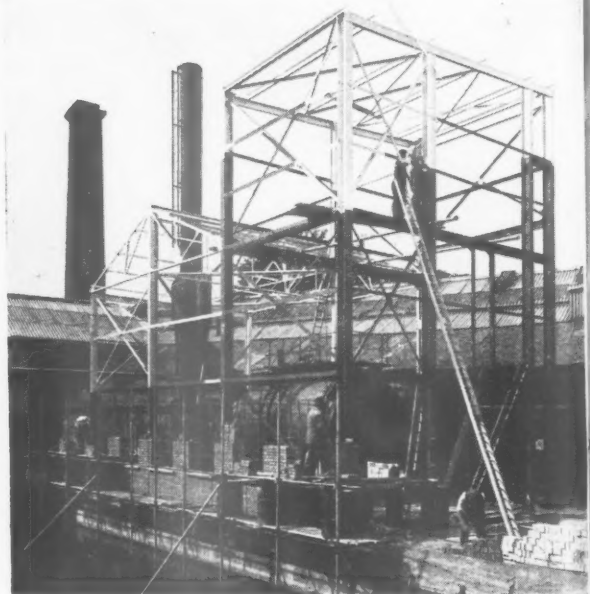
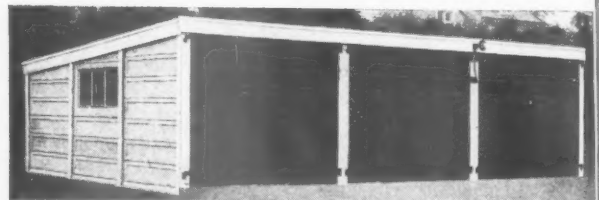


MARLEY GARAGES

meet every need

PORTABLE single types from £50 complete.
STANDARD permanent single type from approximately £70 (can be erected in multiples if required). **MUNICIPAL** ranges from two to any number from £60 each. Write for illustrated leaflets.

THE MARLEY TILE COMPANY LTD
Stifford Road, South Ockendon, Nr. Romford
Essex. Tel.: Tilbury 893. Farm and Factory Buildings.



STRUCTURAL STEELWORK

FOR INDUSTRIAL AND AGRICULTURAL BUILDINGS

CROGGON & CO. LTD.

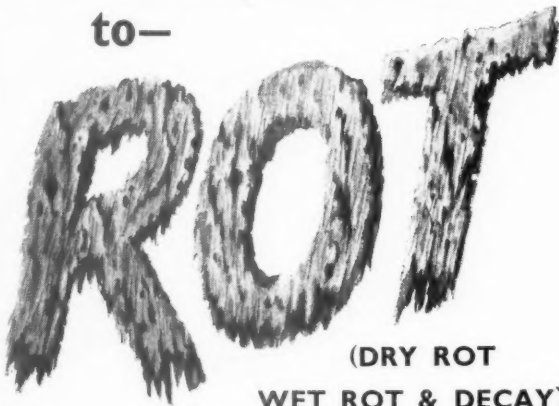
230, UPPER THAMES ST., LONDON, E.C.4
Central 4381/3

Works: Colnbrook

ESTD.
1835

SOLIGNUM

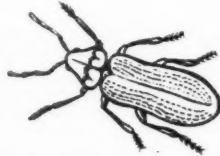
is the complete answer
to—



(DRY ROT
WET ROT & DECAY)

Solignum destroys the dry rot fungus wherever brought into contact with it, and gives complete immunity against further attack. Solignum Wood Preservatives, are made to penetrate into the wood and remain as an active barrier against decay, affording protection from dampness, exposure to weather, dry rot, wet rot, wood borers, and all other enemies of Timber. Solignum is easily applied by brush, by dipping or by spray gun.

AND



WOOD BEETLES TOO!

There are 3 kinds of Solignum

**Solignum Wood
Preserving Stain**

For constructional timber, fences, sheds, joists, flooring, etc., to prevent and destroy dry rot fungus.

**V.D.K. Solignum
Wood Preservative**

In Green, Brown and colourless, can be painted over if desired. Essential for green-houses, netting and canvas.

**Solignum Wood
Beetle Destroyer**

A specially prepared solution to destroy wood boring beetles, i.e. 'Woodworm', in furniture and constructional timber.

Solignum Advisory Service. Let experts help you in preserving your woodwork and avoid costly repairs and replacements. Write for descriptive leaflets and advice **FREE**.



*wood
preserve
it!*

Sole Makers — **SOLIGNUM LTD**
Donington House, Norfolk Street, Strand, W.C.2.



(By Appointment to the late King George V)

WARING & GILLOW

Specialists

IN

FURNISHING

AND EQUIPMENT

OF

PUBLIC BUILDINGS

SHIPS · CLUBS · HOTELS

SCHOOLS · BANKS

AND OFFICES

CONTRACTORS TO H.M. GOVERNMENT

Schemes and Estimates on

application to Contract Department

WARING & GILLOW LTD.

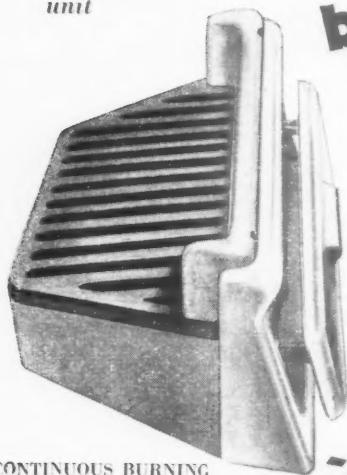
164-182 OXFORD ST., LONDON, W.1

Established 1695

Telephone: MUSeum 5000

Factories at LANCASTER, LIVERPOOL and HAMMERSMITH

*A completely
self-contained
unit*



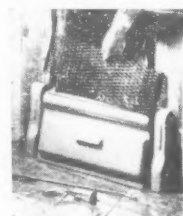
CONTINUOUS BURNING

brighter, hotter fires

Flames from coke!
Only Firemaid, with its exclusive basket, can do it! It is the one basket that has straight bars mounted at an angle, for better through draught and simple, easy cleaning. When a bright fire is required simply insert the special angled poker underneath the bars and rake from back to front. Up leap the flames hotter than coal! Response to the draught control is swift, permitting exact regulation of the burning rate. Unique self-contained construction eliminates sealing. Wide range of wipe - clean finishes. Made in three sizes to fit 14", 16", 18" Milner Firebacks.



Firemaid TRIVET
Simply lifts on or off.
Matching colours.



NIGHTGUARD
Strong mesh, stove
enamelled black.



MINISTRY APPROVED

-using nothing but coke!

Full details from

WALLS LIMITED

Station Street, Tipton, Staffs. Tel.: Tipton 2126

2497

'BROADS TRUCAST' DUCT COVERS

*Specially designed
for use in*

**POWER STATIONS, HOSPITALS
SCHOOLS, KITCHENS
LABORATORIES, BOILER HOUSES, ETC.**

'Broads Trucast' Duct Covers are available in widths from 6" to 36", with Cast Iron Sectional Frames for bolting together to form continuous runs, with necessary angles and branches of various sizes. The Cast Iron Covers and Frames have machined seatings and the covers are recessed for fitting on site to match the surroundings.



BROADS

MANUFACTURING CO. LTD. 4 SOUTH WHARF, PADDINGTON, LONDON, W.2. Tel.: PAD. 7061 (20 Lines)

★ Technical Staff are available to visit site to check final details and offer expert advice on layouts. Liaison is also maintained with contractors during installation. Full details submitted on application.

Ian Henderson Ltd

184 SLOANE ST. S.W.1. TEL: SLOANE 5713

(200 yards from Knightsbridge on the left)

In Association with Nicholls & Jones Ltd. Cabinet & Chair Makers, Architectural Woodworkers, Saint Mary Street, High Wycombe



Here in Sloane Street is the furniture many have been waiting for:—Excellent workmanship, distinguished in appearance, and designed for calm interiors. Over 30 New Furniture, chair and settee designs besides an outstanding selection of the latest Furnishing Fabrics, etc. Our Contracts Department offers a complete furnishing service—including specials—for architects.

I.H. Specialist Agents in the following towns:—
EDINBURGH, MANCHESTER, GLASGOW, BELFAST, LIVERPOOL,
LEEDS, BRADFORD, NEWCASTLE, SCARBOROUGH, NORWICH,
CARDIFF, BIRMINGHAM, COVENTRY, SHEFFIELD, BOURNEMOUTH,
LEICESTER, BRISTOL, CHELTENHAM, CHESTER, SHREWSBURY.



KEEP RAIN OUT!

with tested DUSSEK products

Rain from above, rain from the side and rising damp, can each be dealt with, whatever the building material, with one of the specialised DUSSEK products.

Architects and Builders are invited to write for pamphlets listing the DUSSEK range and its applications and to avail themselves of our advice on problems relating to the protection of buildings from water.



PLASPHALT & BITITE

BITROL

**BITUMEN
SOLUTION**

PLASBESTOS

**BITUMEN
EMULSION**

COLADE

**BITUMEN
EMULSION**

WATERPROOFER P.B.7

BRANCHES, ASSOCIATED COMPANIES AND AGENTS IN, AUSTRALIA, BELGIUM, BRITISH EAST AFRICA, DENMARK, EGYPT, FINLAND, NORWAY, SOUTH AFRICA, SWEDEN

DUSSEK BITUMEN & TAROLEUM LIMITED

EMPRESS WHARF · BROMLEY-BY-BOW · LONDON, E.3

Telephone: ADVance 4127

Telegrams: 'TRINIDITE' Bochurch, London

dm DB145

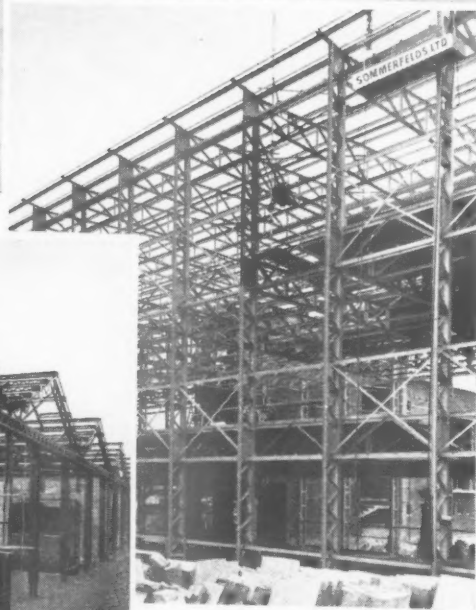
structural steelwork

- DESIGN
- FABRICATION
- ERECTION

Standard Sectional Factories for the Harlow Development Corporation. The High-Tensile Steel used has a yield point more than twice as high as that of mild steel, and the Lattice Construction employed can result in cutting down the weight of steel needed by half. Executive Architects: V. Hammett, B.Sc., A.R.I.B.A., A.R.I.C.S.

The large illustration shows part of the all-welded structure which we designed and supplied to the I.C.I. Deep Lattice Beams and Light Stanchions have been used with nearly fifty per cent. saving in Steel requirements, as compared with ordinary R.S.J. construction. The two storey building spans 50ft. and has a height of 44ft. to eaves. Architects: Messrs. J. Douglas Mathews and Partners.

Write for full details and data sheets.



Sommerfelds

LTD.

WELLINGTON · SHROPSHIRE TEL: 1000

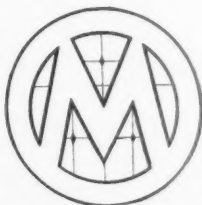
LONDON OFFICE: 167 VICTORIA ST S.W.1
TEL: VIC. 8843 AND 1000

J.T.L.

50 Enlightened Years

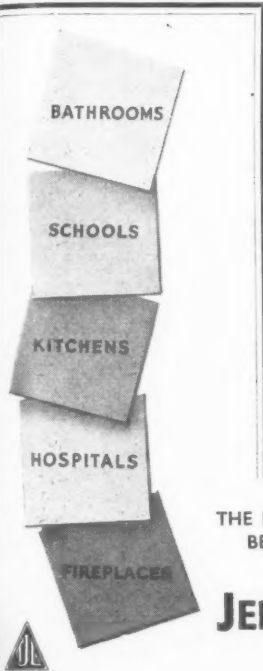
We are proud to announce that Coronation year marks for us another great occasion—the Golden Jubilee celebration of our incorporation as a Limited Company.

We mark this milestone in our History by the issue of our new and comprehensive catalogue, and copies may be obtained by application to our Head Office at Corporation Street, Sheffield or 54, Victoria Street, London, S.W.1.



MELLOWES & CO. LTD. · SHEFFIELD · LONDON · OLDHAM

CERAMIC



THE FIRST COST IS THE LAST
INSTALLATION IS PERMANENT
LESS MAINTENANCE COSTS
EASY TO CLEAN
SPECIAL NON-REFLECTING GREEN FOR OPERATING THEATRES

THE MOST COMPREHENSIVE RANGE OF BEAUTIFUL COLOURS AVAILABLE

MANUFACTURED BY

JEFFREY TILES LTD.
HEREFORD

Telephone: Hereford 3688

SAMPLES WILLINGLY SUBMITTED ON REQUEST



DRAWING BOARDS AND STANDS DRAWING
 AND TRACING PAPER DRAWING INKS
 DRAWING INSTRUMENTS MOUNTED AND
 SECTIONAL PAPERS SENSITISED PAPERS
 AND CLOTHS SURVEYING EQUIPMENT

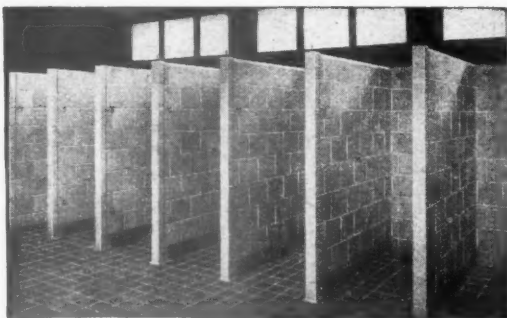
CONSULT US WHATEVER YOUR NEEDS
 FOR DRAWING OFFICE EQUIPMENT

HARPER & TUNSTALL LTD.
 LETO WORKS · EDGWARE · MIDDLESEX

Telephone: Edgware 4455
LONDON:
 39, Victoria St., S.W.1

BIRMINGHAM:
 31, Union St., 2

Telegrams: Ofertial, Edgware
GLASGOW:
 278, St. Vincent St.



Regd. Trade Mark

**IMPERIAL
 PORCELAIN**

For Beauty and Strength — **IMPERIAL PORCELAIN** **SANITARY WARE**

Look at it from any point of view. "Imperial Porcelain" Sanitary Ware is the answer to Public and private toilet installation problems. It is designed to stand up to hard use; and is treated to prevent crazing and discoloration. "Imperial Porcelain" Sanitary Ware is designed in the best contemporary style, and conforms to the highest standards of hygiene and durability. Our "Burmantofts" Faience Tiles (illustrated above) and Leftex Texture Bricks and Tiles will enhance all toilet walls and partitions.

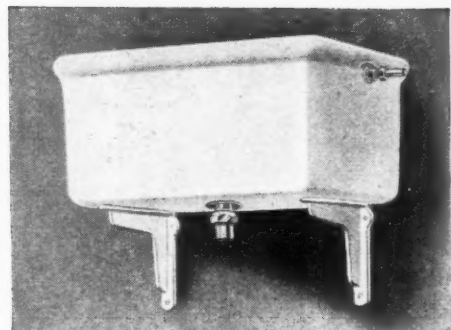
Write today for details of these fine products

The LEEDS FIRECLAY

WORTLEY, LEEDS 12 Phone 38021

LONDON OFFICE: LEEDS HOUSE, CAVENTISH PLACE, W.1 Phone: LAngham 3511

COMPANY LTD



Two ways to HEAT CONSERVATION

1 DRAUGHT EXCLUSION

will reduce the loss of heat through the average window by at least *half*, and through doors by an even greater amount. The actual rate of cold-air infiltration, the source of all draughts, can in turn be reduced by anything up to 95%, according to type of construction.

EXAMPLE: D/H Sash Windows of wood, 5' 2" x 2' 8", average length and width of gap, 18' 0" x $\frac{1}{8}$ ", average wind speed 10 m.p.h.



The two HERMESEAL strips make a perfect draught proof seal when window is closed

BEFORE draught-exclusion = 1903.0 cu. ft. per hr.
AFTER " " = 264.6 cu. ft. per hr.
PREVENTION achieved = 1638.4 cu. ft. per hr. or 86.1%

2 ROOF INSULATION



will reduce the loss of heat through a roof-area by at least 70%. This loss, in the average house, is about *one-third* of all the heat lost in various ways from the structure as a whole.

EXAMPLE: Average "U" values of a number of Pitched roofs of NEW but varying construction, "U" = $B.Th.U./sq. ft./hr./1 \text{ deg. F.}$

BEFORE insulation (Desirable standard 0.20) = 0.43
AFTER insulation by 1" bitumenised glass wool = 0.13
PREVENTION achieved = 0.30 or 69.7%

Specify DRAUGHT EXCLUSION and ROOF INSULATION by HERMESEAL. No higher degree of efficiency in the conservation of heat and the saving of fuel can be achieved in any already existing building. Surveys and installations are carried out by our own skilled staff throughout the country. Write for full details.

DRAUGHT EXCLUSION & ROOF INSULATION BY



HERMESEAL
means warmer homes

BRITISH HERMESEAL LIMITED

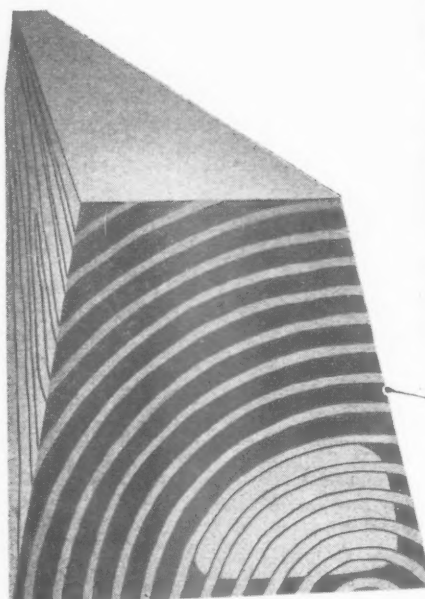
Head Office:—4 PARK LANE, LONDON, W.1

Telephone: GROsvenor 4324 (3 lines)

FLOOR-FILLET
PRESERVATION

DEFENCE

IN DEPTH



HEARTWOOD
SAPWOOD

Cross-cutting a "Tanalised" floor-fillet reveals that the whole of the sapwood and part of the heartwood is impregnated.

With small sized trees being used more and more to meet the demand for building timber, deep preservation is of vital importance. The sapwood content of timber cut from thinnings is very high and has little resistance to decay. Vacuum/Pressure impregnation plants are sited throughout the country. For details write to:

HICKSON'S TIMBER IMPREGNATION CO. (G.B.) LTD.

Castleford,
Yorks.
Castleford 2607/9.

36, Victoria Street
London, S.W.1.
ABBey 1477/8

'Tanalised' Timber

Make your buildings
BRIGHT & COLOURFUL
in Coronation Year



Westminster Bank Ltd. Hammersmith Branch
Specified by Architects' Dept. Westminster Bank Ltd.

Sealocrete Decorative Finishes

for Concrete and allied
Building Materials

SEALANTEX LIQUID STONE COMPOUND

A decorative stone-like preparation for use on Stone, Asbestos, Concrete, Brickwork, Roughcast, etc. Available in many permanent colours. Can be applied internally or externally, even under water, giving a true non-slip surface to bathing and paddling pools. It does not darken with age but lightens, always giving a new, fresh appearance.

SEALANTEX SMOOTH FINISH

A new, hard, matt finish for interior decoration of cement, concrete renderings, plaster, etc. No saponifying, softening or discolouration from reaction with free lime in cement. It has excellent covering capacity and is available in a number of pastel shades.

SEALOCRETE LIQUID STAIN

Colours asbestos, roofing tiles, brickwork, concrete floors, precast work, etc., permitting the original texture of the surface to remain. Not only does it impart a pleasing colourful effect, it also seals and protects as it stains.

SEALANTONE LIQUID COLOURS

Incorporated in cement renderings, roughcast, etc., give a colourful, decorative, permanent water resistant surface, actually improving the strength and general characteristics of all work in which they are incorporated.



SEALOCRETE PRODUCTS LTD.

Atlantic Works, Hythe Road, London, N.W.10
Tel: LADBroke 0015/6/7 Grams: "Exploiture Wesphone, London"



Auditorium of the Free
Trade Hall, Manchester.

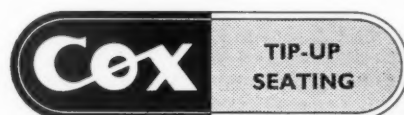
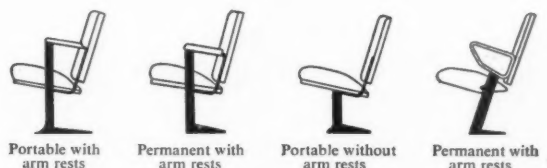
Made to Music's Measure

WHEREVER you sit in this concert hall you are lapped in regal comfort and you hear perfectly. Even if there are some empty seats, they do not impair the tonal quality of the orchestra, as the under part of the seating is designed on sound acoustic principles.

This seating at the Free Trade Hall, Manchester was designed and made by Cox & Co. to the specification of the City Architect, Mr. Leonard C. Howitt, B. Arch., F.R.I.B.A.

Cox & Co. were also responsible for the tip-up seating of the auditorium of the Royal Festival Hall.

The four main types of Cox tip-up seating are shown below, but architects are asked to write to the address below for the booklet which gives fuller details.

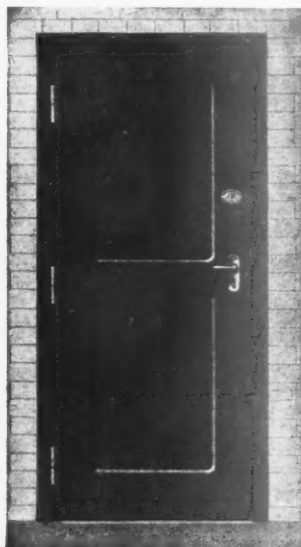


Cox & Co. (Watford) Ltd., Watford, Herts.
Phone: Watford 5361

DANGEROUS

-KEEP IT CAGED.....

An outbreak of fire, like a wild beast at large, is a serious menace to life and property. That's why those



who are interested in the preservation of life and property—the Fire Offices Committee

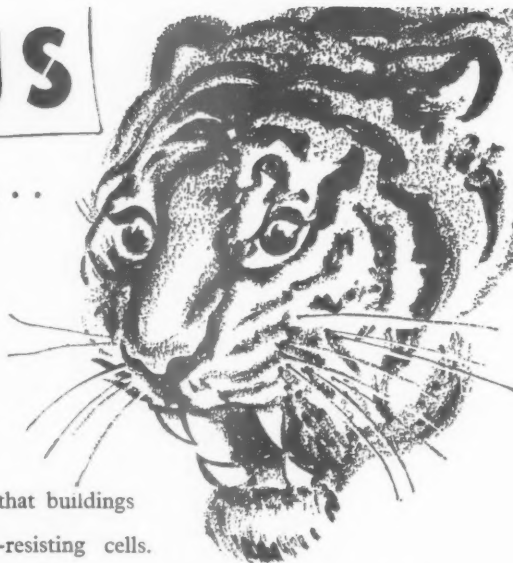
for instance—recommend that buildings be made into fire-resisting cells.

This is easily done—even in existing buildings—by fitting

DREADNOUGHT

Fireproof Doors

at all connecting openings through which fire could pass from one area to another.



DREADNOUGHT FIREPROOF DOORS (1930) LTD., 26 VICTORIA ST., WESTMINSTER, S.W.1. Phone: ABBey 1411

for town *or* country planning



Ingram Farm Estate, Bexhill.
Architect: Bexhill-on-Sea
Borough Council.
Dampcourse: Standard Astos.

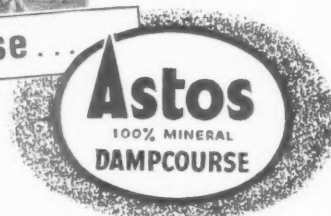
DC.110

Astos Dampcourse is designed to fulfil *all* the demands imposed by modern conditions, from the high load factors in multiple-storey urban construction to the normal movement stresses encountered in rural buildings on new land. In 24 lineal feet rolls and in all wall widths up to 36 inches. Send for descriptive leaflet No. 555 on standard and lead-lined Astos Dampcourse.

THE RUBEROID COMPANY LIMITED

2. COMMONWEALTH HOUSE, NEW OXFORD STREET, LONDON, W.C.1

plan to use...



*A permanent barrier
against rising damp*

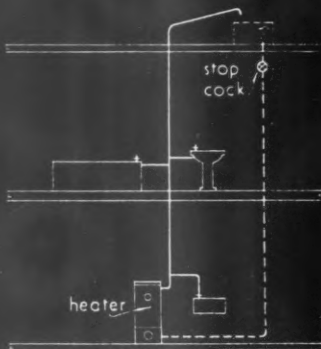
Current *Hot Water* Problems



*If a man and his half take a bath and a half—
how much hot water is left for junior?*

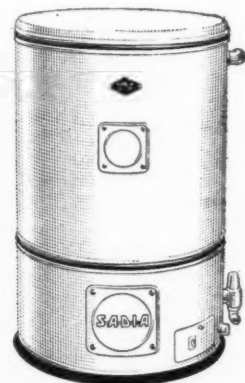
The answer is plenty—if the appropriate size of SADIA Electric Water Heater has been installed. There is a SADIA to meet every household requirement of hot water. They all offer the many advantages that *only electric water heating can give*. Economy for a start—the SADIA consumes less fuel because it efficiently stores hot water for future use; the thermostat automatically switches off the current when the right temperature is reached. Cleanliness too—no fumes, no flues, no ashes, dust or dirt. And the SADIA saves installation costs because the minimum amount of piping is required. Our skilled engineers will gladly advise on any technical points concerning the installation of all types and sizes of SADIA Electric Water Heaters.

TYPICAL INSTALLATION OF U.D.B. WATER HEATERS (ALL ELECTRIC)



A hot water service for kitchen and bathroom from one type U.D.B. Sadia installed under the Draining Board. Note: the water supply from a storage tank and the vent pipe. To comply with bye-laws the cold water feed must be a separate pipe from that connected to the cold water taps.

SADIA AUTOMATIC ELECTRIC WATER HEATERS: U.D.B. TYPES
20 gallons 30 gallons 35 gallons and 40 gallons capacity



Efficient cork insulation. Welded copper tank, tested to 100 lbs. per sq. inch. Sheet Steel container, stove enamel finish. Automatic thermostat control.

There's a natural answer

SADIA
Hot Water by Electricity

Write to

AIDAS ELECTRIC LTD.,
SADIA WORKS, ROWDELL ROAD, NORTHOLT, GREENFORD, MIDDLESEX. Phone: WAXLOW 1697
Scottish Agents: W. Brown & Co. (Engineers) Ltd., 89 Douglas Street, Glasgow, C.2.
Manufactured in S. Africa by: Sadia Water Heaters (Pty) Ltd., 3-5 Newton Street, Village Main, Johannesburg.



are your
CORONATION
FLOODLIGHTING
plans well
advanced?

FLOODLIGHTS
should be
ordered early

1953's celebrations have already brought a brisk and growing demand for Wardle floodlights, popular for their efficiency, strength and workmanship. Wisdom lies in early ordering, so write at once for details—and for any guidance we can give you.

THE **WARDLE** ENGINEERING CO. LTD., OLD TRAFFORD, MANCHESTER, 15

NEW WAYS OF BUILDING

second revised, edition, edited by • ERIC DE MARE, A.R.I.B.A.

Bound in full cloth boards
Size 9½ by 7½ ins., 256 pages, over
200 photographs, plans and drawings
30s. net. • postage 8d.

contributors {
 Dr. K. Hajnal-Könyi • concrete
 O. Bondy • steel
 Phillip O. Reece • timber
 K. Cheesman • glass
 W. B. McKay • brickwork
 Philip Scholberg • light metals and plastics
 C. C. Handisyde • insulation

THIS IS A NEW KIND of book on building construction. Its purpose is to fill a gap by acting as an appendix, or post-graduate course, to the standard publications used by architectural and building students. As such it is designed to be of value to the practising architect and to all others interested in contemporary building, as well as to the student. The book is of a new kind in two other ways; first, in being written, not by one author, but by a group of men, each a specialist in his own subject, on whose knowledge the general practitioner can rely; second, in attempting to be something more than the usual dull textbook by illustrating examples of buildings at home and abroad selected not merely to inform on technique but to stimulate the designer's visual imagination.

THE ARCHITECTURAL PRESS • 9-13 Queen Anne's Gate • S W 1

Vertical Lifting Doors

BY THE BALANCED DOOR SPECIALISTS

Single or multi-leaf Design.



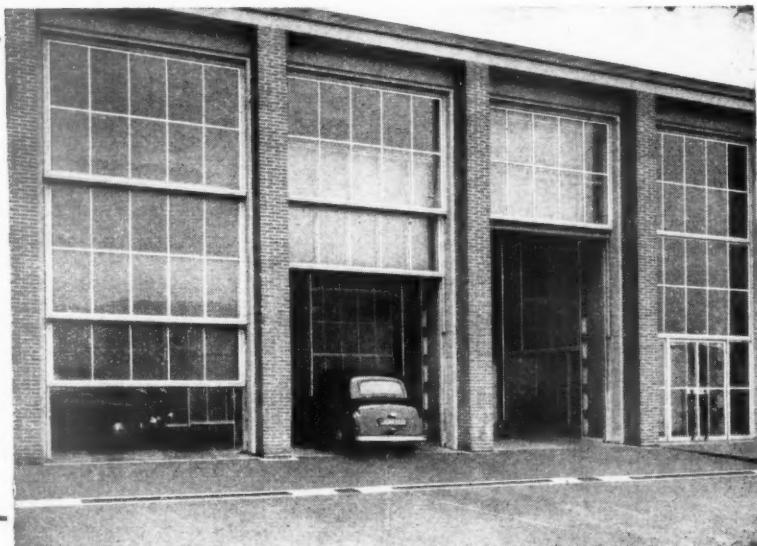
Glazed or Solid
Manual, Geared



Power or Floor-
Mat Operation



Designed to suit
architect's or
individual require-
ments.



IDEAL FOR
DOCKYARDS

STORE SHEDS

CRANE BAYS

TRANSFORMER
STATIONS

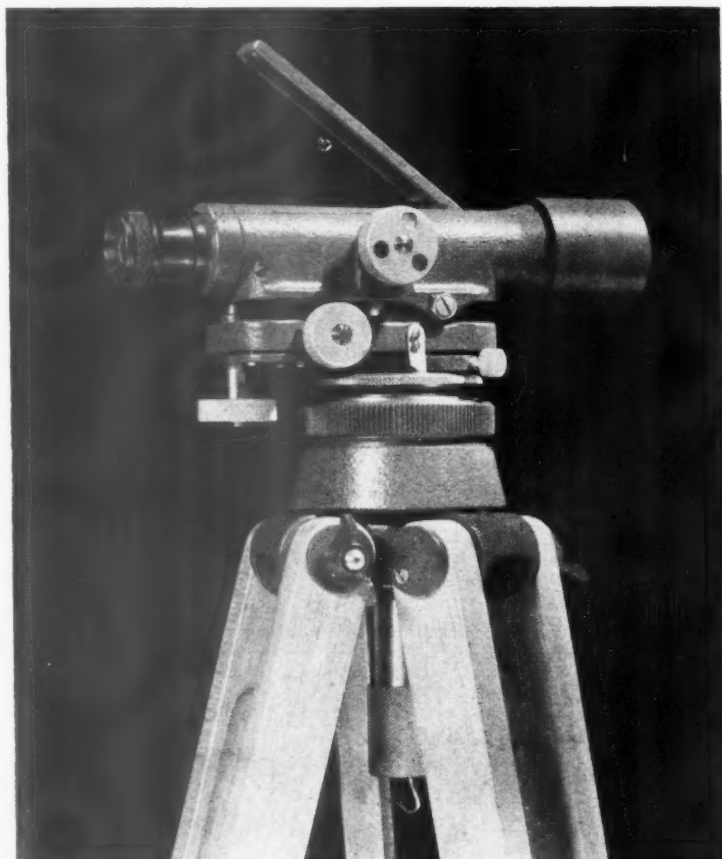
FACTORIES

SHOWROOMS

PARTITIONS, etc.

Please write for full details

ECLAIR DOORS LTD. 239-242, GREAT LISTER STREET, BIRMINGHAM, 7. TEL: ASTON CROSS 2028



WATTS "QUICKSET" LEVEL

An inexpensive and very portable level for general work. Its modern design with ball base and tilting telescope allows it to be set up and used rapidly and accurately even by less skilled workers.

0.01ft. can be observed at 300ft., and horizontal angles laid out to $\frac{1}{4}^\circ$. A tangent screw is fitted and the azimuth scale can be set to zero. The telescope has 1:100 stadia. Weight of instrument and tripod only $8\frac{1}{2}$ lbs.

Please write for list AJ/78 to

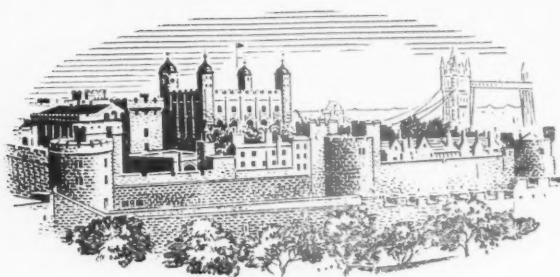
HILGER & WATTS LTD

WATTS DIVISION

48 Addington Square, London, S.E.5

Member of the Export Marketing Company SCIEX

dh



FOR SECURITY REASONS

*The Tower of London
is one of many famous
buildings fitted with*

HOBBS HART Security Equipment

LOCKS • WALL SAFES • SAFES & STRONG ROOMS

Details gladly sent on request.

HOBBS HART & Co. Ltd., 76 Cheapside, London, E.C.2. Tel: City 1709



Sold in gallon tins
ready for use

easy does it

The range includes:

**VITAMEL HIGH
GLOSS PAINT**

**WALDURA
WASHABLE
WATER PAINT**

**SOLVIT
PAINT
REMOVER**

**VITACHARM
FLAT PAINT**

Smith & Rodger's Emulsion Paint makes new friends every day. Easy to apply, no brush marks to show. Dries to a smooth satin-gloss finish. Second coat (if necessary) an hour or two after first. Both you and your client will be enthusiastic about WALDON.

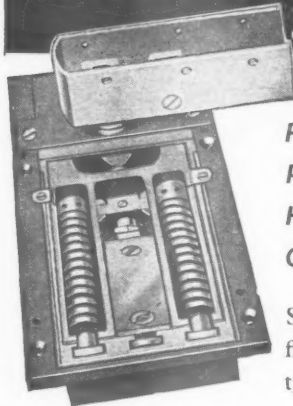


SMITH & RODGER LTD.

ELLIOT STREET GLASGOW, C.3.
CITY 6341-2 'SMITROD' GLASGOW

Have you seen the **NEW** VICTOR DOOR SPRINGS

WITH THE SELF-CONTAINED CHECK



FOR
PUBLIC BUILDINGS
HOUSING SCHEMES
OFFICE BLOCKS, ETC.

Shallow and watertight floor patterns. Overhead types to suit every purpose.

ALSO:

- WINDOW GEARING AND FANLIGHT OPENERS
- 'X-IT' PANIC BOLTS
- DOOR FURNITURE
- SPRING SASH BALANCES
- LOCKS
- CASEMENT FITTINGS

'Victor' Fittings are used throughout Gt. Britain.

ROBERT ADAMS (VICTOR) LTD.
139 STAINES ROAD, HOUNSLOW, MIDDXX.
Telephone: Hounslow 5714

ENGLISH PANORAMA

by THOMAS SHARP, M.A., D.LITT.

INNUMERABLE BOOKS DESCRIBING THE English countryside have been published, particularly in the last twenty years. This is a very different sort of book: and it is, we believe, the first and only one of its kind. It is no mere description of beauty spots, but is a carefully-studied and original account of how the English scene in town and countryside has developed down the centuries, ending with a penetrating analysis of the problems of town and country planning with which we are faced today. When it was first published in 1936 it was described as "the most important contribution to the subject which has yet been made" (*Country Life*); "a large-visioned well-balanced and uncommonly vital book" (*Manchester Guardian*); "as sound and clear as a bell" (*New Statesman*); and it has come to be regarded as something of a classic of its kind. It has been out of print for ten years: and for this new edition it has been in part revised, many new pages have been added, and it is almost entirely newly illustrated. All Thomas Sharp's dozen or more books have been praised for the quality of their writing, as well as for the ideas which they contain; and ENGLISH PANORAMA, along with the rest, though it contains much of interest for the specialist reader, is essentially a spirited and straightforward essay on a subject which should appeal to everyone who has eyes to see.

Bound in full cloth boards. Size 8½ in. by 5½ in. 148 pages, with over fifty half-tone and line illustrations.

12s. 6d. net. Postage inland 7d.

THE ARCHITECTURAL PRESS

9-13 Queen Anne's Gate, Westminster S.W.1

How TIMBER can replace STEEL in structural work



THE HAMPERING effect of the steel shortage can be minimised by the use of more timber for trusses, lattice girders, bracing members, etc. This technique is possible through "Bat" Timber

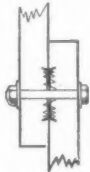
Connectors—providing immensely strong efficient joints—real engineering practice in timber.

Study the diagrams and it can easily be observed how the "Bat" Connector when bolted 'bites' into the wood. If you would like to know more about the possibilities of timber in structural work send for leaflet—free to all architects.

1. Our Design Department is at your Disposal
2. To BRITISH STANDARD 1579
3. Delivery ex-stock



Double-sided square connector



Timber-to-timber joint



Single-sided square connector



TIMBER CONNECTORS

AUTOMATIC PRESSINGS LTD.

"Bat" Works, Blackheath, Birmingham



DAMPCOURSES

to B.S.S. 743

Approved by all Government Departments and Local Authorities

Supplied in rolls 24 feet in length and cut to any width required.

"PERMALUME" (Aluminium Base) "A Super Dampcourse." Combines hessian base with Aluminium core, and affords complete protection.

"PERMASEAL" (Hessian Base) Specially selected and blended bitumens reinforced with a strong hessian core. Efficient and economical.

"HOUSING" (Fibre Base) High grade bitumen dampcourse with a bitumen-impregnated fibre core. Widely specified for housing schemes.

"LEAD-BITU" (Lead Base) Bitumen (hessian or fibre base) reinforced with lead membrane. Particularly suitable for moisture-bearing subsoils.

"ASBEX" (Asbestos Base) The bitumen-impregnated asbestos core assures absolute non-perishability. Withstands "settling" and vibration.

★ ALSO

"WATERSEAL" Reinforced (Slaters') Underlining.

SAMPLES
AND
PRICES
FROM

PERMANITE LIMITED

455, OLD FORD ROAD, LONDON, E.3

Works: LONDON and HERTFORD

Telephone: ADVANCE 4477 (10 LINES)

Telegrams: PERMAPHALT EASPHONE LONDON

DUNBRIK

THE PRECISION FACING BRICK

Introduced in 1934 and since specified by Government Departments, Local Authorities, Leading Architects, Builders, etc. Buildings faced with Dunbriks include Houses, Schools, Factories, Hospitals, Drillhalls, Cinemas, Flats, Office Blocks, etc.

Dunbriks are Manufactured by:—

London and Home Counties

DUNBRIK LIMITED 26, Chilworth Street, London, W.2. 'Phone: Paddington 2471/2

Suffolk, East and Central Essex

ALPHAMSTONE BRICK & TILE CO. LTD.

Alphamstone, near Bures, Suffolk. 'Phone: Twinstead 229

Dorset, S.W. Hants, S. Wilts., S. and W. Somerset.

W. E. MASTERS, Brick Manufacturer, Lytchett Minster near Poole, Dorset. 'Phone: Lytchett Minster 291/2

Oxon, Berks, N. Wilts., Glos. and N. Somerset.

THE COTSWOLD BRICK AND TILE CO. LTD., Standlake, near Witney, Oxon. 'Phone: Standlake 284

East and West Ridings, Yorkshire

DUNBRIK (YORKS) LTD., Stanley Ferry, near Wakefield, Yorks. 'Phone: Wakefield 3694

Counties of Notts, Lincs, Leicester, Rutland, Derby.

THE HOVERINGHAM GRAVEL CO., LTD.

Hoveringham, Notts. 'Phone: Bleasby 242

Scotland

SCOTTISH DUNBRIK LTD., 250, Alexandra Parade, Glasgow, E.1. 'Phone: Bridgeton (Glasgow) 1818; Dundee 81673

Ulster

DUNBRIK (ULSTER) LTD., Doagh Station, Co. Antrim, N. Ireland. 'Phone: Doagh 59

Beauty • Economy • Permanence • Uniformity

SIX CONCRETE ADVANTAGES

LOW COST

FLY PROOF

NO PAINTING

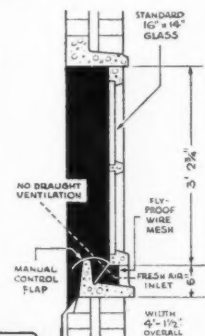
NO-DRAUGHT VENTILATION

NO HINGES

GOOD LOOKS



(Patent No. 65248)



PRECAST CONCRETE WINDOWS for Farm and Factory

Write for Leaflet P.W.51 to: GEO. W. KING LTD., 318 WORKS, HITCHIN, HERTS. TEL: HITCHIN 960. AND AT STEVENAGE

BOOKS BY THE 1953 ROYAL GOLD MEDALLIST

Towards a New Architecture. Translated from the French by Frederick Etchells.

THIS HISTORIC BOOK has probably had a greater influence on English architectural thought than any one publication of the last half-century. It first introduced the writings of Le Corbusier to the English public and was the first published exposition in English of that 'modern movement' in architecture which was gradually establishing itself on the Continent during the first quarter of this century. Of this movement Le Corbusier was—and still is—one of the principal prophets. His ideas are as valid to-day as when he first wrote them. The present edition is an exact facsimile (slightly reduced in page size) of the original English edition published in 1927. Bound in full cloth boards. Size 8¾ ins. by 5¾ ins. 272 pages. Many half-tones; also many line drawings by the author. Second impression. 18s. net. Postage 7d.

Concerning Town Planning. Translated from the French by Clive Entwistle.

THIS IS Le Corbusier's most important post-war book. It contains his succinct answers to many provocative questions put to him about contemporary planning problems and constitutes a reasoned discourse on town planning principles past and present and an affirmation of the world-famous architect's belief that, properly applied, this young science could transform the whole environment of mankind. The illustrations, many of full-page size, are by the author himself. Bound in full cloth boards. Size 8¼ ins. by 5¾ ins. 128 pages, over 60 line illustrations. Second impression. 10s. 6d. net. Postage 4d.

The Home of Man: Written in collaboration with François de Pierrefeu. Translated by Clive Entwistle and Gordon Holt.

THE SECOND of Le Corbusier's post-war books to be published by the Architectural Press. François de Pierrefeu has for many years worked closely with Le Corbusier, participating in the researches of those French architects and scientists who have studied planning matters with him since the war. M. de Pierrefeu writes the introductory text, outlining the principles of planning the towns and homes of the new world to enable ordinary people to benefit fully from the rapid progress of applied science. Le Corbusier himself contributes the book's principal contents: his own inimitable drawings, accompanied by his personal commentary, which admirably illustrate and illuminate the theme. Bound in full cloth boards. Size 8 ins. by 5½ ins. 156 pages, containing a large number of drawings by Le Corbusier. 10s. 6d. net. Postage 4d.

THE ARCHITECTURAL PRESS 9-13 Queen Anne's Gate Westminster SW1

AN ASSOCIATION OF ARTIST CRAFTSMEN

MAKERS OF PRINTING BLOCKS IN LINE

HALFTONE AND COLOUR

ARTISTS · PHOTOGRAPHERS



THE ENGRAVERS GUILD LTD

WINDSOR HOUSE · CURSITOR STREET · LONDON · E.C.4

ADAPTABLE POLICY

The adaptable policy recommended by the A.B.S. involves only a small annual cost to provide a substantial tax free income for dependants, or on retirement a cash sum or pension for life.

For example, a man of 30 years next birthday can provide cover for dependants to the extent of £6,250 for an annual premium of only £31 10s.

Special rebate for Architects and Architects' Assistants.

Particulars from :

The Secretary
A.B.S. INSURANCE DEPARTMENT
66 Portland Place, London, W.1
Tel. : LAngham 5721

Brownall

HIGH JOINT STRENGTH FITTINGS

• IN NON-FERROUS METALS

EASY-CLEAN LABORATORY FITTINGS

In Chrome, Black-Bronze, Polished & Lacquered Brass Finish.

COMPRESSION Fittings for Hospitals and Industrial Building.

For 1/2 in. to 6 in. Tube.

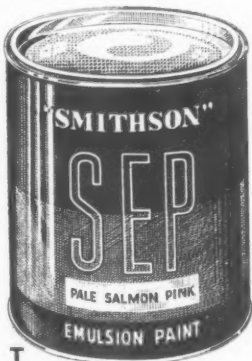
Gunmetal Screwed Fittings to B.S. Table 1 and B.S.P. Threads.

Solder (Capillary) & Welding for all Heating Work.

SEND FOR CATALOGUES DATA AND PRICES ETC.



DONALD BROWN (Brownall) LTD.
LOWER MOSS LANE MANCHESTER 15
Tel: DEAnso 4754/5 Grams "DONABROW" Manchester.



Time-Tested

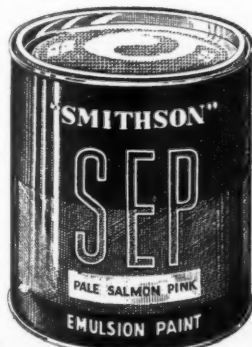
SEP

manufacturers of superfine

This Super plastic emulsion paint is the answer to your decorating problems. Ideal for schools, factories, hospitals, hotels and private houses. Easy application reduces labour costs. SEP may be applied to any prepared surface including new cement, new plaster, asbestos sheeting, brick and stone.

Available in 30 colours

paints since 1790



THOMAS SMITH & SON LTD

238-240 Whitechapel Road, E.1.
BIShopgate 3717-8-9

JABLO FLUSH DOORS

PATENTED-EXTON LICENCE

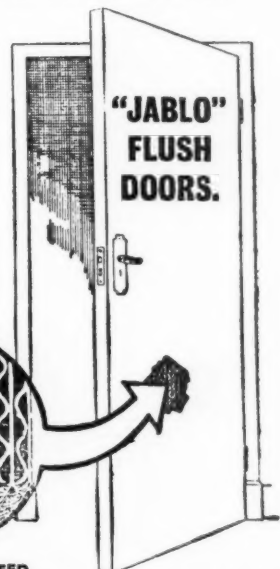
MODERATELY PRICED HIGH QUALITY

British Made CELLULAR CORE Flush Doors
FACED WITH PLYWOOD OR HARDBOARD.

- Freedom from warp and wind.
- Exceptional Lightness.
- High Thermal and Sound Insulating Properties.
- The Utmost Timber economy (.002 Standard per door).

Tested and approved by the Department of Scientific and Industrial Research.

Reviewed by Chief Adviser's Division, Ministry of Works.



FULLY GUARANTEED

The Jablo Flush Door has all the advantages of a solid core door at less than half the cost and weight - the cellular construction provides continuous adhesion and support to the facings, ensuring dead flat surfaces; undulating surfaces so often associated with hollow framed doors are impossible.

MOULDED COMPONENTS (JABLO) LTD.,
JABLO WORKS, CROYDON.

Telephone: CRO 2201-6922

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 Announcements

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

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency; the applicant is a man aged 18-64 in full-time or a woman aged 18-59 inclusive unless he or she, or the employment is excepted from the provisions of the Notification of Vacancies Order, 1952.

BOROUGH OF NEWCASTLE-UNDER-LYME.
Applications are invited for the following posts in the Borough Surveyor's Department:—

(a) ASSISTANT ARCHITECT, Grade VII (£710-£785).

(b) ARCHITECTURAL ASSISTANT, Grade IV (£555-£600).

Applicants for (a) must be Associates, R.I.B.A., and must have had considerable experience on Municipal Housing Schemes, including Flats. A house will be provided if necessary.

Applicants for (b) should have passed the Intermediate Examination of the R.I.B.A. Municipal housing experience will be an advantage.

Application Forms and Conditions of Appointment may be obtained from the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs., and applications should be returned to him by Tuesday, 26th May, 1953.

C. J. MORTON,

Town Clerk.

District Bank House, Newcastle, Staffs. 8722

COUNTY BOROUGH OF WEST HAM.
APPOINTMENT OF CHIEF ASSISTANT ARCHITECT.

Applications are invited for above. Salary, £595 by £40 by £40 to £1,225 (Plus L.A.). Applicants must be Chartered Architects, with sound knowledge of Contract Management, capable of supervising busy drawing office. Experience in Municipal housing work and in design and erection of schools essential. Knowledge of special problems arising in reconstruction of war damaged areas an advantage.

Application forms from Borough Architect and Planning Officer, Thomas R. North, O.B.E., F.R.I.B.A., Dist. T.P. 70, West Ham Lane, Stratford, E.15, returnable by 26th May, 1953.

8734

URBAN DISTRICT OF FELTHAM.
ARCHITECTURAL ASSISTANT required in the Engineer and Surveyor's Department, Grade A.P.T., V (salary: £625 × £15 × £15 × £20—£675). Applicants must be Registered Architects.

Forms of application, obtainable from the undersigned must be returned, accompanied by copies of two testimonials, not later than 28th May, 1953. Canvassing, directly or indirectly, 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. 8751

EASTERN REGIONAL HOSPITAL BOARD

(SCOTLAND).

Applications are invited for the following permanent supernumerary appointments:—

(a) ASSISTANT ARCHITECT. Salary £600—£865 per annum.

Candidates must be Registered Architects having passed the requisite examinations, and have had experience of the design, construction and maintenance of public buildings, preferably including hospitals.

(b) ASSISTANT QUANTITY SURVEYOR. Salary £600—£865 per annum.

Candidates must be Corporate Members of the R.I.C.S. and have had experience in the Scottish Mode of Measurement.

Applications, including particulars of three referees, should be sent to the Secretary, Eastern Regional Hospital Board, 430, Blackness Road, Dundee, not later than 23rd May, 1953.

8769

MINISTRY OF WORKS.

Vacancies exist in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS with recognised training and fair experience. Vacancies mainly in London and Risley (Nr. Warrington). Successful candidates will be employed on wide variety of Public Buildings including Atomic Energy and other Research Establishments, Telephone Exchanges and Housing.

London Salary: Up to £628 per annum. Starting pay according to age, qualifications and experience. Rates outside London slightly lower.

Reasonable prospects of promotion to Leading and Senior Architectural Assistant. Although these are not established posts many have long-term possibilities and competitions are held periodically to fill established vacancies.

Write stating age, nationality and full details of training and experience, to Chief Architect, W.G.10/C.A.2, Ministry of Works, Abell House, John Islip Street, London, S.W.1. 8760

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

COLLEGE OF ART AND CRAFTS.

Principal: Meredith W. Hawes, A.R.C.A., N.R.D. BIRMINGHAM SCHOOL OF ARCHITECTURE.
Director of the School of Architecture:

A. Douglas Jones, Dip. Arch (Liverpool)

F.R.I.B.A.

Applications are invited from chartered architects for appointment as part-time lecturer for 16 hours weekly.

The salary will be two-thirds of the Burnham (Further Education) Scale 1951 for Lecturers £940 by £25 to £1,040. The person to be appointed must have had first hand experience of site supervision and have knowledge of site organisation, working drawings and specifications. A knowledge of Quantities will be an advantage. The successful applicant will be required to take up duty as soon as possible and not later than 1st September.

Forms of application may be obtained from the Principal, College of Art and Crafts, Margaret Street, Birmingham, 3, on receipt of a stamped addressed foolscap envelope and must be returned not later than ten days after the appearance of this advertisement.

E. L. RUSSELL,

Chief Education Officer.

8762

MIDDLESEX COUNTY COUNCIL—

COUNTY ARCHITECT'S DEPARTMENT.

ARCHITECTURAL ASSISTANT required, A.P.T. II, (£455 to £540 p.a., plus London Weighting). Appointment at grade minimum. Must have R.I.B.A. Inter. Exam. Established pensionable, subject to medical assessment and prescribed conditions. Application forms (stmpd. add. env. fscap) from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 26th May (quoting M.4 A.J.). Canvassing disqualifies. 8763

LANCASHIRE COUNTY COUNCIL.

SECTIONAL PLANNING OFFICER, A.P.T. VIII (£760—£835) required in Accrington Divisional Planning Office.

Considerable experience in Town Map preparation and administration of Town and Country Planning Acts and Orders is essential. Candidates should be qualified architects; a planning qualification in addition would be an advantage.

Applications giving experience, present salary and two referees to the County Planning Officer, East Cliff County Offices, Preston, by 27th May, 1953. 8756

URBAN DISTRICT COUNCIL OF CORBY.

ENGINEER & SURVEYOR'S DEPARTMENT.

Applications are invited for the undermentioned appointment on the permanent staff of the Council's Engineer and Surveyor.

TRACER/DRAUGHTSMAN (Male or Female). Salary in accordance with Grade III of the Miscellaneous Division of the National Scale of Salaries, commencing at £375 per annum (£375—£440).

Applicants must be neat and expeditious draughtsmen, well experienced in the tracing of Architectural drawings and must be able, also, to undertake lettering thereon of a high standard.

Housing accommodation will be made available to the selected candidate (if married). The provisions of the Local Government Superannuation Act, 1937, will apply.

Forms of application can be obtained from the undersigned to whom they should be returned completed by not later than Tuesday, the 19th May, 1953.

G. B. BLACKALL,

Clerk of the Council.

Council Offices, Corby, Northants. 8759

WEST SUFFOLK COUNTY COUNCIL.

ASSISTANT QUANTITY SURVEYOR, N.J.C. service conditions, salary £525—£600 (A.P.T. III—IV). Post pensionable; medical examination.

Applicants should be of Intermediate R.I.C.S. standard; duties will include working up and taking off, and measurement of variations both under the Standard Method and the Code of Measurement.

Application forms and particulars of housing accommodation obtainable from the Clerk of the County Council, Shire Hall, Bury St. Edmunds. Applications to be returned by 30th May, 1953. 8776

ARGYLL COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

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

(a) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade III (£520—£565).

(b) JUNIOR ARCHITECTURAL ASSISTANT, A.P.T. Grade I—III (£460—£565).

The above appointments are on the permanent staff and will be subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937. The successful candidates will require to pass a medical examination.

Applications, stating post applied for, age, qualifications and experience, accompanied by copies of two recent testimonials, to be lodged with the County Architect, County Offices, Dunoon, within ten days of the appearance of this advertisement.

A. D. JACKSON,

County Clerk.

8773

BOROUGH OF WALTHAMSTOW.

ASSISTANT ARCHITECT.

Applications are invited for the above appointment on Grades I/V, A.P.T. Division (£495-£675 inclusive of London weighting), commencing salary according to qualifications and experience.

Applications, with names of two persons to references, should be received by the undersigned not later than Saturday, the 30th May, 1953, endorsed "Assistant Architect."

G. A. BLAKELEY,

Town Clerk.

Town Hall, Walthamstow, E.17.

WESTERN AUSTRALIA.

STATE PUBLIC SERVICE.

SENIOR TOWN PLANNING OFFICER.

Salary range: £1,355-£1,455 (gross) Australian currency per annum on present basic wage.

Qualifications: Degree or qualification in Architecture, Engineering or Surveying, supplemented by additional qualification and experience in Town Planning.

Duties: Successful applicant will be required to carry out responsible work under the Town Planning Commissioner in the preparation of a plan for the Perth Metropolitan Region and co-ordinated planning of the remainder of the State. Conditions of Service: Permanent appointment subject to a probationary period of 2 years. General conditions of service as for permanent officers under the Public Service Act except that superannuation rights will not accrue until permanency is conferred.

Transport: A reasonable amount will be allowed for transport of appointee and dependent family to Western Australia.

Further particulars may be obtained from, and applications stating age, qualifications, experience, and marital status, should be addressed by 23rd May, 1953, to:

THE OFFICIAL SECRETARY.

Agent-General for Western Australia,

115/16, Strand, London.

8771

WEST MIDLANDS GAS BOARD.

ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments on the Divisional Staff of the Walsall and District Division. The successful applicants will be required to work in Smethwick, and the estimated duration of engagement is three years.

SENIOR ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade 10 (£655 × £25—£765 per annum), of the National Salary Scales for Gas Staffs.

Candidates should be capable of preparing sketch plans and working drawings and compiling specifications for large new industrial projects with a minimum of supervision.

ARCHITECTURAL ASSISTANT, at a salary in accordance with Grade 6 (£490 × £20—£570 per annum), of the National Salary Scales for Gas Staffs.

Candidates should possess a sound knowledge of building construction, and be capable of preparing working and detailed drawings in conjunction with industrial and commercial buildings.

Applications, stating age and giving full particulars of education, qualifications and experience, together with the names of two referees, should be addressed to Mr. E. Hardiker, Divisional General Manager, West Midlands Gas Board, Walsall and District Division, Walsall Factory Estate, Tame Bridge, West Bromwich Road, Walsall, to reach him within fifteen days of the appearance of this advertisement.

F. H. CURETON,

Secretary to the Board.

8770

COUNTY BOROUGH OF NORTHAMPTON.

(1) SENIOR TOWN PLANNING ASSISTANT, A.P.T., VI (£670-£735).

(2) ASSISTANT ARCHITECT (EDUCATION), A.P.T., V (£595-£645).

(3) JUNIOR ARCHITECTURAL ASSISTANT, A.P.T., I (£465-£510).

Particulars of the above appointments and forms of application, to be returned by 27th May, 1953, may be obtained from the Borough Architect, Guildhall, Northampton.

C. E. VIVIAN ROWE,

Town Clerk.

8768

QUANTITY SURVEYOR.

IMPERIAL WAR GRAVES COMMISSION require QUANTITY SURVEYOR for Italy. Salary £628, rising to £970, entry up to £875 according to age, plus variable Foreign Allowance, at present £645 for married man accompanied by wife, or £490 for married man unaccompanied, or £270 for single man, plus rent allowance in each case. Candidates should be A.R.I.C.S. or equivalent.

Duration of appointment about 18 months. Apply, Appointments Officer, Imperial War Graves Commission, Woodburn House, Woodburn Green, High Wycombe, Bucks. 8796

STEVENAGE DEVELOPMENT CORPORATION.

CHIEF ARCHITECT'S DEPARTMENT.

Applications are invited to fill vacancies for JUNIOR ARCHITECTS on salary grades £475 × £25—£540; £540 × £25—£600; or £605 × £25—£645; according to experience.

Candidates should have completed a course at a recognised School of Architecture, or have passed the final examination of the R.I.B.A.

Applications, stating age, qualifications and experience and giving names of two referees, to be sent to the Chief Administrative Officer, Aston House, Nr. Stevenage, Herts, not later than Thursday, 21st May, 1953. 8795

**COUNTY COUNCIL OF DURHAM.
COUNTY PLANNING DEPARTMENT.**

Applications are invited for the following permanent appointments in the County Planning Department:—

(a) **ONE PLANNING ASSISTANT, Grade VI, A.P.T.** (Commencing salary £670, rising, subject to satisfactory service, by annual increments to £735.)

(b) **ONE LANDSCAPE ARCHITECT, Grade IV, A.P.T.** (Commencing salary £555, rising, subject to satisfactory service, by annual increments to £605.)

Applicants for (a) Must have passed the Final Examination of the Town Planning Institute, and have had considerable experience in all phases of planning work; and for (b) Must have passed the Final Examination of the Institute of Landscape Architects (or its equivalent) and have had practical experience in landscape work, preferably in a Planning Office.

The appointments are subject to such conditions of the National Scheme of Conditions of Service as have been adopted by the Council; to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination by the Council's Medical Officer; to termination by one calendar month's notice in writing on either side. Canvassing, either directly or indirectly, will disqualify, and applicants must disclose in writing whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating age, whether married or single, and giving full particulars of qualifications, experience, present appointment and salary, and the names of two persons to whom reference may be made, must be delivered to the County Planning Officer, 10, Church Street, Durham, by Saturday, 30th May, 1953.

J. K. HOPE,

Clerk of the County Council.

Shire Hall, Durham.
6th May, 1953.

8797

UNIVERSITY OF HONG KONG.

Applications are invited for the vacant post of **LECTURER IN ARCHITECTURE**. Total emoluments for a single man not normally resident in Hong Kong or China are £1,240 by £40 to £1,480 per annum. There is an additional allowance for married men of £160 per annum.

Applicants must be qualified Architects, preferably Fellows or Associates of the R.I.B.A. and should have had considerable practical and teaching experience.

First class sea passages and accommodation at reasonable rentals are provided from expatriate staff.

Further particulars and information as to method of application may be obtained from the Secretary, Association of Universities of the British Commonwealth, 5, Gordon Square, London, W.C.1. Closing date for the receipt of applications is June 30th, 1953.

8784

**LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.**

PLANNING OFFICERS, Grade III (up to £837 10s.) and **TECHNICAL ASSISTANTS** (up to £696).

Professional qualifications A.R.I.B.A., A.R.I.C.S. and/or A.M.T.P.I. required. Application forms (for return by 30th May) and particulars from Architect (AR/EK/P/4) County Hall, S.E.1. (488).

8786

COUNTY BOROUGH OF CROYDON.

Applications are invited for the following appointments in the School Architect's Section:—
(a) **JUNIOR ARCHITECTURAL ASSISTANT** (Inter R.I.B.A.—salary A.P.T. II, £495 by £15 to £540 per annum).

(b) **DRAUGHTSMAN—R.I.B.A. Probationer**—salary A.P.T. I, £465 by £15 to £510 per annum. London Weighting is also payable.

Applications, on forms obtainable from the Chief Education Officer, Katharine Street, Croydon, must be submitted to him by 30th May, 1953.

E. TABERNER,

Town Clerk.

28th April, 1953.

8783

**CITY OF BIRMINGHAM EDUCATION
COMMITTEE.
APPOINTMENT OF STAFF TO ARCHITECT'S
BRANCH.**

Applications are invited for the following appointments in the Architect's Branch of the Birmingham Education Department (Architect to the Committee: Mr. J. R. Sheridan-Shedden, A.R.I.B.A.):—

ASSISTANT CLERKS OF WORKS.

(Temporary.)

Salary: Miscellaneous Grade IV (£440-£495). Applicants should have had a thorough technical training and experience in building construction materials.

Application forms, which may be obtained from the undersigned on receipt of a stamped addressed envelope, must be returned not later than 1st June.

E. L. RUSSELL,

Chief Education Officer.

Education Office,
Margaret Street, Birmingham, 3.

8782

COUNTY BOROUGH OF GLOUCESTER.

(Pop. 67,000.)

**APPOINTMENT OF CITY ARCHITECT AND
ESTATES MANAGER.**

Applications are invited for the above dual appointment from persons not exceeding 45 years of age, preferably with local government experience, qualified to undertake the duties thereof. Enquiries by personal telephone call only to City Architect (22232) answered.

Salary (£1,450 by £50 to £1,650) and Conditions of Service in accordance with Recommendations of J.N.C. for Chief Officers of Local Authorities. (12/50.)

Appointment subject to appropriate Superannuation enactments, and to termination by 3 months' notice on either side.

Applications stating age, qualifications and previous and present appointments and present salary, and also the names of not more than three referees, to be delivered to me by the 8th June, 1953.

Canvassing prohibited and will disqualify.

L. O. NEED,

Town Clerk.

Guildhall, Gloucester.

8780

**GLAMORGAN COUNTY COUNCIL.
HIGHWAYS & PLANNING DEPARTMENT.**

Applications are invited for the following permanent appointment at Headquarters, County Hall, Cardiff:—

ONE SENIOR PLANNING ASSISTANT. Grade A.P.T. VI. (£670 by £20 (2) by £25 to £735 per annum).

The appointment is subject to the National Scheme of Conditions of Service, and to the staffing regulations of the County Council from time to time in force. Applicants must have passed the Final Examination of the T.P.I., the I.C.E., the I.M.M.E., or the R.I.C.S.

A wide knowledge of planning technique is required and candidates must have had previous experience in the preparation of a Development Plan, be competent to analyse survey and research work, and be able to assess facilities required in existing or proposed communities.

Applications stating age, training, qualifications, experience and present salary, and accompanied by two testimonials, should be sent to the County Planning Officer at this address, and received not later than seven days from the date of the appearance of this advertisement.

D. J. PARRY,

Clerk of the County Council

Glamorgan County Hall, Cardiff.

4th May, 1953.

8779

POPULAR BOROUGH COUNCIL invite applications from Registered Architects for established post of **ARCHITECTURAL ASSISTANT, A.P.T. V** (£595-£645 plus London Weighting). Forms obtainable from Borough Engineer & Surveyor, Poplar Town Hall, Bow Road, E.3. Closing date 1st June, 1953.

8785

METROPOLITAN BOROUGH OF

**BERMONDSEY.
ARCHITECTURAL ASSISTANT** (permanent) required—£455 to £630 per annum. Form and particulars from Town Clerk, Bermondsey. Closing date 23rd May, 1953.

8761

**BOROUGH OF BARKING.
DEPARTMENT OF THE BOROUGH
ARCHITECT.**

APPOINTMENT OF ARCHITECTURAL ASSISTANT TO ESTABLISHED STAFF. Applications are invited for the appointment of **ARCHITECTURAL ASSISTANT** on Grade A.P.T. IV at a commencing salary of £465, plus London Weighting.

Further particulars and form of application may be obtained from the Borough Architect, Town Hall, Barking. Completed applications should reach the undersigned not later than 22nd May, 1953.

E. R. FARR,

Town Clerk.

Town Hall,
Barking, Essex:

8781

Tenders for Contracts

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

CITY OF DURHAM.

**ERECTION OF 54 FLATS—SUNDERLAND
ROAD ESTATE (SCHEME '2).**

The Council invites tenders for the erection of 54 three storey flats in three blocks on the Sunderland Road Estate, Durham.

Bills of Quantities and Forms of Tender may be obtained from J. W. Green, Esq., F.R.I.B.A., City Engineer & Architect, Town Hall, Durham, on payment of a deposit of £2 2s. 6d. which will be refunded on receipt of a bona-fide tender not afterwards withdrawn and the return of all documents.

Plans, specification and Conditions of Contract may be examined at the office of the City Engineer during normal office hours.

Tenders enclosed in plain sealed envelopes bearing the words "Flats—Sunderland Road Estate," but not bearing any name or mark indicating the sender must be delivered at my office (in or before Friday, the 12th June, 1953. The Council's standing orders provide that no tenders will be received except those sent in complying with the above directions.

The Council does not bind itself to accept the lowest or any tender.

D. B. MARTIN JONES,

Town Clerk.

32, Claypath, Durham.

8748

Competition

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

BOROUGH OF DOVER.

ARCHITECTURAL COMPETITION.

The Dover Corporation invites Architects resident in the United Kingdom to submit designs in competition for dwelling accommodation on a site in Marine Parade, Dover. The site has an area of 6.5 acres, excluding portions of surrounding streets.

The Assessor for the Competition is Mr. Arthur W. Kenyon, C.B.E., F.R.I.B.A., Dist.T.P., M.T.P.I., and the following premiums are offered:—

(1) 1,000 guineas; (2) 500 guineas; (3) 250 guineas; (4) 150 guineas; (5) 75 guineas; (6) 50 guineas.

The closing date for the submission of designs is the 10th September, 1953, and the last day for questions is the 15th June, 1953.

Competition Conditions and plan of the site may be obtained from the undersigned, on payment of a deposit of two guineas, which will be returned on receipt of a bona fide design, or on the return of the Competition documents at least four weeks before the last day for the submission of designs.

JAMES A. JOHNSON,

Town Clerk.

New Bridge House, Dover.

8710

Stainless Efficiency

BY
**ASSOCIATED
METALS**

Beautifully fabricated equipment in

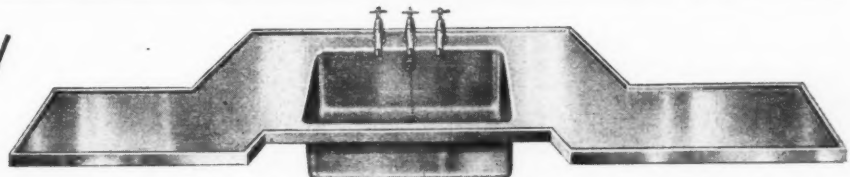
STAINLESS STEEL

to your requirements, or from an extensive range of standards

Our long specialised experience

permits us to quote moderate prices.

PLEASE ASK FOR CATALOGUES



This is a typical household model

Associated Metal Works

(GLASGOW) LTD.

30 ST. ANDREW'S SQUARE, GLASGOW, C.I.

Phone: BELL 2004/5

Grams: STAINLESS GLASGOW

LONDON: 7 Grosvenor Gardens, S.W.1. Phone: Victoria 1977/8

Architectural Appointments Vacant

4 lines or under, 1s. 6d.; each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

SENIOR ARCHITECTURAL ASSISTANT for maintenance and new building work. Should have varied general experience, with knowledge of quantities, estimating, building accounts and control of contracts. Commencing salary £630, plus 12½ per cent. temporary allowance per annum or according to experience. Applications should be made in writing giving full particulars to Managing Director, Cable & Wireless, Ltd., Electra House, Victoria Embankment, London, W.C.2. 8730

ARCHITECTURAL ASSISTANT required in Architects' Department of a City Firm of Architects and Surveyors. Capable of preparing working drawings and taking charge of jobs through all stages. Good opening for the right man. Write, stating age, experience, and salary required, to Box 8713.

ARCHITECT'S ASSISTANT required for Norfolk office. Intermediate standard, able to drive car. Details, including salary required, to Box 8679.

ARCHITECTURAL ASSISTANT required in West End office. Junior or Intermediate, with detailing experience. Box 8717.

SMALL busy Manchester practice requires competent **ASSISTANT**, with sound constructional knowledge. Salary by arrangement. Box 8745.

ARCHITECTURAL ASSISTANTS required immediately. Beyond Intermediate standard. Must be quick, accurate draughtsmen. Only applicants who can start immediately need apply. Details of experience and salary required to W. S. Hattrell & Partners, F./A.R.I.B.A. 1, Queens Road, Coventry. 8802

EXPERIENCED ARCHITECTURAL ASSISTANT required in London office. General Practice. Must be good draughtsman, with sound knowledge of construction and at least 3-5 years' practical office experience. Apply to Secretary, Gale, Heath & Co., 15, New Bridge Street, E.C.4. Tel. Central 1651. 8801

ARCHITECT'S Department of large commercial organization requires **ASSISTANTS**. Sound all-round training in the profession essential, including supervision of work. Excellent opportunities for men of initiative. Apply in writing, giving details of experience, age and salary required, to Box 3582/1, Foster Turner & Everetts, Ltd., 11, Old Jewry, E.C.2. 8800

ARCHITECTURAL DRAUGHTSMAN required at London headquarters of national soft drinks manufacturer. Sound knowledge of building construction, ability to survey and prepare working drawings. Some engineering knowledge also an advantage. Write, giving full particulars and salary required, Box 8778.

ARCHITECTURAL ASSISTANT, Intermediate standard, required for office in Cotswold area. Application, stating age, experience, and salary required, to Eric Cole & Partners, F.F.R.I.B.A., Dyer Street House, Cirencester, Glos. 8767

JUNIOR ASSISTANT—Keen draughtsman required immediately for rebuilding programme. Write experience and salary required to Architect's Department, Zoological Society of London, Regent's Park, N.W.1. 8799

ARCHITECTURAL DRAUGHTSMAN for Pre-cast Concrete design required by large firm of Manufacturers in Wolverhampton district. Apply, stating age, experience, and salary required, to Box 8766.

EXPERIENCED ARCHITECTURAL ASSISTANT required for West End Architects' office. Please apply in writing, stating age, experience, salary required, and when free to commence work. Box 8765.

ASSISTANT ARCHITECT, age 25-30, required by large commercial and property owning company in W.I. Inter. standard at least, with commercial experience. Capable of executing whole job under minimum supervision. Salary £575-£650, according to experience. Box 8774.

EXPERIENCED ARCHITECTURAL ASSISTANT, preferably under 30 years, required immediately for varied London W.I. practice. Must be neat and accurate, with sound knowledge of construction, surveying and detailing. Permanency and good prospects with possibility of future partnership for right man. State age, experience salary required, and when available, to Box 8758.

APPLICATIONS are invited for the following appointment in the office of the Civil Engineer, British Railways, North Eastern Region, York:—

LEADING ASSISTANT ARCHITECT. Should be qualified and have several years' experience. Responsible for developing schemes and preparing working drawings, and should possess sound knowledge of building construction. Commencing salary range, £818 to £968, according to qualifications and experience.

Applications should be addressed to the Civil Engineer, York, so as to arrive by 30th May. 8764

RONALD WARD & PARTNERS require **ASSISTANTS**. Intermediate standard. Apply Victoria 5531. 8768

SCOTT & WESTMORELAND, F./F.R.I.B.A. require competent **ASSISTANT**. Telephone Chancery 7790 for appointment. 8790

ASSISTANT required in Architect and Surveyor's Department of a large Brewery in London for work in connection with industrial buildings. Applicants should be neat and accurate draughtsmen, able to carry out surveys of existing buildings, prepare working drawings and specifications. Reply, stating age, experience, past and present appointments, and salary required, to Box 8791.

BRANCH MANAGER, Fellow or Associate R.I.B.A. for Branch of important Northern Rhodesian practice. Salary £960 p.a. plus bonus participation. House available. Apply quoting Box 37/4 to Overseas Technical Service, 5, Welldon Crescent, Harrow. 8809

ARCHITECTURAL ASSISTANT, Berkshire. Experience in detailing and general working drawings essential. Reply, giving age, experience, and salary required, to Box 8768.

Architectural Appointments Wanted

A.R.I.B.A., 33, single, seeks position leading to partnership. Some capital available. Box 8650.

A.R.I.B.A. (36), 17 years' varied experience. At present associated with well-known London Architects, seeks responsible position in progressive firm. Excellent design, administrative and supervisory ability. Present remuneration approx. £1,500 p.a. Box 8777.

A.R.I.B.A. (33) seeks responsible position. London. Present Chief Assistant in medium size office (about 8/10 assistants). Used to big contracts. 16 years' general private practice experience. Box 8724.

ARCHITECT, A.R.I.B.A. (30), with all-round experience, industrial housing, etc., seeks part-time work or employment to assist build up of own practice. Please write Box 8805.

Other Appointments Vacant

4 lines or under, 1s. 6d.; each additional line, 2s.


The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

EXCEPTIONAL opportunity is offered by old established Company of Flooring Specialists, with a turnover of £250,000, to a Representative for the Midlands and West Country territory. An excellent connection is already developed in the area. Knowledge of the building trade and a connection with Architects and Contractors would be an advantage. Residence in the Birmingham district is essential. Remuneration is by salary and commission and all expenses are paid. Company car is provided. Successful applicant can earn £1,750 to £2,000 p.a. Existence of the vacancy is known in the Advertiser's Organisation and applications will be treated in the strictest confidence. Those applying should write in the first instance to Box 387, S. C. Peacock, Ltd., Advertising Agents, 21, Leigh Street, Liverpool, 1. 8702

DRAUGHTSMAN (male or female) required, with office experience and knowledge of construction, able to work up rough drafts. Qualifications immaterial. Reply, stating wages and experience, Parker & Parker, Architects, Wisbech. 8775

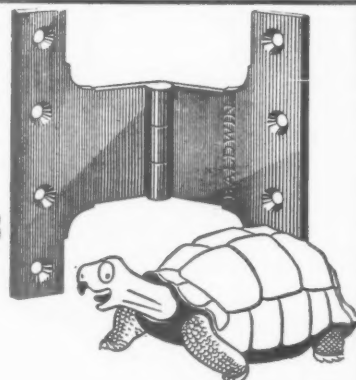
H. NEWSUM, SONS & CO., LTD., Lincoln, in process of developing new structural project, require young man, 24-30 years, with minimum 3 years' experience drawing office and preparation of estimates. Salary according to experience. Staff pension scheme. Apply, in writing, to the Secretary at above address. 8792

FOR
ARCHITECTURAL
PHOTOGRAPHY
In the North East of England



PHILIPSON STUDIOS
20, Oxford St., Newcastle upon Tyne
Telephone Newcastle 27281

FOR
LONG LIFE...
FIX
BALDWIN'S
HINGES



Sole Manufacturers:
BALDWIN, SON & CO. LTD., STOURPORT-ON-SEVERN



**BISON
FLOORS
AND
ROOFS**

Leaders
in
Prestressed
Floors

Openings with Ease

The accommodation of services presents no difficulty with BISON floor and roof units. Holes may be cut through the hollow section of the slabs or alternatively cast during manufacture, to meet your particular requirements.

CONCRETE LIMITED
London . Leeds . Lichfield . Falkirk . Edinburgh

EXPERIENCED SHOP FITTING DRAUGHTSMAN required. Pay £7 a week, more according to experience. Apply Dept. of Personnel, John Lewis & Co., Ltd., 32, Cavendish Square, W.1. 8798

QUANTITY SURVEYOR—Energetic, keen qualified Surveyor required by old-established firm of Architects fully experienced to take charge of Quantity Surveying Department. Progressive position. Apply, stating age, salary, experience, with references, Harrison & Cox, 49, Frederick Road, Edgbaston, Birmingham. 15. 8803

ASSISTANT QUANTITY SURVEYOR for professional office in Northern Rhodesia. Applicants of R.I.C.S. Inter standard will be encouraged to qualify. Initial salary £500 p.a. rising to £720 on passing Final. Single men accommodation provided at £6 per month. Apply quoting Box 37/3 to Overseas Technical Service, 5, Welldon Crescent, Harrow. 8810

SECRETARY/SHORTHAND TYPIST required five mornings or afternoons, Chancery Lane office. Bookkeeping required. Please submit details of experience and salary required. Box 8686.

Services Offered

FREE-LANCE ARCHITECT available to assist over-worked Architects in Exeter-East Devon area. Drawings, surveys, etc. Neat draughtsman. Own car and office facilities. Box 8755.

ARCHITECT, A.R.I.B.A., 11 years' varied experience, London, wishes to assist busy Architects with Sketch Designs, Working Drawings, Details, etc., on a free-lance basis. Own car and willing to call on Architects anywhere Southern England or Midlands. Box 8804.

SPECIFICATIONS written from draft drawings for all contracts (especially for tenders where no quantities), and reports on condition, dilapidations, etc., in London and Home Counties, by qualified experienced Architect. Box 8807.

PERSPECTIVE Commissions accepted. C. Giffard, M.A., A.R.I.B.A., Rudloe House, Wilts. Tel. Corsham 3210. Box 8757.

EXPERIENCED AUSTRALIAN ARCHITECT, currently employed by West End firm, wishes to undertake additional work on contract or hourly basis (working drawings, models, etc.). Phone Palmer, GRO. 5987, or Amersham 431. 8787

For Sale or Wanted

RECONDITIONED EX-ARMY HUTS, and manufactured buildings. Timber, Asbestos, Nissen type, Hall type, etc. All sizes and prices. Write, call, or telephone, Universal Supplies (Belvedere), Ltd., Dept. 25, Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948. 6803

FOR SALE: large number of secondhand 57½ "Winget" Portable Petrol Driven Concrete Mixers on four steel road wheels. Only worked on one contract. Thos. W. Ward, Ltd., Albion Works, Sheffield. 8666

APPROX. 10,000 hand-made Kentish clay pegged Roofing Tiles cleaned and stacked ready for collection. Broadstairs. Box 8718.

BUILDINGS FOR SALE—Prefabricated Offices, Factories, Stores, Workshops, Canteens, etc. Halls, Clubs, Garages, etc.; large and small. Apply for details and prices, stating your requirements to J. Thorn & Sons, Ltd., Box No. 126, Brompton Road, Bexleyheath, Kent. (Tel.: Bexleyheath 305.) 7947

PROPERTY FOR SALE A 15th CENTURY HOUSE OF SPECIAL ARCHITECTURAL INTEREST.

in the heart of the lovely Sussex Downs, only 5 miles from the sea.

IT IS PROPOSED TO DIVIDE THE HOUSE VERTICALLY.

so that the portion to be sold will if desired provide 6 Bedrooms, 2 Reception, etc. An old English garden and courtyard entrance.

It is intended to leave the conversion to the purchaser. Enquiries from Architects acting for clients would be welcomed. Illustrated leaflets and plan may be seen at Messrs. Maple & Co., Ltd., Estate Offices, 5, Grafton Street, Old Bond Street, W.1. (Regent 4685). 8789

BUILDING SITE for Sale, N.W.5. Secluded position, 100 ft. by 60 ft. Planning approved. Freehold, £800. Phone GUL. 6542. 8793

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, Gates and Cloakroom Equipment. Harvest Works, 96/107, St. Paul's Road, N.1. Canonbury 2061.

PICTURE FRAMING—Drawings, Maps, Photographs, etc., framed at short notice. Over 200 mouldings in stock. Samples and prices on request. Blackman, Harvey, Ltd., 11, Bateman's Buildings, Soho Square, London, W.1. GEN. 3463. 8416

WOMAN ARCHITECT wishes to share her s.c. flat with another professional woman. Fifteen minutes Central London. Own room available, partly furnished. Reasonable. Box 8739.

AMERICAN DESK SERVICE, Bond Street address. Letters, telephone, messages, from 15s. p.w. For particulars 'phone GRO. 1454 or write 109, New Bond Street, W.1. 8806

BOOKS, Rare and Scholarly, on a variety of subjects. Catalogue B/53, 1,062 items, 1540-1950, free. Stevens Cox, Antiquarian Bookseller, Ilchester, Yeovil. 8794

BILLS OF QUANTITIES, Specifications, typed and duplicated. All office staff supplied, temporary or permanent. Trinity Bureau, 50, Bedford Street, Strand, W.C.2. Tem. 3002. 8811

Educational Announcements

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

R. I.B.A. AND T.P.I. EXAMS—Stuart Stanley (Ex. Tutor Sch. of Arch., Lon. Univ.) and G. A. Crockett, M.A./B.A., F./F.R.I.B.A., M.A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.), prepare Students by correspondence tuition, 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

RIBA INTER, FINAL & SPECIAL FINAL

Postal Courses in all or any subjects including Design and Professional Practice, Consultation arranged

THE ELLIS SCHOOL

Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A., 103B, OLD BROMPTON RD., LONDON, S.W.7
Phone: KEN 4477/8/9 and 1 at Worcester

SIGNS and LETTERS

IN METAL, WOOD, PERSPEX.
PRODUCED IN OUR OWN UP-TO-DATE WORKSHOPS BY SKILLED CRAFTSMEN.
BUILT TO YOUR SPECIFICATION.

SIGN SERVICE, 9, HIGH STREET, BIRMINGHAM 23
Phones: Erdington 5234/5

ASPHALT WORK TO ALL B.S.S.

COVERITE (ASPHALTERS) LTD.
PALACE GATES STN. N.22. Bowes Park, 1827

FENCING

BOULTON

&

PAUL LTD.

NORWICH

EXAMINATION CANDIDATES!

you are coached by **ICS** until you pass

Students enrolling with I.C.S. for examination courses are coached without extra fee until they pass. Many brilliant successes are gained each year in R.I.B.A., R.I.C.S., I.Q.S., I.Struct.E., I.Mun.E., Examinations. Fees are moderate and include all books required. Reduced Terms to H.M. Forces.

WRITE TODAY FOR FREE BOOKLET giving full details of YOUR examination or non-examination subject.

INTERNATIONAL CORRESPONDENCE SCHOOLS
Dept. 5B, 71 KINGSWAY, LONDON, W.C.2



IT'S CLEAN AS WELL AS CLEVER

Architectural drawings can be mounted and covered in a few minutes by the "Ademco" dry mounting and heat sealing process. It is clean and easy to do and drawings treated in this way have a longer life, will not easily crease or tear, and can be kept absolutely free from finger prints.

Ask your drawing office to write for full details today.



The Adhesive Dry Mounting Co. Ltd., Dept. A219, 26 Stamford Street, S.E.1. WATERLOO 3484

"ADEMCO" is a registered trademark.

BRYCE WHITE LTD.

SEND FOR OUR ILLUSTRATED LITERATURE AND SELECT YOUR DOORS

HEAD OFFICE: DESERONTO WHARF, LANGLEY, BUCKS. Telephone: LANGLEY 232

FROM THE LARGEST AND MOST VARIED STOCK IN THE TRADE

SOUTHALL 2231. BRANCHES IN LONDON, BRISTOL, SOUTHAMPTON

Alphabetical Index to Advertisers

Acrow (Engineers), Ltd.	PAGE lxxxv	Econa Modern Products, Ltd.	PAGE lxxxv	Midland Electric Mfg. Co., Ltd.	PAGE xiv
Adams, Robt. (Victor), Ltd.	lxxxv	Ellis School of Architecture, The	xcii	Mills Scaffold Co., Ltd.	xciv
Adams, Ltd.	xlvi	Ellis, John, & Sons, Ltd.	lxxxii	Monsanto Chemicals, Ltd.	lxxxvii
Adhesive Dry Mounting Co., Ltd., The ...	xcii	Engravers' Guild, The	xcii	Moulded Components (Jablo), Ltd.	lxxxvii
Aidas Electric, Ltd.	lxxxv	Farrer, Wm. E., Ltd.	xcii	National Federation of Clay Industries	xxv
Anderson Construction Co., Ltd.	lxxxv	Finlock Gutters, Ltd.	lxxvii	Permanite, Ltd.	lxxxv
Anderson, D., & Son, Ltd.	xliv	Flexo Plywood Industries, Ltd.	lii	Phillipson & Son, Ltd.	xx
Andrews, A., & Sons, Ltd.	lxxxvii	Fordham Pressings, Ltd.	lvi	Phoenix Rubber Co., Ltd.	xlvi
Architects' Benevolent Society	lxxxvii	Franki Compressed Pile Co., Ltd., The ...	xxvii	Pilkington Brothers, Ltd.	lxxxv
Architectural Press Ltd., The lxxxii, lxxxv, xxxvi		French, Thos., & Sons, Ltd.	lx	Pollard, E., & Co., Ltd.	vi
Armstrong Cork Co., Ltd.	lxxxv	Gas Council, The	xxxiii, xlvii	Prodorite, Ltd.	—
Associated Metal Works (Glasgow), Ltd.	lxxxix	Girling Ferro-Concrete Co., Ltd.	xlvi	Pynford, Ltd.	ii
Austin, Jas., & Son (Dewsbury), Ltd.	xxvi	Glow-Worm Boilers, Ltd.	xvii	Quiz Electrics, Ltd.	lvi
Automatic Pressings, Ltd.	lxxxv	Greenwood's & Airvac Ventilating Co., Ltd.	ii	Radiation Group Sales, Ltd.	xxxvii
Baldwin, Son & Co., Ltd.	xc	Hangers Paints, Ltd.	xlvi	Rawplug Co., Ltd., The	lviii
Baume & Co., Ltd.	lxxviii	Harper & Tunstall, Ltd.	lxxxvii	Richards Tiles, Ltd.	xxii
Boulton & Paul, Ltd.	xcii	Harvey, G. A., & Co. (London), Ltd.	iii	Robbs Cement Enamel Finishes, Ltd.	lxx
Briggs, Wm., & Sons, Ltd.	xi	Henderson, Ian, Ltd.	lxxxv	Roller Shutters, Ltd.	lxxxviii
Brightside Foundry & Engineering Co., Ltd.	x	Henderson, P. C., Ltd.	lxii	Ruberoid Co., Ltd., The	lxxxv
British Hermeseal, Ltd.	lxxxviii	Hickson's Timber Impregnation Co. (G.B.), Ltd.	lxxxviii	Saiguard Appliances, Ltd.	liv
British Plaster Board, Ltd., The	xlvi	Higgs & Watts, Ltd.	lxxxviii	Sankey-Sheldon, Ltd.	lxix
British Plumber, Ltd.	xxxvi	Hobbs, Hart, & Co., Ltd.	lxxxviii	Saro Laminated Products, Ltd.	xxxviii
British Trolley Track Co., Ltd.	lxxxix	Hollis Bros., Ltd.	lx	Sealanco (St. Helens), Ltd.	xv
Britnac Electrical Co., Ltd.	xlvi	Holoplast, Ltd.	l	Sealcrete Products, Ltd.	lxxxix
Broad & Co., Ltd.	lxxiv	Hope, Henry & Sons, Ltd.	lxix	Sign Service	xcii
Brown, Donald (Brownall), Ltd.	lxxxvii	Hygienette Mfg. Co., Ltd.	lxv	Smith & Pearson, Ltd.	xlvi
Bryant, C., & Son, Ltd.	xxv	Insultite Products Corporation, Ltd.	lxx	Smith & Rodger, Ltd.	lxxxv
Bryce White & Co., Ltd.	xcii	International Correspondence Schools...	xcii	Smith, Thomas, & Son, Ltd.	lxxxvii
Carter & Co., Ltd.	Front cover	Jeffrey Tiles, Ltd.	lxxxvii	Solignum, Ltd.	lxxxii
Celotex, Ltd.	xxiv	Johns, Edward, & Co., Ltd.	xxii	Sommerfeld's, Ltd.	lxxxvi
Cement Marketing Co., Ltd., The	vii	Johnson Fireclay Co., Ltd.	xix	Speedwell Gear Case Co.	lv
Chloride Batteries, Ltd.	v	Jones, T. C., Ltd.	iv	Thermalite, Ltd.	xxxii
Concrete, Ltd.	xc	Ketton Portland Cement Co., Ltd.	xxx	T.M.C. Harwell (Sales), Ltd.	xx
Costain, Richard, Ltd.	xcii	King, George W., Ltd.	lxxxv	Townson, Wm., & Sons, Ltd.	viii
Coverite (Asphalts), Ltd.	lxxxix	Laing, John, & Son, Ltd.	—	Tretol, Ltd.	—
Cox & Co. (Watford), Ltd.	xliv	Lead Industries Development Council...	lv	Troughton & Young (Lighting), Ltd. ...	lxxxv
Crefield, C. V., & Co., Ltd.	lxvii	Leatherford, Ltd.	lxxxvii	Trussed Concrete Steel Co., Ltd.	lxxxvii
Croogon & Co., Ltd.	lxvii	Leeds Fireclay Co., Ltd., The	xciii	Turner's Asbestos Cement Co., Ltd.	—
Cullum, Horace W., & Co., Ltd.	lxvii	London Brick Co., Ltd.	xciii	Uni-Secc, Ltd.	lvii
Docker Brothers	xii	Macandrews & Forbes, Ltd.	xciii	Venus Pencil Co., Ltd., The	—
Doulton & Co., Ltd.	lvi	McCarthy, M., & Sons, Ltd.	xxxv	Versil, Ltd.	iii
Downing, G. H., & Co., Ltd.	xxv	Magnet Timber, Ltd.	lxxvii	Walker, Crosswell & Co., Ltd.	xviii
Dreadnought Fireproof Doors (1930), Ltd.	lxxx	Mallinson, Wm., & Sons, Ltd.	lxxvii	Walls, Ltd.	lxxxiv
Ductube Co., Ltd.	xli	Marley Tile Co., Ltd., The	xxi, lxxii	Walpamur Co., Ltd., The	—
Dunbrik, Ltd.	lxxxv	Mellowes & Co., Ltd.	lxxvi	Ward, Thos. W., Ltd.	xxx
Dunlop Rubber Co., Ltd.	ii	Merchant Trading Co., Ltd., The	xxix	Wardle Eng. Co., Ltd.	lxxxii
Dusseck Bitumen & Taroleum, Ltd.	lxxxv			Waring & Gillow, Ltd.	lxxxii
				Williams & Williams, Ltd.	xi
				Wood, Edward, & Co., Ltd.	xiii

For Appointments (Wanted or Vacant). Competitions Open, Drawings, Tracings, etc., Education, Legal Notices, Miscellaneous Property, Land and Sales, lxxxviii, lxxxix, xc, xcii.



"Quickspray" and "Silvaspray"

"QUICKSPRAY" and "SILVASPRAY" Wash Fountains are particularly suitable where a large number of individuals have to wash at one and the same time, particularly in Engineering factories. The old habit of washing in dirty water held up in a lavatory basin is entirely eliminated when Wash Fountains are installed, the user always washing under a clear stream of water, thus preventing any contagion.

We are manufacturers and suppliers of all patterns of Sanitary equipment. Catalogue on request.

WILLIAM E. **Farrer** LIMITED
CROWN WORKS, WELBY ROAD, HALL GREEN, BIRMINGHAM 28
STAR WORKS, BIRMINGHAM 9
82 VICTORIA STREET, LONDON S.W.1

Farrer

PAGE
xiv
xciv
xxx
xxxvii
xvi
lxxxv
xc
xlvii
lxxi
vi

ii
lvi
xxxvii
lviii
xxii
lix
xxxviii
lxxx
liv
lxix
xxxviii
xv
lxxix
xci
xlviii
xxxiv
lxxxvii
lxxiii
lxxvi
liv
xxxii
xx
viii

xxxviii
lvii

iii
xviii
lxxiv

xxx
lxxxii
lxxiii
xi
xiii

”

”

,
e
s
e,
g.
r
y
e
r
g

of
c.

IF
CE

IF YOU'RE PLANNING CENTRAL HEATING...

... YOU NEED THIS HANDBOOK

The Coke Department of The Gas Council exists to serve gas coke users and to enable them to use gas coke in the most efficient ways possible. When central heating schemes are in the planning stage the facts in this handbook will be found helpful. The Coke Department's Technical Handbooks are available free (together with any specialised advice you may need) from your Area Gas Board or the address below.

TWO OTHER HANDBOOKS
WHICH MAY HELP

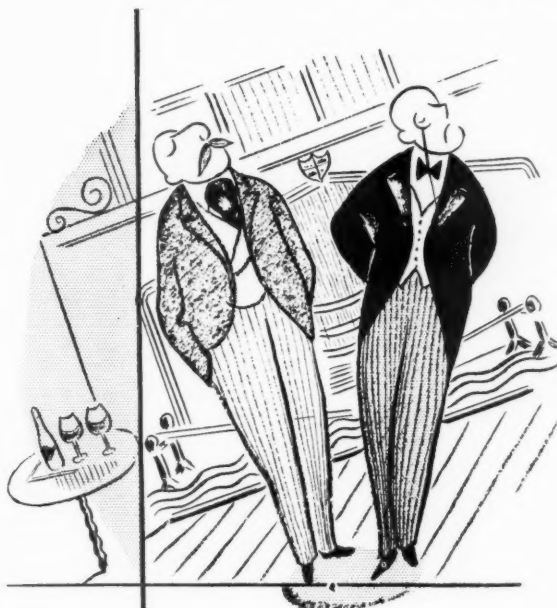
Coke-fired
Small Steam-raising Plant.

Coke-fired Domestic Appliances
and their application.



The Gas Council · Coke Department · 1 Grosvenor Place · London · SW1

Good 'connections'



are important

when connecting timber members it is most essential to see that you use . . .

"TECO" Patent No. 593945

DOUBLE BEVELLED SPLIT-RING &
"BULLDOG"

CIRCULAR TOOTHED-PLATE
(Regd. Design. No. 838743)
TIMBER CONNECTORS

The inclusion of these connectors in timber structures strengthen the joints by spreading the load over a large area of the timber members, increasing the load capacity, permitting reductions in timber dimensions and the amount of hardware, at the same time giving extra strength and stability to the finished structure.

"TECO" double bevelled split-rings and
"BULLDOG" circular toothed-plate

TIMBER CONNECTORS make possible the designing of timber structures on an engineering basis for greater spans and loads than ever before.

**EASY TO INSTAL — LESS TIMBER AND
HARDWARE REQUIRED — SIMPLIFIES
FABRICATION**



"TECO" Patent
SPLIT-RING TIMBER
CONNECTORS

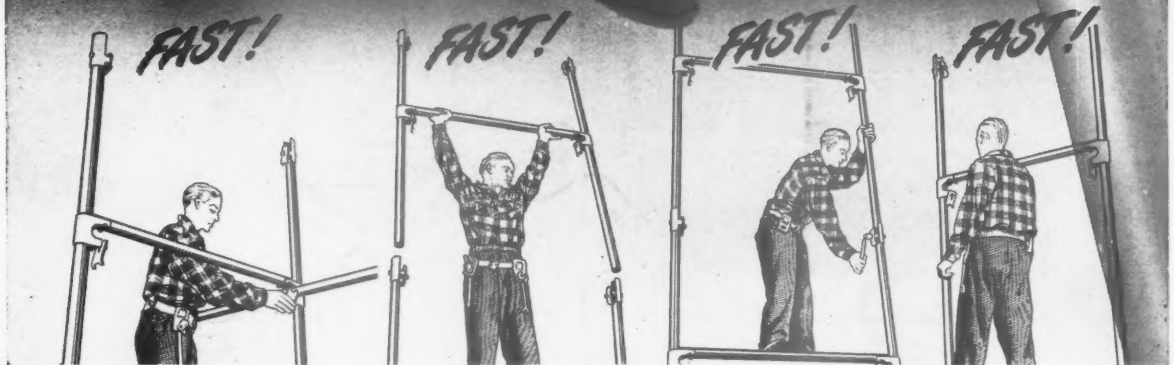


"BULLDOG"
Circular
Toothed-Plate
TIMBER CONNECTORS
Double-sided and
Single-sided

Apply for full particulars to:

MACANDREWS & FORBES LTD
2 CAXTON STREET, LONDON, S.W.1.
TELEPHONE: ABBEY 4451/3

MAKE IT A FAST JOB WITH MILLFRAMES



Horizontal tube inserted in Millframe Coupler. Half-turn the spring steel plate—it's fast!

Going up. The next Millframe slides quickly into position on the verticals of H-FRAME below.

Half-turn plate, tighten bolt. Millframes are then secured to give standard lift height of 6'.

Millframes of special light-gauge steel tube give high speed erection and dismantling.

MILLS SCAFFOLD CO. LTD.

(A Subsidiary of Guest, Keen and Nettlefolds, Ltd.)

Head Office: TRUSSLEY WORKS, HAMMERSMITH GROVE, LONDON, W.6. (RIVerside 5026/9)

Agents and Depots: BELFAST · BIRMINGHAM · BOURNEMOUTH · BRIGHTON · BRISTOL · CANTERBURY · CARDIFF
COVENTRY · CROYDON · DUBLIN · GLASGOW · HULL · ILFORD · LIVERPOOL · LOWESTOFT · MANCHESTER
NEWCASTLE · NORWICH · PLYMOUTH · PORTSMOUTH · READING · SHIPLEY · SOUTHAMPTON · SWANSEA · YARMOUTH

