6-1-1962

The Irish Plumber and Heating Contractor, June 1962 (complete issue)

Follow this and additional works at: https://arrow.tudublin.ie/bsn

Part of the Civil Engineering Commons, Construction Engineering Commons, and the Construction Engineering and Management Commons

Recommended Citation
doi:10.21427/D7298Z
Available at: https://arrow.tudublin.ie/bsn/vol2/iss3/1

This Article is brought to you for free and open access by the Journals at ARROW@TU Dublin. It has been accepted for inclusion in Building Services News by an authorized administrator of ARROW@TU Dublin. For more information, please contact yvonne.desmond@tudublin.ie, arrow.admin@tudublin.ie, brian.widdis@tudublin.ie.

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License
And she knows just where to get it. Because the hard hitting advertising which first sells her on the idea of installing Shell and BP Housewarming also tells her of the superb service offered by her local Appointed Installer. The special Shell and BP Appointed Installer's sign is prominently featured in each advertisement to help her remember it.

There are hundreds of Mrs. 1970's. All looking for the Irish Shell and BP Limited Appointed Installer's sign — the sign which they know means prompt efficient service. Hundred's of Mrs. 1970's—hundreds of systems to install and service. It's obviously very good business to give Mrs. 1970 what she wants!

**SHELL AND BP HOUSEWARMING**

THE ORIGINAL SCHEME FOR OIL-FIRED CENTRAL HEATING IN THE HOME

IRISH SHELL AND BP LIMITED
SHELL-BP HOUSE,
13-16 FLEET ST., DUBLIN 2.

1962 Directory Of Manufacturers, Agents, etc.
FOR ALL PLUMBING & HEATING
CHOSEN BY CRAFTSMEN

1. INSTANTOR
   the most efficient joints in the world for copper tubing. Equally reliable for use with plastic pipes.

2. ENDEX
   capillary fittings for small-bore central heating—efficient, unobtrusive and cheaper to install.

3. CONEOR
   go underground with safety. Coneor couplings are zinc-free gunmetal castings specifically chosen for use with soft copper tubing.

4. FYFFE'S
   up-to-date range of PLUMBERS' BRASS WARE is at your stockist's now. All patterns can be supplied—polished or chromium-plated.

ADD THEM UP TO A FIRST CLASS JOB

IT PAYS TO KEEP TO THE FYFFE LINES

Fyffe Couplings (Ireland) Ltd.
Instantor Works, James's Street, Dublin, 8.
And she knows just where to get it. Because the hard hitting advertising which first sells her on the idea of installing Shell and BP Housewarming also tells her of the superb service offered by her local Appointed Installer. The special Shell and BP Appointed Installer's sign is prominently featured in each advertisement to help her remember it. There are hundreds of Mrs. 1970's. All looking for the Irish Shell and BP Limited Appointed Installer's sign — the sign which they know means prompt efficient service. Hundred's of Mrs. 1970's — hundreds of systems to install and service. It's obviously very good business to give Mrs. 1970 what she wants!
BIG 4 FOR ALL PLUMBING & HEATING
CHosen by CRAFTSMEN

1 INSTANTOR

the most efficient joints in the world
for copper tubing. Equally reliable
for use with plastic pipes.

2 ENDEX
capillary fittings for small-bore central
heating—efficient, unobtrusive and cheaper
to install.

3 CONEOR
go underground with safety. Coneor couplings
are zinc-free gunmetal castings specifically
chosen for use with soft copper tubing.

4 FYFFE’S
up-to-date range of PLUMBERS’ BRASS
WARE is at your stockist’s now. All patterns
can be supplied—polished or chromium-plated.

ADD THEM UP TO A FIRST CLASS JOB

IT PAYS TO KEEP TO THE FYFFE LINES

Fyffe Couplings (Ireland) Ltd.
Instantor Works, James’s Street, Dublin, 8.
PLUMBING
PLASTIC WASTE PIPE AND FITTINGS

★ Speed & ease of installation
★ Outlets & traps designed to take the discharge of boiling water.
★ Hand tight compression joints throughout.
★ Immediate removal of any Part for cleaning and or replacement.
★ Low installed cost.

WRITE TO:
TEMPLE TUBES LTD.
TEMPLE MILL PASSFIELD NR. LIPHOOK HAMPSHIRE.

Full technical service available on this product and all other applications of pitch fibre.

RANGE OF FITTINGS AT PRESENT AVAILABLE FOR DOMESTIC SYSTEMS ONLY

<table>
<thead>
<tr>
<th>Description</th>
<th>1&quot;</th>
<th>1½&quot;</th>
<th>2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression Nuts and Rings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Pipe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straight Couplings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bends 22½°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal Tees 88½</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shanks  East Waste 3&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sink  3½&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bath  1½&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deepseal Traps P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined Overflow and Bath Waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression Ring 1½&quot; Dia.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Iron Plastic Coupling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank Caps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe Clip—Single Fixing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Double Fixing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Published by ARROW @TU Dublin, 1962
The Irish Plumber and Heating Contractor.

**Thermal Insulation**

M. A. Boylan Limited
A subsidiary of The Cape Asbestos Company Ltd.,
50a Harcourt Street, Dublin.
Telephone: 52397, 54485 and 51787

We are the foremost insulation specialists in the country with many important insulation contracts to our credit. The huge Oil Refinery at Whitegate and the Derrinlough Briquette factory are recent examples. If you have any heat-loss problem, discuss it with our highly experienced technical staff. Our recommendations are offered free and without obligation.

*Sole agents and stockists for:

- 'Rocksil' rock wool
- Rigid Sections
- Flexible Sections
- Blankets
- Mattresses (wire-mesh-backed)
- Loose Wool
- 'Caposite' amosite asbestos moulded blocks and pipe sections
- Also full range of plastic materials and hard-setting compositions.

---

We are pleased to have been associated for over 25 years with Plumbing and Central Heating Engineers throughout the country.

**Deliveries Everywhere**

'Quasi-Arc' Electrodes And Welding Plant

**THE MOST OUTSTANDING NAME IN THE FIELD OF ELECTRIC ARC WELDING**

Why Not Consult Us? Phone 55471

**Industrial Gases (I.F.S.) Ltd.**

BLUEBELL, INCHICORE, DUBLIN
This month again sees John G. Bolton writing on welding practice. In this issue he deals with bronze welding of copper tubes.


Trade Topics, keeping you in touch, are on page.

Due to the inclusion of an important directory section in this issue, we have been obliged to hold over until next month a number of regular features.—Ed.

Directory of Manufacturers, Agents, Representatives and Distributors

The first comprehensive register of manufacturers, agents, representatives and distributors of plumbing, heating, ventilation and insulation appliances, fittings and materials available in this country is presented with this issue of the Contractor.

This special directory will prove invaluable to the trade and should be carefully filed for future reference.

ADDITIONAL COPIES AVAILABLE ON APPLICATION.

PRICE FIVE SHILLINGS PER COPY.
Due to heavy demands on space this month, many items which would normally be appearing in Trade Topics have had to be held over.

Potez Distributors Appointed

Messrs. M. Rowan & Co. Ltd. (51-52 Capel Street, Dublin) have been appointed as distributors for the Potez range of heating units now being manufactured at the Galway factory. The three models now available are:

- Model 7R1: Heated space up to 12,713 c.f.t. (corrected volume). Output: 37,440 B.t.u./hr. Price: £48 5s.

A fuel tank and draught regulating shutter is incorporated in all three models.

£1/2m. Bolton St. extension opened

The teaching accommodation of the College of Technology at Bolton St., Dublin, has been increased by almost fifty per cent since the new £500,000 extension was opened by the Taoiseach, Mr. Lemass. The Archbishop of Dublin, Most Rev. Dr J. C. McQuaid, blessed the extended building.

Speaking after the opening, the Taoiseach said that the College had filled a major role. The demand for places in it reflected the industrial growth of the country.

Mr. Martin Gleeson, Chief Executive Officer, City of Dublin Vocational Education Committee, said that with the extended building fully occupied the critical situation had been reached where the College would be unable next September to meet the demands on its accommodation.

A light-hearted thirteen minutes from Shires

Pictured at the Building Centre were, from left: Mr. E. D. King, Director, Shires; Col. N. O'Morroe, Director, Shires; Mr. D. McGeevy, Managing Director Building Centre; and Mr. J. Ferguson, Managing Director, Shires.

The new Shires thirteen minute colour film, "The Inconvenience," was shown in Dublin recently at a Building Centre reception given by Shires (Ireland) Limited.

The film has been made with the object of emphasizing the need for the incorporation of modern facilities in the home, factory, workshop, school, and such buildings. It does this by tracing, in a light-hearted manner, the history of this equipment and comparing the historically ornate and unhygienic models with the facilities available today. The film is available on loan from Shires.

Drugasar Balanced Flue Heater

The Drugasar 3,000 Low (from F. A. Borchardt Limited) is a robustly constructed balanced flue type heater, designed to give convected as well as radiated heat. It has an attractive outer casing with top and centre grilles and is fitted with specially constructed flue equipment, so that the heating unit is completely sealed from the room which is being heated and ventilation problems are therefore obviated.

The ducts are concealed within an asbestos cement wall liner cemented into the wall opening, a grille being fitted flush on the outer side of the wall. These heaters should be fitted preferably on an outside wall or to fabricated flues. This heater is ideal for placing under low windows. Irish Agents: Preston Ltd., 201 Pearse St., Dublin.

Additional Torch Heads

A number of additional heads are now available for the famous Bullfinch Air/Kosangs heating torches.

With the No. 3 Head this Torch is now widely used for the fitting of P.V.C. piping. The new heads widen considerably the range of heating for all types of brazing. Sales and Service from Welding Services Ltd., 14-16 Amiens Street, Dublin (47051).

Irish Office

The Distillers Plastics Group, comprising British Geon Limited, British Resin Products Limited, and Distrene Limited, has opened an office in Dublin. The office is situated at 28, Upper George's Street, Dun Laoghaire, Co. Dublin.

Mr. G. Y. Blomeley will be in charge of the new office, being responsible for sales of all Distillers Plastics Group materials in the Republic of Ireland.
We chose Wavin PVC...

AT CASTLEFORBES WORKS

Castleforbes Works had a problem! A highly corrosive chemical, used in their modern manufacturing process in Dublin made very short work of conventional pipes. This could mean frequent renewal of the pipe-lines, with consequent loss of production and the risk of dangerous bursts—but they chose Wavin PVC because Wavin PVC Pipes are immune to chemical attack. They are also inexpensive and easy to install, with a complete range of PVC fittings. And they solved their problem efficiently and cheaply.

If you have a problem in pipework, why not consult Wavin—the pioneers of PVC in Ireland.

CLAUDO VALVES — Suitable for compressed air, other gases, liquids or vacuum, employ a brand new principle in the design.

The shutoff mechanism is contained in a neoprene cylinder that is virtually indestructible.

CLAUDO valves are supplied in all sizes from 1" to 2". Easy to operate, only half a turn.

The normal compressed air leakage is 25%. CLAUDIO valves are 100% airtight and eliminate such losses.

Write for full details to:

THE BRITISH STEAM SPECIALTIES LTD.
33 LEESON PARK DUBLIN
Phone: Dublin 68561
also at 98 LISBURN ROAD, BELFAST.
Phone: Belfast 28688.
LAST MONTH the welding of copper pipelines by the oxyacetylene process was examined. It was pointed out that to make a true autogenous weld on a copper tube, it was necessary to actually melt the pipe ends so that complete fusion of the parent metal took place.

This process requires a high degree of skill to achieve satisfactory welds and, except for special work, is almost superseded by the Bronze Welding Method.

This technique was evolved from the brazing process used for many years in the engineering world, and although it is called bronze-welding by name, strictly speaking it is not welding in the true sense of the word, because it does not require the copper to be raised to melting temperature. However, for convenience we will continue to use the term "welding" in this article.

Difference

IT MAY be opportune at this point to define the difference between brazing and bronze welding. In actual fact there is none, as the nature of the finished joint is somewhat the same. The term "brazing" is, however, more applicable to the slip-fit type of joint—e.g., bicycle frames—where the brazing metal or "spelter" runs, when heated, into the gap between the closely fitting parts of the joint, by capillary attraction.

On the other hand, in bronze welding, we do not depend on a slip-joint for efficiency, as the deposit of the bronze on the joint provides a degree of strength to at least that possessed by the copper tube itself.

The chief advantage, therefore, of bronze welding over the autogenous welding of copper lies in the fact that joints can be made without raising the parent metal to melting point. The bronze is also easy to apply in any position which may be encountered on the job, and this technique will therefore give very satisfactory results when used by a trained craftsman.

Preparation

IN THE preparation of copper tubes for bronze welding, there are several points to keep in mind. First, the metal must be clean so that it will be readily "tinned" by the filler rod. This means that all traces of grease, paint, etc., must be removed, but usually no preparation is required on new copper tubes beyond the removal of burrs or sharp edges at the joints. Note that the use of de-oxidised copper tube is not necessary as was the case with autogenous welding.

Secondly, it is important to form a joint which will permit a large area of contact between the filler metal and the copper. This is the reason why one side of a copper pipe joint is "belled out" so as to form a large V angle with the other side and thereby give greater surface area. This results in the joint having a high shear strength in addition to a high tensile strength. The yield stress on an average joint is in the region of 3½ tons per sq. in.

It has been found that, in many tests, the tube will burst at about 3,000 lbs./sq. in. while the bronze welded joint is still perfect.

Avoided

IT MAY be mentioned here that face to face butt welds on light gauge copper tube are best avoided as the area of contact is small. In this respect the "belled out" joint is much superior in strength—a fact which is recognised in the Atomic Plants where butt joints on thin walled copper tubes are not permitted, and so the belled or V-joint reigns supreme.

Branch Joints.—Where branch joints occur we must keep to the same principle—to try and provide a large degree of surface contact between the bronze and the copper. This is usually achieved by tapering the opening up so as to form a cup into which is welded the branch (see sketch). Alternately, the branch can be made a close saddle fit and then bronze welded.

Fluxes.—It was mentioned earlier that the copper must be "tinned" as a preliminary to bronze welding, and most of the fluxes used to assist this process have therefore a borax base.

The flux is usually applied by dipping the heated end of the filler rod into the powder from time to time during welding and then applying it to the joint. The main reason for using a flux is to remove all traces of dirt or oxide from the surface of the copper so that the bronze will

(continued page fifty-five)
IN THIS SPECIAL SECTION WE HAVE COMPiled A COMPLETE
DIRECTORY OF PRINCIPALS AND AGENTS SO THAT THE TRADE WILL
HAVE A HANDY REFERENCE GUIDE WHENEVER SUCH INFORMATION
IS REQUIRED. FOR THE BENEFIT OF READERS ALL CATEGORIES ARE
LISTED ALPHABETICALLY AND AN INDEX OF ADDRESSES WILL BE
FOUND ON PAGE FORTY-SEVEN.

Presented with the June, 1962, issue of the Irish Plumber And Heating
Contractor.
For Variety - with Individuality

Specify

BARWELL

Every Time
The SANBRA-CONEX (IRELAND) LTD. range is designed to meet your requirements for all plumbing services in copper or plastic tubes, above and below ground. It includes Pillarcocks, Bibcocks, Wastes, Plugcocks, etc.—and CONEX Compression Joints and Fittings, Valves, Stopcocks, and Drawn Copper Traps. SANBRA-CONEX products are approved by the leading Architects, Surveyors, Plumbers, Contractors, Government Departments, Municipal Authorities and Water Works throughout Ireland. For speedy, economical, better plumbing, you can always depend on SANBRA-CONEX products.

★ VERY PROMPT DELIVERIES
★ ATTRACTIVE PRICES

HOT BRASS PRESSINGS TO SPECIFICATION
POLISHING & CHROME PLATING CAPACITY

FREE! Write TO-DAY for your free copy of our
FULLY ILLUSTRATED CATALOGUE.

SANBRA-CONEX (IRELAND) LIMITED, SANTRY AVENUE, SANTRY, CO. DUBLIN
Telephone: Dublin 373637. Telegrams: SANCO, DUBLIN.
Automatic Controls for Oil Firing, Compressed Air and Water Supply by—

DANFOSS

- Solenoid Valves, Pressure Switches, Thermostats, Boiler Water Level Controls, Photo Resistor Control Panels, Oil Pumps, Jets, Transformers, etc.

Agents and Stockists:

J. J. Sampson & Son Ltd.
12a Wexford Street, Dublin, Phone 51856.

Directory of manufacturers, agents, representatives, distributors

Every effort has been made to ensure the accuracy of the entries in this directory, but the publishers accept no responsibility for any inaccuracies.

In the case of omissions, immediate notification will ensure that the matter is rectified when the directory is being revised.

PACKAGE BOILERS by JOHN THOMPSON (WILSON BOILERS) LTD.

Multipac, the high efficiency package boiler with 82% efficiency, wet-back combustion chamber eliminating refractory linings and brickwork, needs only a small floor space. Rapid circulation is obtained from the 3 pass combustion gas system. The Multipac range is 2,000 to 20,000 lb./hr. Demipac has all the advantages of Multipac with outputs of 500 to 3,500 lb./hr. Please write for fully descriptive literature on Multipac and Demipac.

JOHN THOMPSON (WILSON BOILERS) LTD.
LILYBANK WORKS, LONDON RD, GLASGOW, E.1.
Agent in Eire: William Peet & Sons Ltd, Dalkey, Co. Dublin.
## Directory Of Manufacturers, Agents, Representatives And Distributors

### Air Cleaners, Electronic

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alrnesco Products Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>AIRNESCO</td>
</tr>
<tr>
<td>Honeywell Controls Limited</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
</tbody>
</table>

### Air Conditioning Equipment

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>ANDREW</td>
</tr>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
<td></td>
</tr>
<tr>
<td>Brightside Heating &amp; Engineering Co. Ltd.</td>
<td>Brightside Engineering Co. Ireland Ltd.</td>
<td>H-JET</td>
</tr>
<tr>
<td>Carlyle Air Conditioning &amp; Refrigeration Ltd.</td>
<td>Enquiries supplied direct</td>
<td>CARLYLE</td>
</tr>
<tr>
<td>Chrysler Airtemp Ltd.</td>
<td>Everton Engineering Limited (Northern Ireland)</td>
<td>CHRYSLER AIRTEMF</td>
</tr>
<tr>
<td>Chrysler Airemp Ltd.</td>
<td>H. A. O'Neil Ltd. (Republic of Ireland)</td>
<td></td>
</tr>
<tr>
<td>Dunham Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>CALIFORNIAN</td>
</tr>
<tr>
<td>Hall-Thermotank Ltd.</td>
<td>J. &amp; E. Hall Ltd. (Irish Office)</td>
<td>AQUA HILL</td>
</tr>
<tr>
<td>Hall-Thermotank Ltd.</td>
<td>Thermotank Ltd. (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Heating and Building Services Ltd.</td>
<td>Enquiries supplied direct</td>
<td>HI-VEE</td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Lightfoot Refrigeration Co. Ltd.</td>
<td>Lightfoot Refrigeration (Ireland) Ltd.</td>
<td>LIGHTFOOT</td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds Ltd.</td>
<td>Stewarts and Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Stillite Products Ltd.</td>
<td>Enquiries supplied direct</td>
<td>STILLITE</td>
</tr>
<tr>
<td>Tranle Limited</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Yokes Limited</td>
<td>The Leinster Engineering Co. Ltd.</td>
<td>&quot; KOMPAK &quot;</td>
</tr>
<tr>
<td>York Shipley Ltd.</td>
<td>York Shipley Limited (Irish Office)</td>
<td>EMBASSY</td>
</tr>
</tbody>
</table>

### Air Vents

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>MECHA VENT</td>
</tr>
<tr>
<td>Greenwood-Airvacs Ventilating Co. Ltd.</td>
<td>Technical Sales Company</td>
<td></td>
</tr>
<tr>
<td>Spirax-Sarco Ltd.</td>
<td>Enquiries supplied direct</td>
<td>SIROCCO</td>
</tr>
<tr>
<td>Thermostat Ltd.</td>
<td>J. &amp; E. Hall Ltd.</td>
<td>THERMOTANK</td>
</tr>
<tr>
<td>Thermostat Ltd.</td>
<td>Thermotank Ltd. (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Charles Winn &amp; Co. Ltd.</td>
<td>J. S. Lister Limited</td>
<td>UNIVENT</td>
</tr>
</tbody>
</table>

### Air Washers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>ANDREW</td>
</tr>
<tr>
<td>Copperad Ltd.</td>
<td>British Steam Specialties Ltd.</td>
<td>MANWOOD MILLER</td>
</tr>
<tr>
<td>Davidson &amp; Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>J. &amp; E. Hall Ltd.</td>
<td>TORNADO</td>
</tr>
<tr>
<td>Thermostat Ltd.</td>
<td>Thermotank Ltd. (Northern Ireland)</td>
<td></td>
</tr>
</tbody>
</table>

### Autoclaves

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cochran &amp; Co., Annan Ltd.</td>
<td>Enquiries direct</td>
<td>COCHRAN</td>
</tr>
</tbody>
</table>

### Automatic Clock Controllers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>Peter Macfarlane &amp; Son, Ltd. (N.I.)</td>
<td></td>
</tr>
</tbody>
</table>

### Blowers and Exhausters

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td>TORNADO</td>
</tr>
</tbody>
</table>

### Boiler Controls

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electroflo Meters Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td>ELECTROFLO</td>
</tr>
</tbody>
</table>

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
## Boiler Fittings

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airnesco Products Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>AIRNESCO</td>
</tr>
<tr>
<td>Bolton Superheater &amp; Pipeworks Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>BOSS</td>
</tr>
<tr>
<td>British Radiators Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>W. H. Leech</td>
</tr>
<tr>
<td>Combustion Equipment Ltd.</td>
<td>Ha'pin &amp; Hayward Ltd.</td>
<td>PEGLERS</td>
</tr>
<tr>
<td>Charles Winn &amp; Co. Ltd.</td>
<td>J. S. Lister Ltd.</td>
<td>WINN</td>
</tr>
<tr>
<td>Hattersley (Ormskirk) Ltd.</td>
<td>W. H. Leech</td>
<td></td>
</tr>
<tr>
<td>Peilers Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
</tbody>
</table>

## Boilers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Ironfounders Ltd.</td>
<td>Waterford Ironfounders Ltd.</td>
<td>AGA/WATTS</td>
</tr>
<tr>
<td>Bastian &amp; Allen Ltd.</td>
<td>Hendon Bros. (Machinery) Ltd.</td>
<td>BAXI-PACK</td>
</tr>
<tr>
<td>Baxi Ltd.</td>
<td>F. A. Smith</td>
<td>ROBIN HOOD</td>
</tr>
<tr>
<td>Beeston Boiler Co. Ltd.</td>
<td>J. F. Glasgow</td>
<td>BUDERS</td>
</tr>
<tr>
<td>Buderus'sche Eisenwerke</td>
<td>Quadrant Engineers</td>
<td>BURGESS</td>
</tr>
<tr>
<td>Burgess &amp; Co. (Engineers) Ltd.</td>
<td>Enquiries direct</td>
<td>CRAWLEY</td>
</tr>
<tr>
<td>Charles Portway and Sons Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd.</td>
<td>CLAYTONOIL</td>
</tr>
<tr>
<td>Clayton, Son &amp; Co. Ltd.</td>
<td>Clyde Fuel Systems Ltd. (Irish Office)</td>
<td>CLYDE</td>
</tr>
<tr>
<td>Clydeside Fuel Systems Ltd.</td>
<td>Cochran &amp; Co. (Annan) Ltd.</td>
<td>COCHRAN</td>
</tr>
<tr>
<td>Coopers Ltd.</td>
<td>Enquiries direct</td>
<td>TURBO-STATIC</td>
</tr>
<tr>
<td>Crane Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Colt Ventilation Ltd.</td>
<td>F. W. Norman</td>
<td>ANGULAR</td>
</tr>
<tr>
<td>Danish Stoker &amp; Varmekedal Kompanni</td>
<td>Danish Stoker &amp; Boiler Co. Ltd. (Irish Office)</td>
<td>D.S.V.</td>
</tr>
<tr>
<td>Dartmouth Manufacturing Co. Ltd.</td>
<td>Kenneth M. Reynold's Ltd.</td>
<td>DELMORE</td>
</tr>
<tr>
<td>Delmore Engineering Co. Ltd.</td>
<td>O. B. C. Ltd. (Irish Office)</td>
<td>DUNSLEY</td>
</tr>
<tr>
<td>Dunley Heating Appliance Co. Ltd.</td>
<td>John Barrett &amp; Sons</td>
<td>AUGUSTINE</td>
</tr>
<tr>
<td>Edmond D. Ryder</td>
<td>Enquiries supplied direct</td>
<td>EDWARDS</td>
</tr>
<tr>
<td>Edwards Engineering Corp.</td>
<td>Hugh C. Maguire</td>
<td>ELLERSTED</td>
</tr>
<tr>
<td>Foley, Duffy &amp; Co. Ltd.</td>
<td>Quadrant Engineers</td>
<td>FALCON</td>
</tr>
<tr>
<td>Forta, N. V.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Frederick Ray (Engineering) Ltd.</td>
<td>Waterford Ironfounders Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Glenn-Worm Boilers Ltd.</td>
<td>Monsell Mitchell &amp; Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Grange-Camelon Iron Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Hartley &amp; Sedgden Ltd.</td>
<td>McGrath &amp; Kenny</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Henry Wilson &amp; Co. Ltd.</td>
<td>G. A. Reid</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Hova' Oil Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>H. R. Hofield Ltd.</td>
<td>E. J. Cocker</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Ideal-Standard Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>International Boilers and Radiators Ltd.</td>
<td>Monsell Mitchell &amp; Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Janitor Boilers Ltd.</td>
<td>D. H. Sullivan</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>J. B. Van Helst en Zonen N.V.</td>
<td>Willard Peet &amp; Sons</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>John Thompson Ltd.</td>
<td>John Thompson Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Joshua Bigwood Ltd.</td>
<td>P. J. Casey</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Lincoln Furnaces Ltd.</td>
<td>Dunwood &amp; Dobson Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Lumby Ltd.</td>
<td>G. F. Morley Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Marshall &amp; Anderson Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Neavon, Chambers &amp; Co. Ltd.</td>
<td>Baxendale &amp; Co. Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>P. F. Hume Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Orr &amp; Sembower, Inc.</td>
<td>Peter Macfarlane &amp; Son Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Perkins Boilers Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Radiation Parkray Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Range Boilers Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Rasmussen, H. &amp; Co. Ltd.</td>
<td>Hugh C. Maguire</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Ruston &amp; Hornsby Ltd.</td>
<td>Ruston &amp; Hornsby Ltd. (Irish Office)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Ryax Heating Ltd.</td>
<td>P. Donnelly &amp; Sons Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Societe Generale De Fonderie</td>
<td>Irish Engineering &amp; Production Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>S. Smith &amp; Sons (England) Ltd.</td>
<td>Monsell Mitchell &amp; Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Steel Radiators Ltd.</td>
<td>Hugh C. Maguire</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds Ltd.</td>
<td>Stewart &amp; Lloyds of Ireland Ltd</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Sunrod Domestic Boilers Ltd.</td>
<td>Monsell Mitchell &amp; Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Sunrod Domestic Boilers Ltd.</td>
<td>W. P. F. Hume &amp; Co. Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Taco Boilers Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Thomas Potterton Ltd.</td>
<td>F. P. Hume &amp; Co. Ltd. (N.I.)</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Trianco Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Valor Company Ltd.</td>
<td>E. E. Petroleum Co. (Ireland) Ltd.</td>
<td>GLOW-WORM</td>
</tr>
</tbody>
</table>

---

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**
**IRISH TECHNICAL & PRODUCTION CO. LTD.**

25 UPPER MOUNT STREET, DUBLIN. Telephone: 62636.

Agents for

**Chappée**

Boilers For Oil & Coal Firing

* For Hot Water Installations

- AN100 Series .......... 33,000/61,000 BTUs/hour
- AX200 Series .......... 66,000/144,000 BTUs/hour
- AN300 Series .......... 128,600/278,000 BTUs/hour
- AN400 Series .......... 269,000/603,000 BTUs/hour
- AN500 Series .......... 524,000/1,400,000 BTUs/hour
- AN600 Series .......... 1,100,000/2,500,000 BTUs/hour
- B200 Series .......... 262,000/628,000 BTUs/hour

* For L.P. Steam Installations

- A5000 Series .......... 270,000/1,250,000 BTUs/hour
- A6000 Series .......... 975,000/2,260,000 BTUs/hour
- B2000 Series .......... 262,000/629,000 BTUs/hour

---

- We hold a comprehensive stock of Boilers at above address.

**FRANCIA** Pressure Jet Oil Burners

- FROM 70,000 TO 6,000,000 BTU/h.
- FOR LIGHT OR HEAVY OIL.

- 25 F and 45 F Domestic Package Units.
  - 25 F—100,000 BTU/h.
  - 45 F—200,000 BTU/h.

- All Our Burners Are Backed By Us With Full Service & Spares Dept.
The Irish Plumber and Heating Contractor.

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vauxhall Boiler Co. Ltd.</td>
<td>P. J. Casey</td>
<td>GOICALOR</td>
</tr>
<tr>
<td>Walther &amp; Cie.</td>
<td>Quadrant Engineers</td>
<td>SUPERECONOMIC</td>
</tr>
<tr>
<td>Weldrye Ltd.</td>
<td>Enquiries direct</td>
<td>WELDRYTE</td>
</tr>
<tr>
<td>W. H. Paul Ltd.</td>
<td>G. F. Morley Ltd.</td>
<td>PAULOMATIC</td>
</tr>
<tr>
<td>Richard Baxendale &amp; Sons Ltd.</td>
<td>Baxendale &amp; Co. Ltd.</td>
<td>BEANCO</td>
</tr>
</tbody>
</table>

**Burner Controls**

- Danfoss Ltd. | J. J. Sampson & Son Ltd. | DANFOSS |
- Honeywell Controls Ltd. | Honeywell Controls Ltd. (Ireland) | HONEYWELL |
- Rheostatic Company Ltd. | R. E. Ayers | SATCHWELL |
- Venner Ltd. | Roper Bros. Ltd. | VENNER |

**Burners, Gas**

- Bratt Colman Ltd. | L. C. Young | CONTINUE-FLO |
- Continue-Flo Heating Products Ltd. | W. J. Thompson Ltd. | |
- Feceoil Burners Ltd. | Enquiries supplied direct | |
- Geo. Bray & Co. Ltd. | Enquiries supplied direct | |
- Keith Blackman Ltd. | Keith Blackman Ltd. (Irish Office) | |
- Radiation-Parkray Ltd. | L. C. Young | PARKRAY |
- Selas Gas and Engineering Co. Ltd. | A. H. Masser Ltd. | BUNSEN |

**Burners, Oil**

- Atlantic Distribution Industries (G.A. Walsh Group) | Enquiries supplied direct | |
- Auto-Combustions (London) Ltd. | Auto-Combustions (Ireland) | |
- Camron Engineering Co. Ltd. | Mousell Mitchell & Co. Ltd. | CAMRON |
- Clyde Fuel Systems Ltd. | Clyde Fuel Systems Ltd. (Irish Office) | CLYDE |
- Continue-Flo Heating Products Ltd. | W. J. Thompson Ltd. | CONTINUE-FLO |
- Dansk, Stoker & Varmekedel Kompagni | Danish Stoker & Boiler Co. Ltd. (Irish Office) | D.S.V. |
- Davis Wayne (Burners) Ltd. | Farrell Engineering Co. Ltd. | DAVIS WAYNE |
- Feceoil Burners Ltd. | Enquiries supplied direct | |
- Francia & Cie | Irish Technical & Production Co. Ltd. | FRANCIA |
- Industrial & Domestic Heaters Ltd. | Enquiries supplied direct | SELECTOS |
- J. B. Van Heijst en Zonen N.V. | J. B. Van Heijst & Sons Ltd. (Irish Office) | VEHA |
- Kresky Manufacturing Co. Ltd. | W. J. Thompson Ltd. | KRESKY |
- Nu-Way Heating Plants Ltd. | NU-Way Heating Plants Ltd. (Irish Office) | NU-WAY |
- O.B.C. Ltd. | O.B.C. Ltd. (Irish Office) | O.B.C. |
- O.B.C. Ltd. | Peter Macfarlane & Son Ltd. (N.I.) | |
- Tecalemit Ltd. | Enquiries supplied direct | |
- Urquharts (1926) Ltd. | Quadrant Engineers | URQUHART |
- Wilson, Henry & Co. Ltd. | George A. Reid | WILSON OILHEAT |

**Burners, Solid Fuel**

- Joshua Bigwood & Son Ltd. | P. J. Casey | D.S.V. |
- Dansk, Stoker & Varmekedel Kompagni | Danish & Boiler Co. Ltd. | THERMAX |
- Engineering Products Ltd. | Enquiries supplied direct | |
- Ruston & Hornsby Ltd. | Ruston & Hornsby Ltd. (Irish Office) | |
- Suxx Combustion Ltd. | Thomas Heiton & Co. Ltd. | SUXE |
- Waterford Ironfounders Ltd. | Enquiries direct | MONA |

**Baths, Basins, Bidets and Sinks**

- Adamas Ltd. | Enquiries supplied direct | ADAMSEZ |
- Allied Ironfounders Ltd. | Waterford Ironfounders Ltd. | ELYSIAN/VOGUE/LEISURE |
- Andrews Bros Ltd. | Alfred Briggs Ltd. (N.I.) | ELIZABETH ANN |
- Armitage Ware Ltd. | F. N. S. Ahern | "OVADEALE"/ORIANA |
- Associated Metal Works (Glasgow) Ltd. | Associated Metal Works Ltd. (Irish Office) | "ASSOCIATED METALS" |
- Belco Manufacturing Co. Ltd. | E. G. Mullane | BELCO |
- Curran Ltd. | Norman Stewart Ltd. | |
- C.S.A. Industries Ltd. | Enquiries supplied direct | |
- Dahl Brothers Ltd. | Enquiries supplied direct | DAHL |

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
OIL-FIRED CENTRAL HEATING has a lot to offer you!

If you would like to discuss your particular problems why not contact

ESSO HOME HEAT DEPT.
STILLORGAN, CO. DUBLIN
TELEPHONE 881661
LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
LET THE...

"Augustine"

Fully Automatic ELECTRIC BOILER Solve Your Central Heating Needs

CLEAN ★ COMPACT ★ ECONOMICAL
★ Manufactured in Dublin to patent specification.

Enquiries to:—

EDMOND D. RYDER
46, LOWER DRUMCONDRA ROAD,
DUBLIN.

Telephone 45992.

BRITISH PATENT No. 875, 707, 17th AUG., 1959

Super-Vee*

combats atmospheric pollution with guaranteed 96% efficiency at minimum cost

Vokes Super-Vee is an inexpensive, expendable air filter which, because of its unique medium, can offer up to 25% greater capacity compared with similar filters of the same size. This medium, impregnated with a specially developed adhesive, combines high filtration efficiency (guaranteed 96% against Aloxite 50 Test Dust) with long life. Unaffected by moisture, non-cracking, and resistant to fungal growth, it is ideal for the collection of sooty or tarry deposits, without any danger of fibre migration. Vokes Super-Vee, which is fully interchangeable with other filters of its type, is already widely used in applications such as paint finishing plant, chemical laboratories, textile plant, distilleries and heating and ventilating installations. Write for details of how it can give you high filtration efficiency at lowest possible cost.

Comprehensive literature concerning all Vokes filters is available on request from the Sole Agents.

VOKES

THE LEINSTER ENGINEERING CO. LTD.
158-159 CHURCH STREET, DUBLIN.

Dust Load on Filter (Grms.).
Filter Medium is Flame Resistant to BSS 476.
### Control Equipment and Controllers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Rototherm Co. Ltd.</td>
<td>Rototherm Precision &amp; Instrument Co. Ltd.</td>
<td>Rototherm</td>
</tr>
<tr>
<td>Burgess Products Ltd.</td>
<td>Modern Plant Ltd.</td>
<td>Burgess</td>
</tr>
<tr>
<td>Danfoss Ltd.</td>
<td>J. J. Sampson &amp; Son Ltd.</td>
<td>Danfoss</td>
</tr>
<tr>
<td>Danfoss Ltd.</td>
<td>W. P. F. Hume &amp; Co. Ltd. (N.I.)</td>
<td>Danfoss</td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>GEC</td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>G. A. Reid</td>
<td>Honeywell</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>Honeywell</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>Peter Macfarlane &amp; Sons Ltd. (N.I.)</td>
<td>Irish Technical &amp; Production Co. Ltd.</td>
<td>ODEST</td>
</tr>
<tr>
<td>Charles Penruddow &amp; Son Ltd.</td>
<td>Manotherm Ltd.</td>
<td>PENN</td>
</tr>
<tr>
<td>Penn Controls Nederland</td>
<td>R. E. Ayers</td>
<td>SATCHEWELL</td>
</tr>
<tr>
<td>The Rheostatic Co. Ltd.</td>
<td>Modern Plant Ltd.</td>
<td>Satchwell</td>
</tr>
<tr>
<td>Thermostatic Ltd.</td>
<td>R. T. Large &amp; Son</td>
<td>THERMOFOR</td>
</tr>
<tr>
<td>Thermostatic Ltd.</td>
<td>McFarlane &amp; Co. Ltd.</td>
<td>THERMO FOR</td>
</tr>
<tr>
<td>Tylors of London Ltd.</td>
<td>McFarlane &amp; Co. Ltd.</td>
<td>THERMO FOR</td>
</tr>
</tbody>
</table>

### Control Panels

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bastian &amp; Allen Ltd.</td>
<td>Hendron Bros. (Machinery) Ltd.</td>
<td>B &amp; A</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>GE</td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>Honeywell</td>
</tr>
<tr>
<td>Nu-Way Heating Plants Ltd.</td>
<td>Nu-Way Heating Plants Ltd.</td>
<td>Nu-WAY</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>Peter Macfarlane &amp; Sons Ltd. (N.I.)</td>
<td>Peter Macfarlane &amp; Sons Ltd. (N.I.)</td>
<td>SATCHEWELL</td>
</tr>
</tbody>
</table>

### Convector

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
<td>VECTAIR</td>
</tr>
<tr>
<td>F. A. Bochardt Ltd.</td>
<td>Preston Limited</td>
<td>DRUG ASAR</td>
</tr>
<tr>
<td>Calovent Ltd.</td>
<td>Calovent Ltd. (Irish Office)</td>
<td>CALOVENT</td>
</tr>
<tr>
<td>Copperad Ltd.</td>
<td>British Steam Specialities Ltd.</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>Flexaire Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Company of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Trane Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
</tbody>
</table>

### Coolers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
<td>VECTAIR</td>
</tr>
<tr>
<td>Copperad Ltd.</td>
<td>British Steam Specialities Ltd.</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>J. &amp; E. Hall Ltd.</td>
<td>J. &amp; E. Hall Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Lightfoot Refrigeration Co. Ltd.</td>
<td>Lightfoot Refrigeration (Ireland) Ltd.</td>
<td>LIGHTFOOT</td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td>S &amp; L</td>
</tr>
<tr>
<td>York Shipley Ltd.</td>
<td>York Shipley Ltd. (Irish Office)</td>
<td>YORK</td>
</tr>
</tbody>
</table>

### Cyclones

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>ANDREW</td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td>ANGELO</td>
</tr>
<tr>
<td>Matthews &amp; Yates Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Drainage and Sanitation-Traps and Wastes

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barking Brassware Co. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belco Ltd.</td>
<td>E. G. Mullane</td>
<td>BELCO</td>
</tr>
<tr>
<td>Hendy Ltd.</td>
<td>Enquiries supplied direct through Merchants</td>
<td>BELCO</td>
</tr>
<tr>
<td>Conex-Terna Ltd.</td>
<td>Sanbra-Conex (I.) Ltd.</td>
<td>CONEX</td>
</tr>
<tr>
<td>Econa Modern Products Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. S. &amp; C. Ltd.</td>
<td>A. H. Messer Ltd.</td>
<td>INSTANTOR</td>
</tr>
<tr>
<td>Greenwood &amp; Hughes Ltd.</td>
<td>A. H. Messer Ltd.</td>
<td>VULCATHENE</td>
</tr>
<tr>
<td>Gymnars Ltd.</td>
<td>A. H. Messer Ltd.</td>
<td>VULCATHENE</td>
</tr>
<tr>
<td>Hans Grohe K.G.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kay &amp; Co. (Engineers) Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peglers Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tylors of London Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
Central Heating by Fanned Warm Air Gas, Oil and Solid Fuel

Ductair G105/23 Gas Only
Ductair G105/23 is designed for use in the average small house or flat. It provides full heating by ducted warm air for the living room and kitchen and background heating in the bedrooms by ducting or by spillover warm air from the hall. Warm air can also be diverted to a clothes drying cupboard. The unit is controlled by a room thermostat which automatically switches on both fan and burner immediately heat is called for. This system is specially suitable for installation in flats, including multi-storey blocks, where it makes possible individual metering. G105 requires no floor space—the cabinet hangs on the kitchen wall. Balanced flue and SE-duct models are available. It can be used for air circulation during the summer.

Performance
Output: 23,000 Btu/h. This provides full heating for living rooms of 4000 to 6000 cu. ft. capacity according to hours insulation aspect etc. Alternatively, it provides full heating for a smaller living area with background warmth in the bedroom.

Central Heating with Hot Water Ductair 22—Gas, oil and solid fuel
Ductair 22 provides the same services as the G105 plus constant hot water throughout the house and a heated towel rail. It is available for use with three different types of fuel. With the gas-fired model a C70 Circulator is used to supply hot water to the storage cylinder and to the heat exchanger in the Ductair cabinet. For the oil-fired version, a Parker G305 oil boiler is used in the same way and, for solid fuel, a Parker G55 or S6. In all cases the unit is controlled in the same way by a room thermostat.

Performance
Output: 22,000 Btu/h. (space heating). This provides for a living area of 4000-5000 cu. ft. capacity, depending on insulation standards, etc. Alternatively, full heating for a smaller living area with background warmth in the bedrooms.

Domestic water heating, by gas, when providing space heating—5000 sq. ft. warmer water heating only—12,000 Btu/h. By oil and solid fuel 5000-10,000 Btu/h. depending on choice of water heater.

Central Heating by Small Bore Plus Domestic Hot Water—Gas & Solid Fuel

Parkray G301/2 Gas
This new gas-fired boiler for central heating and hot water in the 2-3 bedroom home is specially designed to give maximum efficiency on both circuits with low gas consumption. Because it is designed to give economical water heating as a continuous service, the time switch is arranged to control the boiler heating circuit only. This allows the water heating to recover even when the central heating is off (for instance, overnight) and together with its other features makes it possible for this unit to deal with peak loads in excess of the unit rating. The particularly economical water heating is achieved by the unique circuit with special thermostat and high/low burner control. This arrangement also ensures that the domestic hot water is always controlled to a maximum temperature of 155°F, and the central heating circuit to a desirable higher figure of approximately 175°F. This balanced-flue appliance can be mounted on any outside wall in the kitchen. It is completely new design normally suitable for fitting a stainless steel heat exchanger is corrosion resistant and requires the minimum of maintenance.

Performance
Output: 25,000 Btu/h. This provides constant hot water and approximately 100 sq. ft. of radiating surface, depending on heating requirements, standards of insulation etc.

Parkray G604—Gas
This automatically controlled gas-fired unit gives a fast uniform flow of heat round the circuit. It will give full heating in all the rooms for a 3-4 bedroom house or flat, or a high level of background heating for the larger home. The hot water can be used to heat conventional radiators or skirting radiators. It is controlled by a wall thermostat, usually placed in the main living room.

Performance
Output: 45,000 Btu/h. Typical heating surface: 220 sq. ft. with transmission rate of 170°F Btu/sq. ft./hr. 100°F temperature difference. Controlled circulating water temperature: Mean 170°F.

Parkray S56 Solid Fuel
Hopper feed coke boiler
A large hopper over the Parkray S56 boiler holds sufficient fuel to look after all normal heating requirements for 24 hours. Even at maximum output the S56 will operate for 10 hours on one refueling. A waisted high external level provides effortless riddling and a prismatic viewer in the ashpit cover shows the state of the fire and the level of the ashes in the pan. The ashespan, of completely new design normally needs emptying only once a day and is provided with a special cover that prevents any dust escaping. A fitted thermostat controls the rate of burning and a dial thermometer, available as an optional extra. The recommended fuels are Sunbitre hard coke and gas coke.

Performance
Output: 33,000 Btu/h. Allowing 10,000 Btu/h. for domestic hot water. 115 sq. ft. of radiating surface can be heated. Central heating—165 sq. ft. of radiating surface including unlagged pipes.

Parkray S25—Solid Fuel
This small boiler provides plenty of hot water for the small household, heats a radiator or two and gives gentle background warmth in the kitchen. A fuel hopper over the boiler cuts stoking to a minimum, and the new shaker grate ensures efficient clearance of ashes. Easy to install and economical to run, the S25 requires less than 18 inches square of floor space and stands only 25 inches high.

Performance
Output: 15,000 Btu/h. When fitted with a 30 gallon indirect cylinder, the Parkray S25 will provide, in addition to domestic hot water supply, sufficient hot water to heat 30-40 sq. ft. of radiating surface with unlagged pipes. When the boiler is not supplying hot water—80 sq. ft. of radiating surface.

Full technical information on all Radiation products is available from:
Radiation Parkray Limited, Radiation House, North Circular Road, Neasden, N.W.10. Telephone: Williesden 1234

Nineteen
NO PAINT NEEDED!
— with MARLEY gutters and down pipes

Marley rainwater goods, made of smooth glossy vinyl, need no maintenance—not even an initial painting! They're light in weight, easy to handle and fix, and they cannot deteriorate or wear out even in industrial or coastal atmospheres. Available from leading Builders' Providers.

MARLEY VINYL GUTTERS AND DOWN PIPES

Register of Manufacturers, Agents, Representatives and Distributors

In this special directory—the first of its kind ever published in Ireland—appliances, fittings and materials available in the Republic of Ireland and the North of Ireland are listed under the following main headings:

- Oil, Solid Fuel and Gas-Fired Boilers.
- Electric Heating Appliances.
- Thermostats and Controls.
- Pumps and Circulators.
- Radiators.
- Insulation Materials.
- Oil Storage Tanks.
- Ventilators & Fan Equipment.
- Sanitary Ware.
- Tap and Shower Fittings.
- Pipes, Jointings and Gutters.
- Tools and Welding Metals.
- Hot Water Supply Equipment and Boilers.
- Water Pumping Equipment.
- Water Storage Tanks.

* * *

Keep this register for future reference. It has been designed so that it can be easily separated from the magazine.
### Damper Regulators and Quadrants

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
</tbody>
</table>

### Dehumidifiers

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
</tr>
<tr>
<td>York Shipley Ltd.</td>
<td>York Shipley Ltd. (Irish Office)</td>
</tr>
<tr>
<td>YORK</td>
<td>YORK</td>
</tr>
</tbody>
</table>

### Draught Stabilisers

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfred Langham Ltd.</td>
<td>Enquiries direct</td>
</tr>
<tr>
<td>LANGHAM</td>
<td>LANGHAM</td>
</tr>
</tbody>
</table>

### Drying Apparatus

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>ANDREW</td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>G.E.C.</td>
</tr>
<tr>
<td>Lightfoot Refrigeration Co. Ltd.</td>
<td>Lightfoot Refrigeration (Ireland) Ltd.</td>
<td>LIGHTFOOT</td>
</tr>
</tbody>
</table>

### Ducting

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
</tr>
<tr>
<td>Uni-Tubes Ltd.</td>
<td>Technical Sales Company</td>
</tr>
<tr>
<td>ROPEX</td>
<td>ROPEX</td>
</tr>
</tbody>
</table>

### Duct Heaters

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
</tr>
<tr>
<td>Woods of Colchester Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
</tr>
<tr>
<td>WOODS</td>
<td>WOODS</td>
</tr>
</tbody>
</table>

### Dust Collecting Plant

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
</tr>
<tr>
<td>Matthews &amp; Yates Ltd.</td>
<td>Enquiries supplied direct</td>
</tr>
</tbody>
</table>

### Economisers, Fuel

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trianeo Ltd.</td>
<td>Heatoveent Supply Co. Ltd.</td>
</tr>
<tr>
<td>TRIANCO</td>
<td>TRIANCO</td>
</tr>
</tbody>
</table>

### Ejectors, Steam

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hattersley (Ormskirk) Ltd.</td>
<td>W. H. Leech</td>
</tr>
<tr>
<td>HATTERSLEY</td>
<td>HATTERSLEY</td>
</tr>
</tbody>
</table>

### Electric Heating Elements

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bray, Geo. &amp; Co. Ltd.</td>
<td>Enquiries supplied direct</td>
</tr>
<tr>
<td>BRAY</td>
<td>BRAY</td>
</tr>
</tbody>
</table>

### Electric Heating Equipment

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bastian &amp; Allen Ltd.</td>
<td>Hendron Bros. (Machinery) Ltd.</td>
<td>B.I.C.C.</td>
</tr>
<tr>
<td>British Insulated Callenders Cables Ltd.</td>
<td>British Insulated Callenders Cables Ltd. (Irish Office)</td>
<td>B.I.C.C.</td>
</tr>
<tr>
<td>Cambridge, E. J. (Heatrite) Ltd.</td>
<td>Enquiries supplied direct</td>
<td>HEATRITE</td>
</tr>
<tr>
<td>Clayton, Reginald Ltd.</td>
<td>Enquiries direct</td>
<td>DELUXETE</td>
</tr>
<tr>
<td>Colt Ventilation Ltd.</td>
<td>F. W. Norman</td>
<td>COLT</td>
</tr>
<tr>
<td>Dimplex Ltd.</td>
<td>A, Bell &amp; Co. (Ireland) Ltd.</td>
<td>Dimplex</td>
</tr>
<tr>
<td>Ecko Heating &amp; Electrical Ltd.</td>
<td>Kelly &amp; Shiel Ltd.</td>
<td>THERMOVENT</td>
</tr>
<tr>
<td>Elsey &amp; Giffbins Ltd.</td>
<td>Enquiries supplied direct</td>
<td>ESWA</td>
</tr>
<tr>
<td>Eswa Ltd.</td>
<td>Falk, Stadlmann &amp; Co. Ltd. (Irish Office)</td>
<td>FALKS</td>
</tr>
</tbody>
</table>

### LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
Packaged Zone-A-Matic Heating

• Design, commissioning and first six months service free of charge.

Manufactured by—

EDWARDS ENGINEERING CORP.

Technical Representative: HUGH C. MAGUIRE A.M.I.H.V.E.
37, Blackheath Park, Clontarf, Dublin.

Radiation New World Limited,
Radiation House,
North Circular Road, London, N.W.10

MANUFACTURERS OF

NEW WORLD

STORAGE WATER HEATERS

for sink and whole house use, having corrosion resisting combustion chambers and suitable for low working heads.

• Area Manager for the Republic of Ireland and Northern Ireland:
MR. CHARLES ROLLS, 115 Crawfordsburn Road, Bangor, Co. Down.

FURTHER details on information listed in this register are available to readers.

TO AVAIL of the Reader Enquiry Service details of particulars required should be sent to:

Irish Trade and Technical Publications,
Callaghan Chambers,
13-15 Dame Street, Dublin.

WHEN writing, readers should say on what page and under what heading the subject of the enquiry is mentioned.

ADDITIONAL COPIES AVAILABLE ON APPLICATION TO THE PUBLISHERS. PRICE FIVE SHILLINGS PER COPY.
Expansion Joints

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME ON TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>G.E.C.</td>
</tr>
<tr>
<td>Heatrae Ltd.</td>
<td>Enquiries supplied direct</td>
<td>HEATRAE</td>
</tr>
<tr>
<td>H.Y.E. (Electric) Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Lincoln Furnaces Ltd.</td>
<td>Dunwoody &amp; Dobson Ltd.</td>
<td>LINCOLN</td>
</tr>
<tr>
<td>Moreheat Ltd.</td>
<td>E. G. Mulhane</td>
<td>MORHEAT</td>
</tr>
<tr>
<td>Powell Infran Heatring Ltd.</td>
<td>D. H. Sullivan</td>
<td>GULF</td>
</tr>
<tr>
<td>Sterling Domestic Appliances Ltd.</td>
<td>Enquiries supplied direct</td>
<td>THERMODARE</td>
</tr>
<tr>
<td>Unidare Ltd. (Infra-Red Heaters)</td>
<td>Irish Technical &amp; Production Co. Ltd.</td>
<td>THERMODARE</td>
</tr>
<tr>
<td>Unidare Ltd. (Storage Heaters)</td>
<td>Enquiries supplied direct</td>
<td>THERMODARE</td>
</tr>
<tr>
<td>Wright Electric Motors (UK) Ltd.</td>
<td>Enquiries supplied direct</td>
<td>SAFEHEAT</td>
</tr>
<tr>
<td>Aerialite Ltd.</td>
<td>Enquiries supplied direct</td>
<td>ELVACO</td>
</tr>
<tr>
<td>Eltron Heating Ltd.</td>
<td>Through Wholesalers direct</td>
<td>ELTRON</td>
</tr>
<tr>
<td>Eltron (London) Ltd.</td>
<td>Carlile &amp; Co. Ltd.</td>
<td>HURSEAL</td>
</tr>
<tr>
<td>Santon Ltd.</td>
<td>Charles Nolan &amp; Co. Ltd.</td>
<td>SANTON</td>
</tr>
<tr>
<td>Valor Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td>VALOR</td>
</tr>
</tbody>
</table>

Extractors and Ventilation Fans

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME ON TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>DYNAFLOW</td>
</tr>
<tr>
<td>Colt Ventilation Ltd.</td>
<td>F. W. Norman</td>
<td>COLT</td>
</tr>
<tr>
<td>Copperal Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Ekco Heating &amp; Electrical Ltd.</td>
<td>Kelly &amp; Shiel Ltd.</td>
<td>ERKO</td>
</tr>
<tr>
<td>Greenwoods &amp; Airvac Ventilating Co. Ltd.</td>
<td>Technical Sales Company</td>
<td></td>
</tr>
<tr>
<td>Greenwoods &amp; Airvac Ventilating Co. Ltd.</td>
<td>Dublin Glass &amp; Paint Co. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>London Fan &amp; Motor Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td>BREEZA</td>
</tr>
<tr>
<td>Marelli &amp; Co.</td>
<td>L. J. Keogh</td>
<td>MARELLI</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Limited (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd. (N.I.)</td>
<td></td>
</tr>
<tr>
<td>Peugeot &amp; Cie</td>
<td>Trumeco Ltd.</td>
<td></td>
</tr>
<tr>
<td>Tack Industries Ltd.</td>
<td>Pan-Air Sales Limited</td>
<td>NU-AIRE</td>
</tr>
<tr>
<td>Thermostatik Ltd.</td>
<td>J. &amp; E. Hall Limited</td>
<td></td>
</tr>
<tr>
<td>Thermoventik Ltd.</td>
<td>Thermotank Ltd. (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Woods of Colchester Ltd.</td>
<td>General Electric Company of Ireland Ltd.</td>
<td>X-PEL-AIR</td>
</tr>
</tbody>
</table>

Fan Speed Regulators

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME ON TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indola N.V.</td>
<td>Technical Equipment Co. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Woods of Colchester Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td></td>
</tr>
</tbody>
</table>

Fixing Tools and Bolt Driving Guns

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME ON TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Bourner (Fixings) Ltd.</td>
<td>G. A. Reid</td>
<td>SPITMATIC</td>
</tr>
<tr>
<td>Ucan Development Ltd.</td>
<td>Calumet Trading Co. Ltd.</td>
<td>HILTI</td>
</tr>
</tbody>
</table>

Filters, Air

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME ON TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>ANDREW</td>
</tr>
<tr>
<td>Brooks Ventilation Units Ltd.</td>
<td>Enquiries supplied direct</td>
<td>BROOKS</td>
</tr>
<tr>
<td>Copperal Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Lockert Industries Ltd.</td>
<td>Hugh C. Maguire</td>
<td></td>
</tr>
<tr>
<td>Shaw &amp; Son Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>SHAW</td>
</tr>
<tr>
<td>Thermotank Ltd.</td>
<td>J. &amp; E. Hall Ltd.</td>
<td></td>
</tr>
<tr>
<td>Thermotank Ltd.</td>
<td>Thermotank Ltd. (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Vokes Ltd.</td>
<td>Leinster Engineering Co. Ltd.</td>
<td>MICROWIRE/MICRODISC</td>
</tr>
</tbody>
</table>

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.

Twenty-three
The Irish Plumber and Heating Contractor.

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filters, Liquid, Oil, Water, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>BOSS</td>
</tr>
<tr>
<td>Danfoss Ltd.</td>
<td>J. J. Sampson &amp; Son Ltd.</td>
<td>DANFOSS</td>
</tr>
<tr>
<td>Locker Industries Ltd.</td>
<td>O. C. Maguire</td>
<td>O.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd. (N.I.)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>Plenty &amp; Son Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td>VOKES</td>
</tr>
<tr>
<td>Vokes Ltd.</td>
<td>Leinster Engineering Co. Ltd.</td>
<td>VOKES</td>
</tr>
</tbody>
</table>

Flame Failure and Protection Devices

The Rheostatic Co. Ltd. | R. E. Ayers | SATCHELL

Flue-Gas Corrosion Protection

Oil-Age Boiler Co. Ltd. | Danish Stoker & Boiler Co. Ltd. | D.S.V.

Fuel, Ash and Clinker Conveying Plant

Trianco Ltd. | Heatonvent Supply Co. Ltd. | TRIANCO

Fume Removal Equipment

| Keith Blackman Ltd. | Keith Blackman Ltd. (Irish Office) |
| Vokes Ltd. | Leinster Engineering Co. Ltd. |

Floor Heating Installations

Aerialite Ltd. | Enquiries supplied direct | ASHATHERM |
| British Insulated Cables Ltd. | B.I.C.C. Ltd. (Irish Office) | " PANELEC " |
| Falk, Stadelmann & Co. Ltd. | Falk, Stadelmann & Co. Ltd. (Irish Office) | FLORAWARM |
| H.V.E. (Electric) Ltd. | Enquiries supplied direct |
| Simplex Electric Co. Ltd. | Simplex |
| Thermalay Ltd. | Hughes & Coyle Ltd. | THERMALAY |
| Unitare Ltd. | Enquiries supplied direct | THERMADARE |

Gauges, Air, Pressure, Vacuum, etc.

British Rototherm Co. Ltd. | The Rototherm Precision & Instrument Co. Ltd. | ROTOTHERM |
| British Steam Specialties Ltd. | British Steam Specialties Ltd. (Irish Office) | BOSS |
| Brooks & Walker Ltd. | Halpin & Hayward Ltd. |
| General Electric Co. Ltd. | General Electric Co., of Ireland Ltd. |
| Halpin & Hayward Ltd. | Enquiries supplied direct | FYRITE |
| Hattersley (Ormskirk) Ltd. | Manotherm Ltd. | HATTERSLEY |
| Manotherm (E.N.F.M.) | O.B.C. Ltd. (Irish Office) | O.B.C. |
| O.B.C. Ltd. | Peter Macfarlane & Son, Ltd. (N.I.) |
| Pegler's Ltd. | Enquiries supplied direct | PEGLERS |
| Charles Winn & Co. Ltd. | J. S. Lister Ltd. | WINN |

Gauges, Liquid

British Steam Specialties Ltd. | British Steam Specialties Ltd. (Irish Office) | BOSS |
| Cleveland Meters Ltd. | Manotherm Ltd. | CLEVELAND |
| General Electric Co. Ltd. | General Electric Co., of Ireland Ltd. |
| Hattersley (Ormskirk) Ltd. | W. H. Leech | HATTERSLEY |
| Tylors of London Ltd. | Tylors of Ireland Ltd. | TYLOR |

Gauges, Liquid Level

Barhead Engineering Co. Ltd. | Dan Kelly & Co. | GALONGAGE |
| British Steam Specialties Ltd. | General Electric Co., of Ireland Ltd. | BOSS |
| General Electric Co. Ltd. | W. H. Leech | HATTERSLEY |
| Hattersley (Ormskirk) Ltd. | O.B.C. Ltd. (Irish Office) | O.B.C. |
| O.B.C. Ltd. | Peter Macfarlane & Son Ltd. (N.I.) |
| Sectra Ltd. | Manotherm Ltd. | SEESTRU |
| Charles Winn & Co. Ltd. | J. S. Lister & Co. Ltd. | WINN |

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
HAVE YOU EXAMINED THIS NEW PIPE?

- It is Stewarts and Lloyds new High Density polyethylene pipe and it has many interesting advantages.
- Have you seen our literature? Telephone 46704 and we shall be pleased to send it to you.
- We can arrange for our Technical representative to call on you at your convenience.

NEW HIGH DENSITY polyethylene pipe

STEWARTS & LLOYDS OF IRELAND LTD., EAST WALL RD., DUBLIN 3. Phone 46704.
Generators (Steam)

Vapor, S.A. ........................................... Irish Technical & Production Co. Ltd, VAPOR

Grilles, Louvres, etc.

F. H. Biddle Ltd. ..................................... Quadrant Engineers, BIDDLE
Colt Ventilation Ltd. .................................. F. W. Norman, COLT
Greenwood & Alfvea Ventilating Co. Ltd. .............. AGAVECTOR
Heating and Building Services Ltd. .................... Enquiries supplied direct, HI-VEE
Thermotank Ltd. ...................................... J. & E. Hall Ltd.

Grit Arresters

Andrew Air Conditioning Ltd. ......................... F. G. Thornton, ANDREW
Combustion Equipment Ltd. .......................... Halpin & Hayward Ltd.

Headers

Kirk & Co. (Tubes) Ltd. ................................ D. P. Engert & Co., KIRK
Stewarts & Lloyds Ltd. ............................... Stewarts & Lloyds of Ireland Ltd, S. & L.

Heaters, Air

Aerialite Ltd. ......................................... Enquiries supplied direct, AERIALITE
Afos Ltd. .................................................. Peter Macfarlane & Co. Ltd, AFOS
Allied Indus. Ltd. ...................................... A. H. Masser Ltd, AGAVECTOR
Auto Combustions (London) Ltd. ...................... Auto Combustions (Ireland) Ltd, VAPORMISER
Baxi Ltd. .................................................. F. A. Smyth, BAXI
F. H. Biddle Ltd. ....................................... Quadrant Engineers, WARMFLO/UNIFO
Keith Blackburn Ltd. .................................... British Steam Specialties Ltd, (Irish Office) COPPERAD
F. A. Borehardt Ltd. ..................................... Preston Ltd, DRUGASAR
Calumet Trading Co. Ltd. .............................. Enquiries supplied direct, VIKING BEL-AIR
Clyde Fuel Systems Ltd. ............................... Clyde Fuel Systems Ltd, (Irish Office) CLYDE
Colt Ventilation Ltd. .................................... F. W. Norman, TURBO-STATIC
Copperad Ltd. .......................................... Enquiries supplied direct, SIROCCO
Davidson & Co. Ltd. .................................... Enquiries supplied direct, CASTLE
Dunham-Bush ............................................ Henry R. Ayton Ltd, DUNHAM-BUSH
Farrell Engineering Co. Ltd. .......................... Enquiries supplied direct, GENERAL ELECTRIC
General Electric Co. Ltd. ............................ General Electric Co. of Ireland Ltd, G.E.C.
Hainault Engineering Co. Ltd. ......................... Hainault Ltd, HAINAULT
Heating & Building Services Ltd. ..................... Enquiries supplied direct, HI-VEE
Indola N.V. ............................................. Technical Equipment Co. Ltd, A.
Dan Kelly & Co. ........................................ Enquiries supplied direct, NOBEL 31
Lincoln Furnaces Ltd. ................................... Enquiries supplied direct, LINCOLN
Nu-Way Heating Plants Ltd. ............................ Nu-Way Heating Plants Ltd, (Irish Office) NU-WAY
Peter Macfarlane & Son Ltd. (N.I.) ..................... Enquiries supplied direct, POTEZ
Thomas Hume Ltd. (N.I.) ............................... Enquiries supplied direct, VATTERTON
Powell Dunphy Modular Ltd. ........................... Enquiries supplied direct, DRAVO
Stewarts & Lloyds Ltd. ............................... Stewarts & Lloyds of Ireland Ltd
Sugg, William & Co. Ltd. .............................. Enquiries supplied direct, W. Cole
Trane Ltd. .................................................. Enquiries supplied direct, SUGG
Weldryte Ltd. .......................................... Enquiries supplied direct, WELDRYTE
Woods of Colchester Ltd. .............................. General Electric Co. of Ireland Ltd

Heaters, Water

Aidas Electric Ltd. ..................................... A. P. Haslam, SADIA
Ascot Gas Water Heaters Ltd. ........................ L. C. Young, ASCOT
Bastian & Allen Ltd. ................................... Hendron Bros, (Machinery) Ltd, BURCO
F. H. Biddle Ltd. ....................................... Quadrant Engineers, COX
Burco Ltd. .............................................. A. P. Haslam, ELSON
Cox Engineering Co. Ltd. .............................. Enquiries supplied direct, ELSON
Eisy & Gibbons Ltd. .................................... Enquiries supplied direct, GEC.
General Electric Co. Ltd. ............................ General Electric Co. of Ireland Ltd, G.E.C.
Eltron (London) Ltd. .................................... Through Wholesalers, ELTRON
Heatrace Ltd. .......................................... Enquiries supplied direct, HEATRAE
McMullans Kosangas Ltd. .............................. Enquiries supplied direct, KOSANGAS
Radiation New World Ltd. ............................. Charles Rolls, NEW WORLD
Santon Ltd. .............................................. Charles Nolan & Co, SANTON
Simplex Electric Co. Ltd. ............................. Electro-Diesel (Ireland) Ltd, CREDIA
Societe Generale de Fonderie ......................... Irish Technical & Production Co Ltd, CHAPPEE
Stewarts & Lloyds Ltd. ............................... Stewarts & Lloyds of Ireland Ltd, S. & L.
H-Vesshoff & Co. Ltd. ................................ Irish Industrial Supplies Ltd.
FROM HANS GROHE

* Pop-Up Bath Wastes and Overflows
* Traps and Wastes of all sorts
* Showers and other Bathroom Accessories

HANS GROHE, KG., SCHILTACH, SCWARZALD, WESTERN GERMANY.

* Detailed information is available from our Irish Representatives:

NORMAN STEWART - LTD. -
CENTRAL HOTEL CHAMBERS, DAME COURT, DUBLIN.
Telephone: 73086.

Also Agents in Ireland for:

STOCKISTS AND SUPPLIERS TO THE HEATING TRADE of

Trianco Boilers & Suxe Burners

A VARIED RANGE OF OTHER HEATING APPLIANCES ALSO IN STOCK

THOS. HEITON & CO. LTD.: 18 WESTMORELAND ST., DUBLIN
37 GEORGE'S QUAY, DUBLIN

June, 1962.
WELDING SERVICES LTD.

14-16 AMIENS STREET, DUBLIN

Phones 47051-2-3.

WELDING RODS
FLUXES
ELECTRODES
STELLITE
BLOWPIPES
CUTTERS
REGULATORS
HOSE
TROLLIES
NOZZLES
ADAPTORS
GOGGLES
SKULL CAPS
LEATHER JACKETS
CHROME SLEEVES

ARC WELDERS
SPOT WELDERS
PROFILE CUTTERS
STRAIGHT LINE AND CIRCLE CUTTERS
PIPE BEVELLING MACHINES
CABLE
ELECTRODE HOLDERS
EARTH CLAMPS
HANDSCREENS
HELMETS
GLOVES
APRONS
POSITIONERS

WE SPECIALISE IN PROPANE FOR CUTTING - BRAZING - HEATING - LEAD MELTING - BENDING PVCPIPES - FLOODLIGHTS.

WE REPAIR AND SERVICE EXCHANGE ALL MAKES OF GAS WELDING AND CUTTING EQUIPMENT.

WE GIVE YOU FREE ADVICE AND DEMONSTRATIONS.

WE HIRE ARC WELDING MACHINES.

WE CARRY THE WIDEST RANGE OF WELDING EQUIPMENT IN EIRE.

USE SIFBRONZE FOR 100 p.c. LEAKPROOF JOINTS
<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE Co., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETORY NAME OR TRADE MARK</th>
</tr>
</thead>
</table>

### Heat Exchangers

- **F. H. Biddle Ltd.**
  - Quadrant Engineers
- **Cochran & Co. Annon Ltd.**
  - D. P. Engert & Co.
- **Dunham-Bush Ltd.**
  - Henry R. Ayton Ltd.
- **Heating & Building Services Ltd.**
  - Enquiries supplied direct
- **Kirk & Co. (Tubes) Ltd.**
  - D. P. Engert & Co.
- **William McGeoch & Co. Ltd.**
  - Technical Sales Company
- **Stewarts & Lloyds of Ireland Ltd.**
  - S. & L.
- **Woods of Colchester Ltd.**
  - General Electric Co. of Ireland Ltd.
  - York Shipleys Ltd. (Irish Office)
  - YORK

### Heating, Storage

- **Bastian & Allen Ltd.**
  - Hendren Bros. (Machinery) Ltd.
- **Unidare Ltd.**
  - Enquiries direct or through Wholesalers
  - THERMODARE
- **General Electric Co. Ltd.**
  - General Electric Co. of Ireland Ltd.
  - NIGHTSTOR

### Hospital Equipment

- **Crane Ltd.**
  - Enquiries supplied direct
  - CRANE
- **J. S. & F. Folkard Ltd.**
  - A. H. Masser Ltd.
  - VULTEX
- **Gummers Ltd.**
  - McGrath & Kenny
  - GUMMERS
- **Shanks & Co. Ltd.**
  - C. H. Lockhart Ltd.
  - SHERMS
- **Twyfords Ltd.**
  - T. R. Ivers
  - TWYFORDS

### Humidifiers

- **Copperad Ltd.**
  - British Steam Specialties Ltd.
  - COPPERAD
- **Keith Blackman Ltd.**
  - Keith Blackman Ltd. (Irish Office)

### Humidity Controllers, Indicators, Rewarders, etc.

- **Honeywell Controls Ltd.**
  - Honeywell Controls Ltd. (Irish Office)
  - HONEYWELL
- **Shandon Scientific Co. Ltd.**
  - Halpin & Hayward Ltd. (Northern Ireland)
  - SHANDON

### Injectors, Nozzles, etc.

- **British Steam Specialties Ltd.**
  - British Steam Specialties Ltd. (Irish Office)
  - BOSS
- **Dolfofd Ltd.**
  - J. J. Sampson & Son Ltd.
  - DANFOSS
- **Hattersley (Ormskirk) Ltd.**
  - W. H. Leech
  - HATTERSLEY
- **Keith Blackman Ltd.**
  - Keith Blackman Ltd. (Irish Office)
  - O.B.C.
- **O.B.C. Ltd.**
  - O.B.C. Ltd.
  - Peter Macfarlane & Son Ltd.
  - O.B.C.

### Instruments, Meters, Indicators, Gauges, etc.

- **British Steam Specialties Ltd.**
  - British Steam Specialties Ltd. (Irish Office)
  - RHODES
- **British Rototherm Co. Ltd.**
  - Rototherm Precision & Instrument Co. Ltd.
  - ROTOTHERM
- **Cleveland Meters Ltd.**
  - Manotherm Ltd.
  - CLEVELAND
- **G. C. Pillinger & Co. Ltd.**
  - G. C. Pillinger & Co. (Ireland) Ltd.
  - HONEYWELL
- **General Electric Co. Ltd.**
  - Honeywell Controls Ltd.
  - Honeywell Controls Ltd. (Irish Office)
- **Kemp & Lauiritzen**
  - Technical Sales Company
  - KENT
- **George Kent Ltd.**
  - S. W. Cartly & Son
  - O.B.C.
- **O.B.C. Ltd.**
  - O.B.C. Ltd.
  - Peter MacFarlane & Son Ltd. (N.I.)
  - SATCHELL
- **The Rheostatic Co. Ltd.**
  - R. E. Ayers
  - TYLOR
- **Shandon Scientific Co. Ltd.**
  - Halpin & Hayward Ltd. (Northern Ireland)
  - SHANDON
- **Tylors of London Ltd.**
  - Tylors of London Ltd.
  - TYLOR

### Insulation

- **Cape Insulation & Asbestos Products Ltd.**
  - M. A. Boylan Ltd.
  - ROCKSIL
- **Cor-Tex Proofer Ltd.**
  - Enquiries supplied direct
  - ISOFOAM
- **Darlington Insulation Co. Ltd.**
  - Goodbody Limited
  - DARLINGTON
- **Fibreglass Ltd. (Irish Office)**
  - Fibreglass Ltd. (Irish Office)
  - FIBREGLASS
- **Gypsum Industries Ltd.**
  - Enquiries supplied direct
  - FERROKLYTH
- **M.A.B. Insulations Ltd.**
  - Enquiries supplied direct
  - OPPANOL

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**

**Twenty-nine**
The Irish Plumber and Heating Contractor.

The Nobel 31

Adds Warmth and Luxury

The ‘Nobel’ 31 is ideally suitable for lounge bars or in fact all large rooms. The cost of installation is remarkably low and it is most economical on fuel and general maintenance. There are absolutely no fumes with the Nobel 31. Obtainable with either manual or thermostatic controls—It is essential in any hotel.

Write or ‘phone for full particulars to:

DAN KELLY & CO.

31 Upper Baggot St., Dublin 4.
‘Phone 680067.

BREAKTHROUGH!

At last the Insulation with the Waterproof Cover!

‘THERMALAINE’

FOR THE INSULATION OF PIPING IN DUCTS, ROOF SPACES, WALLCHASES, OUTDOORS.

Consulting Engineers who specify it can be sure that come dampness or flood the insulation will remain good.

Contracting Plumbing and Central Heating Engineers who use it will get a first-class waterproofed insulation at low prices that can be applied with speed, eliminating one stage of the usual lagging process, thereby cutting labour costs to the absolute minimum.

Clients will like it because it is clean and easy to handle, being supplied to fit the Bore of the Piping being covered, therefore eliminating dirt around the site.

Workmen will like it because the waterproof cover does away with the discomfort that goes with the handling of the usual insulating materials.

* Considering this material does away with one stage of the lagging process, the cost is remarkably low and compares very favourably with other popular materials.

McAuley & Cunningham


Agent: JOHN F. MANGAN & CO., 105B, Morechampton Road, Donnybrook, Dublin.
### Jointing Compounds

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>BOSS</td>
</tr>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Philipps Products Ltd.</td>
<td>Expandite (Ireland) Ltd.</td>
<td>PHILPLUG</td>
</tr>
</tbody>
</table>

### Liquid Handling Equipment

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
</table>

### Lubricators

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>BOSS</td>
</tr>
</tbody>
</table>

### Pipe Bending Equipment

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Hendron Bros. (Dublin) Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Hilmor Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Selas Gas &amp; Eng. Co. Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Tubela Engineering Co. Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Wright Electric Motors (IX) Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
</tbody>
</table>

### Pipes, Tubes and Pipe Fittings

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bendz Ltd.</td>
<td>F. E. Todd</td>
<td>BENDZ</td>
</tr>
<tr>
<td>Bolivar Stamping Co. Ltd.</td>
<td>C. B. Sheridan</td>
<td>BOLIVAR</td>
</tr>
<tr>
<td>Bolton Superheater &amp; Pipeworks Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td></td>
</tr>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Brooks &amp; Walker Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td></td>
</tr>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Conex Terna Ltd.</td>
<td>Sanbra-Conex (Ireland) Ltd.</td>
<td>CONEX</td>
</tr>
<tr>
<td>Continue-Flo Heating Products Ltd.</td>
<td>W. J. Thompson Ltd.</td>
<td>CONTINUE-FLO</td>
</tr>
<tr>
<td>Du Bois Co. Ltd.</td>
<td>Kenneth M. Reynolds Ltd.</td>
<td></td>
</tr>
<tr>
<td>Extended Surface Tube Co. Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Frank Love Ltd.</td>
<td>Cyril Hughes</td>
<td>XL</td>
</tr>
<tr>
<td>Fyffe Couplings (Ireland) Ltd.</td>
<td>Enquiries direct or through Merchants</td>
<td>INSTANTOR/CONEOIR</td>
</tr>
<tr>
<td>Hackethal Cable &amp; Wire Works</td>
<td>L. R. Wood Ltd.</td>
<td>HACKETHAL</td>
</tr>
<tr>
<td>Irish American Pipes Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Kay &amp; Co. (Engineers) Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Kingdom Tubes Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td>KONTITE</td>
</tr>
<tr>
<td>Kirk &amp; Co. (Tubes) Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td>KIRK</td>
</tr>
<tr>
<td>James H. Lamont &amp; Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Lancashire &amp; Corby Steel Manufacturing Co. Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>O.B.C. Limited</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Limited</td>
<td>Peter Macfarlane &amp; Son Ltd. (N.I.)</td>
<td></td>
</tr>
<tr>
<td>Oster Manufacturing Co. Ltd.</td>
<td>Monseil, Mitchell &amp; Co. Ltd.</td>
<td>OSTER</td>
</tr>
<tr>
<td>Peglers Limited</td>
<td>Enquiries supplied direct</td>
<td>PEGLERS</td>
</tr>
<tr>
<td>Potatoes (U.K.) Ltd.</td>
<td>Manotherm Ltd.</td>
<td>DODD &amp; MUNRO</td>
</tr>
<tr>
<td>Simplex (of Ireland) Ltd.</td>
<td>Enquiries supplied direct</td>
<td>SIMPLEX</td>
</tr>
<tr>
<td>Slanton Ironworks Co. Ltd.</td>
<td>Enquiries direct</td>
<td>STANTON</td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>F. W. Talbot &amp; Co. Ltd.</td>
<td>S. W. Carty &amp; Son Ltd.</td>
<td>TALBOT</td>
</tr>
<tr>
<td>Temple Tubes Ltd.</td>
<td>V. H. Campbell</td>
<td>T.T.</td>
</tr>
<tr>
<td>Tubewrights Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Turners Ashclay Cement Co. Ltd.</td>
<td>Asbestos Cement (Pipes) Ltd.</td>
<td></td>
</tr>
<tr>
<td>Unitised Limited</td>
<td>Enquiries direct</td>
<td>HYDRODARE</td>
</tr>
<tr>
<td>Unitare Limited</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Unit Superheater &amp; Pipe Co. Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Vokes Limited</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td>VOKES</td>
</tr>
</tbody>
</table>

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**

*Thirty-one*
<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pipes and Tubes, Plastic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Insulated Cables Ltd.</td>
<td>B.I.C.C., Ltd. (Irish Office)</td>
<td>B.I.C.C.</td>
</tr>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>WAVIN/DURAFIPE</td>
</tr>
<tr>
<td>J. &amp; S. F. Folkard Ltd.</td>
<td>A. H. Maser Ltd.</td>
<td>VULCATHENE</td>
</tr>
<tr>
<td>Marley Tile Co. Ltd.</td>
<td>Concrete Products of Ireland Ltd.</td>
<td>MARLEY</td>
</tr>
<tr>
<td>O’Brien Plastics Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Osma Plastics Ltd.</td>
<td>V. H. Campbell</td>
<td>OSMA</td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds Ltd.</td>
<td>Stewarts &amp; Lloyds of Ireland Ltd.</td>
<td>S. &amp; L.</td>
</tr>
<tr>
<td>Unidare Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>Wavin Pipes Ltd.</td>
<td>Enquiries supplied direct</td>
<td>WAVIN</td>
</tr>
</tbody>
</table>

| **Pipes and Tubes, Soil and Drain** | | |
| Allied Ironfounders Ltd. | Waterford Ironfounders Ltd. | |
| Banagher Tiles Ltd. | Enquiries supplied direct | |
| Bendz Ltd. | F. E. Todd | BENDZ |
| Brook Pottery Ltd. | Enquiries direct | |
| Burn Brothers (London) Ltd. | Enquiries direct | TERRAIN |
| Clarecastle Clay Products Ltd. | Enquiries direct | |
| Elenagis Fireclays Ltd. | Enquiries direct | |
| Galway Tile Co. Ltd. | Enquiries supplied direct | |
| Key Engineering Co. Ltd. | Norman Macnaughton & Sons (Dublin) Ltd. | KEY |
| Moraccrete Ltd. | Enquiries supplied direct | MORACRETE |
| Rathcoole Tile & Pipe Works Ltd. | Enquiries supplied direct | |
| Slane Brick Co. Ltd. | Enquiries supplied direct | STANTON |
| Stanton Ironworks Co. Ltd. | Enquiries supplied direct | T.T. |
| Temple Tubes Ltd. | V. H. Campbell | |
| Turners Asbestos Cement Co. Ltd. | Asbestos Cement Ltd. | |
| Weatherwell Ltd. | Enquiries supplied direct | WEATHERWELL |

| **Pressure Booster Sets** | | |
| Rhodes, Brydon & Youatt Ltd. | Quadrant Engineers | |

| **Pressure Controllers** | | |
| Honeywell Controls Ltd. | Honeywell Controls Ltd. (Irish Office) | HONEYWELL |
| Manotherm (E.N.F.M.) | Manotherm Ltd. | MANOTHERM |

| **Pressurising Equipment** | | |
| Pressurisation Ltd. | Quadrant Engineers | NITRO-UNIT |
| Warmac Ltd. | Hugh C. Maguire | WARMAC |

| **Pressure Switches** | | |
| Danfoss Ltd. | J. J. Sampson & Son Ltd. | DANFOSS |
| Honeywell Controls Ltd. | Honeywell Controls Ltd. (Irish Office) | HONEYWELL |
| O.B.C. Ltd. | O.B.C. Ltd. (Irish Office) | O.B.C. |
| O.R.C. Ltd. | Peter Macarlane & Son Ltd. | |
| Rheostatic Co. Ltd. | R. E. Ayers | SATCHWELL |

| **Pressure Vessels** | | |
| Cochran & Co. (Annan) Ltd. | Enquiries direct | |
| Hammond Lane Industries Ltd. | Enquiries direct | |
| Harvey, G. A. & Co. Ltd. | Enquiries direct | |
| Sheet Metal Engineering Co. Ltd. | Enquiries direct | |
| Stewarts & Lloyds Ltd. | Stewarts & Lloyds of Ireland Ltd. | S. & L. |
| Thompson Bros. Ltd. | John Thompson Ltd. | |
| Universal Fabricators (Dublin) Ltd. | Enquiries direct | UFL |
| Warmac Ltd. | Hugh C. Maguire | WARMAC |

*LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.*
"Why work all night as well?"

when you can write one order to O.B.C.

Cut your paper work down by taking advantage of the fabulous range of equipment stocked by O.B.C. at all its branches.

Give yourself a break.
- Domestic Boilers and Radiators
- Oil Burner Spares
- Small Bore Heating Equipment
- Automatic Heating Controls
- Accelerators and Mixing Valves
- Refractories
- Control Panels
- Exchange Reconditioned Parts

Send for your copy today, available FREE to members of the heating trade.

There's an O.B.C. branch near you.

Head Office -
DROITWICH: Phone: 2051.
LONDON: 22 Kingley Street, London, W.I. Phone: Regent 5179.
NEWCASTLE: 76 Jesmond Road, Newcastle-upon-Tyne. Phone: 810867.
MANCHESTER: 20 Peel Street, Chadderton, Oldham. Phone: Oldham Main 9488.
BOURNEMOUTH: 183 Barrack Road, Christchurch, Hants. Phone: Christchurch 1331.
BRISTOL: 3 Transom House, Victoria Street, L. Phone: 262894.
LEICESTER: 87 Avenue Road Extension. Phone: 74669.
GLASGOW: 7 Park Circus Place. Phone: Douglas 8118.
CARDIFF: 17 St. Andrew's Crescent. Phone: 33368.
DUBLIN: 5 Upper Fitzwilliam Street. Phone: 61653.
BELFAST: 23-27 Cupar Street, Belfast, 13. Phone: Belfast 31576.
### Pumps and Circulators

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beresford, James &amp; Son Ltd.</td>
<td>Unitare Ltd.</td>
<td>BERESFORD</td>
</tr>
<tr>
<td>Beresford, James &amp; Son Ltd.</td>
<td>Unitare Engineering Ltd. (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Berry Hill (Engineers) Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td></td>
</tr>
<tr>
<td>Blake, John Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowser International Ltd.</td>
<td>Peter Macfarlane &amp; Co. Ltd.</td>
<td>BOWSER</td>
</tr>
<tr>
<td>Celtic Engineering Co. Ltd.</td>
<td>Enquiries supplied direct</td>
<td>GOULD</td>
</tr>
<tr>
<td>Danfoss Engineering Ltd.</td>
<td></td>
<td>DANFOSS</td>
</tr>
<tr>
<td>Delmore Engineering Co. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>DELMORE</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edwards Engineering Corp.</td>
<td>Hugh C. Maguire</td>
<td>EDWARDS</td>
</tr>
<tr>
<td>Gwynne's Pumps Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.C. Engineering Co. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.V. Duoplast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hammelrath &amp; Schwenzer</td>
<td>Hendron Bros. (Dublin) Ltd.</td>
<td>DIA</td>
</tr>
<tr>
<td>Harford Pumps Ltd.</td>
<td>G. A. Reid</td>
<td>OPIO</td>
</tr>
<tr>
<td>Harland Engineering Co. Ltd.</td>
<td>H. C. Fillinger &amp; Co. Ltd.</td>
<td>SELFIN</td>
</tr>
<tr>
<td>Holden &amp; Brooke Ltd.</td>
<td>J. Hind &amp; Sons Ltd. (Northern Ireland)</td>
<td>WATERPAK/LOEWEFLYGT</td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
<tr>
<td>Ideal-Standard Ltd.</td>
<td>Enquiries supplied direct</td>
<td></td>
</tr>
<tr>
<td>International Boilers &amp; Radiators Ltd.</td>
<td>Gallon Mitchell &amp; Co. Ltd.</td>
<td>SIGMUND THERMOPAK/SILENTELO</td>
</tr>
<tr>
<td>Koninklijke Machinesfabriek Gebr. Stork &amp; Co.</td>
<td>Hendron Bros. (Dublin) Ltd.</td>
<td>STORK</td>
</tr>
<tr>
<td>Thomas Lenehan &amp; Co. Ltd.</td>
<td>Enquiries direct</td>
<td>SABRE JET</td>
</tr>
<tr>
<td>R. A. Lister &amp; Co. Ltd.</td>
<td>R. A. Lister &amp; Co. Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>McFerran &amp; Guildford Ltd.</td>
<td>Enquiries direct</td>
<td>ROVI</td>
</tr>
<tr>
<td>Mono Pumps Ltd.</td>
<td>Mono Pumps Ltd. (Irish Office)</td>
<td>MONO</td>
</tr>
<tr>
<td>F. E. Myers &amp; Bros. Co.</td>
<td>Hendron Bros. (Dublin) Ltd.</td>
<td>MYERS</td>
</tr>
<tr>
<td>Newman, Hender &amp; Co. Ltd.</td>
<td>C. H. Lockhart Ltd.</td>
<td></td>
</tr>
<tr>
<td>Nu-Way Heating Plants Ltd.</td>
<td>Nu-Way Heating Plants Ltd. (Irish Office)</td>
<td>NU-WAY</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td></td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plenty &amp; Son Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulsoimeter Pumps Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhodes Brydon &amp; Yonath Ltd.</td>
<td>Quadrant Engineers</td>
<td>MO-PUMP</td>
</tr>
<tr>
<td>Radiation Parkray Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotherham Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryland Pumps Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saunders Valve Co. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scalded Motor Construction Co. Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>RAPIDMMU</td>
</tr>
<tr>
<td>Steel Radiators Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stuart Turner Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sumo Pumps Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unidare Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unidare Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worthington-Simpson Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Pyrometers

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
<tr>
<td>West Instruments Ltd.</td>
<td>Manotherm Ltd.</td>
<td>WEST</td>
</tr>
</tbody>
</table>

### Radiators

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beeaston Boiler Co. Ltd.</td>
<td>I. F. Glasgow</td>
<td>BEESTON</td>
</tr>
<tr>
<td>Brightside Heating &amp; Engineering Co. Ltd.</td>
<td>Brightside Engineering Co. (Ireland) Ltd.</td>
<td></td>
</tr>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (N. Ireland)</td>
<td>BOSS-ROBBE</td>
</tr>
<tr>
<td>Calovent Ltd.</td>
<td>Hugh C. Maguire</td>
<td>CALOVENT</td>
</tr>
<tr>
<td>Copperad Ltd.</td>
<td>British Steam Specialties Ltd.</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>Glow-Worm Boilers Ltd.</td>
<td>Monnell, Mitchell &amp; Co. Ltd.</td>
<td>GLOW-WORM</td>
</tr>
<tr>
<td>Ideal-Standard Ltd.</td>
<td>E. J. Croker</td>
<td></td>
</tr>
<tr>
<td>International Boilers &amp; Radiators Ltd.</td>
<td>Monnell Mitchell &amp; Co. Ltd.</td>
<td>INTERNATIONAL</td>
</tr>
<tr>
<td>Keeling, J. H. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
for showers: flow control and thermostatic control of the water temperature are now combined in one compact, elegant, and recessible unit. This valve is called the Leonard 72 and is manufactured by Walker Crosweller & Company Limited, Cheltenham.

MODERN PLANT LTD.
CRUMLIN RD., DUBLIN

A. H. MASSER LTD.

Visit our display at the Building Centre
or write to:
ANNESLEY WORKS, EAST WALL ROAD, DUBLIN 3
PHONE 79801

REPRESENTING
J. S. & F. Folkard Ltd.,
"Vulcathene"
Waste Drainage System with
Polyfusion Joining Process
"Vultex" Laboratory,
Shower and
Hospital Fittings
Selas Gas and
Engineering Co., Ltd.,
Bunsen Burners,
Furnaces and
Gas Equipment.
The Irish Plumber and Heating Contractor.

Convectors and Direct Hot Air Heating Units

—By

POTEZ

These attractive heaters are available in three models as detailed below. They are operated on paraffin or domestic diesel oil. Fumes go up the chimney and only pure, beautiful, hot air is distributed throughout the home, factory or glasshouse.

- Model No. 7R1 (as illustrated). Heated space up to 12,713 cu. ft. (corrected volume).

Distributors:

THE HOUSE OF ROWAN

M. Rowan & Co. Ltd., 51-52 Capel St., and 1-2 Westmoreland Street, Dublin. Phone 41891 (10 lines).

Eliminate Noise

IN THE W.C. CISTERN AND ATTIC TANK BY FITTING A

CRAIG SILENT BALLCOCK

WHY THE “CRAIG” SILENT BALLCOCK IS SILENT

When an ordinary Ballcock is in operation the water flow from the Orifice is uncontrolled, filling the Valve Body with turbulent water mixed with Free Air thus causing millions of Air Bubbles to “bombard” the Orifice, Washer and Body and creating wear, particularly in the Orifice with eventual failure to shut off properly. The Rubber Washer requires frequent renewal and there is steady deterioration in the body.

THE “CRAIG” SILENT BALLCOCK has a pressurised Body controlled by two Baffles in the Downpipe. As the Anti-Syphonage Valve is closed by the inflow of water, surplus air is excluded—thus the water is free from surplus air.

There being no Air Bubbles (the cause of 95% of Cistern noise) the “CRAIG” SILENT BALLCOCK is therefore completely SILENT in operation.

INDISPENSIBLE IN HOMES, HOSPITALS, HOTELS, OFFICES, CLUBS, ETC.

Sole Distributors for Ireland:—

IRISH EQUIPMENT COMPANY LTD.

Ballymount Road, Walkinstown, Dublin. Telephone: 501548.
Recording Equipment and Recorders

- British Rototherm Co. Ltd.
- Cleveland Meters Ltd.
- Honeywell Controls Ltd.
- George Kent Ltd.
- Manotherm (E.N.F.M.)
- John Thompson Ltd.
- Tyloes of London Ltd.
- Walker, Crosweller & Co. Ltd.

Refractories

- Curtis (Omn) Ltd.
- Darlington Insulation Co. Ltd.
- Nu-Way Heating Plants Ltd.
- O.B.C. Limited
- Plibrico Co. Ltd.

Refractory Linings

- Corrosion Ltd.
- L. R. Wood Ltd.

Refrigeration Plant

- Chrysler Airetemp Ltd.
- Chrysler Airetemp Ltd.
- Danfoss Ltd.
- Dunham-Bush Ltd.
- Frigidaire Div. of General Motors Ltd.
- J. & E. Hall Ltd.
- Lee Refrigeration Ltd.
- Lightfoot Refrigeration Co. Ltd.
- L. Sterne & Co. Ltd.
- Stewarts & Lloyds Ltd.
- John Thompson Ltd.
- Trane Ltd.
- York Shipley Ltd.

Regulators

- Andrew Air Conditioning Ltd.
- Danfoss Ltd.
- Drayton Controls Ltd.
- Hattersley (Ormskirk) Ltd.
- Honeywell Controls Ltd.
- Ideal-Standard Ltd.
- O.B.C. Ltd.
- O.B.C. Ltd.
- Rheostatic Co. Ltd.
- Selas Gas & Eng. Co. Ltd.

Roofing Copper

- Delta Enfield Rolled Metals Ltd.
- Norman Stewart Ltd.

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
The Irish Plumber and Heating Contractor.

* Stuart Turner Ltd.  
  Henley-on-Thames, Oxon.  
  • SMALL PUMPS AND MARINE ENGINES.

* Plenty & Son Ltd.  
  Newbury  
  • OIL PUMPS AND FILTERS.

* John Blake Ltd.  
  Accrington, Lanes.  
  • BOILER FEED PUMPS.

* Marshall & Anderson Ltd.  
  Motherwell  
  • STEAM AND H.W. BOILERS.

* Gwynnes Pumps Ltd.  
  Lincoln and London  
  • CENTRIFUGAL PUMPS.

* Alley & MacLellan Ltd.  
  Worcester  
  • CI AND STEEL VALVES.

* Glenfield & Kennedy Ltd.  
  Kilmarnock  
  • WATERWORKS VALVES & FITTINGS

* William Boby & Co. Ltd.  
  Rickmansworth, Herts.  
  • WATER TREATMENT ENGINEERS.

Sole Agent:  
D. P. ENGERT & CO.,  
5 Ardee Road, Rathmines, Dublin. Phone 91166.

---

all through the house

EVEN TEMPERATURE
constant comfort

with the exclusive

TWIN AIR system in
Lincoln FURNACES

PHONE 72463 or write:

DUNWOODY & DOBSON LTD.,  
32 LOMBARD STREET, E., DUBLIN.
Roof Drains, Waterheads Gutters and Outlets

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Ironfounders Ltd.</td>
<td>Waterford Ironfounders Ltd.</td>
<td>ASPECT</td>
</tr>
<tr>
<td>Allied Structural Plastics Ltd.</td>
<td>Enquiries direct</td>
<td>Baxendale &amp; Co. Ltd. (Irish Office)</td>
</tr>
<tr>
<td>Baxendale &amp; Co. Ltd.</td>
<td>Baxendale &amp; Co. Ltd. (Irish Office)</td>
<td>TERRAIN</td>
</tr>
<tr>
<td>Burn Bros. (London) Ltd.</td>
<td>Enquiries direct</td>
<td>Universal Ltd.</td>
</tr>
<tr>
<td>Carthorn (1949) Ltd.</td>
<td>Enquiries direct or through Merchants</td>
<td>UPL</td>
</tr>
<tr>
<td>Chadwicks (Dublin) Ltd.</td>
<td>Enquiries direct or through Merchants</td>
<td>FINLOCK</td>
</tr>
<tr>
<td>Finlock Gutters Ltd.</td>
<td>Enquiries direct</td>
<td>Finlock</td>
</tr>
<tr>
<td>Key Engineering Co. Ltd.</td>
<td>Enquiries direct</td>
<td>ThyssenKrupp</td>
</tr>
<tr>
<td>Kilkenny Products Ltd.</td>
<td>Enquiries direct</td>
<td>Key</td>
</tr>
<tr>
<td>Marley Tile Co. Ltd.</td>
<td>Concrete Products of Ireland Ltd.</td>
<td>Marley</td>
</tr>
<tr>
<td>O'Brien Plastics Ltd.</td>
<td>Enquiries direct</td>
<td>O'Brien Plastics Ltd.</td>
</tr>
<tr>
<td>Osmo Plastics Ltd.</td>
<td>North Down Equipment Co. Ltd.</td>
<td>Osmo</td>
</tr>
<tr>
<td>Temple Tubes Ltd.</td>
<td>Enquiries direct</td>
<td>Temple Tubes Ltd.</td>
</tr>
<tr>
<td>The Nuralite Co. Ltd.</td>
<td>Thomas Dockrell, Sons &amp; Co. Ltd.</td>
<td>Nuralite</td>
</tr>
<tr>
<td>Turners Asbestos Cement Ltd.</td>
<td>Asbestos Cement Ltd.</td>
<td>Everite</td>
</tr>
</tbody>
</table>

Roof Units (Ventilation)

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Air Conditioning Ltd.</td>
<td>F. G. Thornton</td>
<td>Andrew</td>
</tr>
<tr>
<td>Brooks Ventilation Units Ltd.</td>
<td>Enquiries direct</td>
<td>Brooks</td>
</tr>
<tr>
<td>Colt Ventilation Ltd.</td>
<td>F. W. Norman</td>
<td>Colt</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>Dunham-Bush</td>
</tr>
<tr>
<td>Eyewood-Heilwell Ltd.</td>
<td>W. H. Eyewood &amp; Co. (Ireland) Ltd</td>
<td>Breeza</td>
</tr>
<tr>
<td>London Fan &amp; Motor Co. Ltd.</td>
<td>Enquiries direct</td>
<td>Morlite</td>
</tr>
<tr>
<td>Morlite Ltd.</td>
<td>Enquiries direct</td>
<td>Morlite</td>
</tr>
<tr>
<td>Woods of Colchester Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>Woods</td>
</tr>
</tbody>
</table>

Rustproofing

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expandite Ltd.</td>
<td>Expandite (Ireland) Ltd.</td>
<td>Metagalv/Gewi Tape</td>
</tr>
<tr>
<td>Thomas Parsons &amp; Sons Ltd.</td>
<td>Thomas Parsons &amp; Sons Ltd. (Irish Office)</td>
<td>Denso</td>
</tr>
<tr>
<td>Winn &amp; Coales Ltd.</td>
<td>Alex Engineering Co. Ltd.</td>
<td>Steel-A-Strip</td>
</tr>
</tbody>
</table>

Sealing Compounds

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eromastics Ltd.</td>
<td>Evode Industries Ltd.</td>
<td>Seel-A-Strip</td>
</tr>
<tr>
<td>Expandite Ltd.</td>
<td>Expandite (Ireland) Ltd.</td>
<td>Seel-A-Round</td>
</tr>
<tr>
<td>Expandite Ltd.</td>
<td>Expandite (Ireland) Ltd.</td>
<td>P.C.4/Asbestumen</td>
</tr>
</tbody>
</table>

Sewerage Disposal

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farrar, Wm. E. Ltd.</td>
<td>T. &amp; C. Martin Ltd.</td>
<td>Farrar, Wm. E. Ltd.</td>
</tr>
</tbody>
</table>

Sight Glasses

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd.</td>
<td>Boss</td>
</tr>
</tbody>
</table>

Silencers

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Keith Blackman Ltd. (Irish Office)</td>
<td>Vokes</td>
</tr>
<tr>
<td>Vokes Ltd.</td>
<td>Leinster Engineering Co. Ltd.</td>
<td>Leinster Engineering Co. Ltd.</td>
</tr>
<tr>
<td>Woods of Colchester Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td>Woods of Colchester Ltd.</td>
</tr>
</tbody>
</table>

Steam Traps

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR</th>
<th>PROPRIETARY NAME OR TRADE MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Steam Specialties Ltd.</td>
<td>British Steam Specialties Ltd. (Irish Office)</td>
<td>Velan</td>
</tr>
<tr>
<td>Drayton Controls Ltd.</td>
<td>Monsell, Mitchell &amp; Co. Ltd.</td>
<td>Drayton</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>Dunham-Bush</td>
</tr>
<tr>
<td>Lancaster &amp; Tonge Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>Lancaster</td>
</tr>
<tr>
<td>Tranex Ltd.</td>
<td>Enquiries direct</td>
<td>Tranex Ltd.</td>
</tr>
</tbody>
</table>

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
### Stokers

- Allied (Founders Ltd)........... Enquiries direct.......... WATTS
- Beeston Boiler Co. Ltd......... I.F. Glasgow.............. BEESTON
- Nu-Way Heating Plants Ltd...... Enquiries direct.......... NU-WAY
- James Hodgkinson (Salford) Ltd. Enquiries direct.......... John Thompson Ltd. (N.I. Office)
- John Thompson Ltd...............

### Tanks and Cylinders

- Andrew Air Conditioning Ltd..... F. G. Thornton........... ANDREW
- Auto-Combustions Ltd............ Auto-Combustions (Ireland) Ltd. ANDREW
- Beeston Boiler Co. Ltd.......... I.F. Glasgow.............. BEESTON
- Blackrock Engineering Co. Ltd. Enquiries direct.......... FIDDIAN
- British Steam Specialities Ltd. Enquiries direct.......... BELCO
- Carthorn (1949) Ltd............. W. D. Craig & Co. (Northern Ireland)
- Coppercraft Metal Works......... Enquiries direct.......... SUPATAPS/SPA
- Griffith Bros.................... Enquiries direct.......... VULTEX
- Hammond & Son Ltd.............. Enquiries direct.......... OSMA
- Hartley & Son Ltd............... McGrath & Kenny.........
- Ideal-Standard Ltd.............. E. J. Cocker.............
- Osma Plastics Ltd.............. V. H. Campbell...........
- Thompson Bros. (Bilton) Ltd. ... John Thompson Ltd. (N.I. Office)

### Taps, Mixers and Shower Units

- Aerotaps Ltd.................... Enquiries direct.......... AEROTAPS
- Adamsez Ltd..................... Enquiries direct.......... ADAMSEZ
- Armitage Ware Ltd............. F. N. S. Ahern........... NUASTYLE
- James Barwell Ltd............. C. B. Sheridan........... FIDDIAN
- Delco Manufacturing Co. Ltd. ... E. G. Mullane........... BELCO
- F. H. Bourne & Co. Ltd......... George A. Reid.......... SUPATAPS/SPA
- J. S. & F. Fawkland Ltd......... A. H. Masser Ltd........ VULTEX
- Friedrich Grohe GmbH........... Norman Stewart Ltd....... GROHE
- Fyffe Couplings (Ireland) Ltd. Enquiries direct.......... FYFFE'S
- Gummers Ltd..................... Enquiries direct.......... GUMMERS
- Grohe Thermostat GmbH.......... Norman Stewart Ltd....... GROHE THERMOSTAT
- Harford Pumps Ltd.............. George A. Reid.......... AQUAMIX/MIXFORD
- Ideal-Standard Ltd............. E. J. Cocker............. IDEAL
- International Boilers & Radiators Ltd. Enquiries direct.......... SIGMIX
- Leisure Kitchen Equipment Ltd. R. T. Large & Son.......... LEISURE
- Oriel France S.A................ Calumet Trading Co. Ltd. FEROSTA
- Newman, Hender & Co. Ltd....... C. H. Lockart...........
- Peglers Ltd..................... Enquiries direct.......... PEGLERS
- Sanbra Ltd...................... Enquiries direct.......... CONEX
- Shanks & Co. Ltd............... C. H. Lockart Ltd......... SHANKS
- Walker, Crosswell & Co. Ltd.... Modern Plant Ltd......... LEONARD/UNATAP
- Charles Winn & Co. Ltd.......... J. S. Lister Ltd......... WINN

### Thermometers, Temperature Indicators, etc.

- British Rototherm Co. Ltd...... Rototherm Precision & Instrument Co. Ltd. ROTOTHERM
- British Steam Specialities Ltd. British Steam Specialities Ltd. (Irish Office). BOSS
- Honeywell Controls Ltd......... (Irish Office)............ HONEYWELL
- Kosmos Amtsaren-Und Apparatfabn Franz Manotherm Ltd............. MANOTHERM
- Raumsteiver K.G................ Manotherm Ltd............. MANOTHERM
- O.B.C. Ltd....................... O.B.C., Ltd. (Irish Office) O.B.C.
- O.B.C. Ltd....................... Peter Macfarlane & Son Ltd. (N.I.) O.B.C.
- Manotherm (E.N.F.M.)........... Enquiries direct.......... CLORIUS
- Odin Cleant Ltd................ Enquiries direct.......... R. E. Ayers
- Rheostatic Co. Ltd............... Enquiries direct.......... SATCHEWELL
- Rueger, Lausanne.............. Manotherm Ltd............. ZONE-A-TROL

---

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**

---

https://arrow.tudublin.ie/bsn/vol2/iss3/1
DOI: 10.21427/D7298Z

44
TECHNICAL SALES CO. LTD.
79 Lower Leeson Street, Dublin
Telephone: 61662.

Representing:—

POWERED VENTILATION REGISTERS and GRILLS
Greenwoods & Airvac Ventilating Co. Ltd.
Powderdome roof units—
variety of types,
"Lloydair" Registers and grills, floor grills, etc.
"Extraire" fan units,
Mechavent 75 Mk. II wall mounted (built-in) kit¬
chen fan units with discomfort canopy in three
colours for all homes.

HEAT METERS (Danish)
Kemp & Lauritzen
Equivalent of the electric meter for recording heat
consumption in homes, offices, flats, factories, etc.

PLIABLE DUCTING for VENTILATION SYSTEMS, etc.
Uni-Tubes Ltd.
Kopex pliable ducting from 1⁄4" to 71⁄4" I.D. up to
300 deg. F. Kopex PVC covered flexible conduit
from 1" to 3" O.D.
Special grades to Lloyds requirements.

GERMAN INTERPLAY FOUNTAINS
Rotary pumps, Ceramical Gargoyles and groups of
animals. Underwater illumination in white and
changing colours, manual and fully automatic water-
organs.

SIMPLEX ELECTRIC CO. LTD.
for industrial/commercial lighting, iron-clad switch-
gear, cubicle control panels, flame-proof equip-
ment, conduit and fittings, etc.

WM. McGEOCH & CO. LTD.
Ship fittings and furnishings, heat exchange units,
etc.

LIGHTING FITTINGS
British, German, Danish. Commercial / Industrial / flameproof / modular or
non-modular surface, semi-
or fully recessed. Designed and prepared made to
special requirements if re-
quired.

STAGE LIGHTING
W. J. Furse & Co. Ltd.
Stage Lighting Specialists and Manufacturers. Draw-
ings and specifications pre-
pared for every application.

SUNDARY EQUIPMENT
• We can supply your requirements.

Consult: TECHNICAL SALES CO. LTD.

Register of Manufacturers, Agents, Representatives and Distributors

In this special directory—the first
of its kind ever published in Ireland
—appliances, fittings and materials
available in the Republic of Ireland
and the North of Ireland are listed
under the following main headings:

• Oil, Solid Fuel and Gas-Fired Boilers.
• Electric Heating Appliances.
• Thermostats and Controls.
• Pumps and Circulators.
• Radiators.
• Insulation Materials.
• Oil Storage Tanks.
• Ventilators & Fan Equipment.
• Sanitary Ware.
• Tap and Shower Fittings.
• Pipes, Jointing and Gutters.
• Tools and Welding Metals.
• Hot Water Supply Equipment and Boilers.
• Water Pumping Equipment.
• Water Storage Tanks.

Keep this register for future reference. It has been designed so
that it can be easily separated from
the magazine.

June, 1962.

Published by ARROW@TU Dublin, 1962
## Thermostatic Controls

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danfoss Ltd.</td>
<td>J. J. Samson &amp; Son Ltd.</td>
<td>DANFOSS</td>
</tr>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd.</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>J. B. C Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd.</td>
<td></td>
</tr>
<tr>
<td>Penn Controls Nederland</td>
<td>Manotherm Ltd.</td>
<td>PENN</td>
</tr>
<tr>
<td>R. B. Pullin &amp; Co. Ltd.</td>
<td>National Agencies Ltd.</td>
<td>PULLIN</td>
</tr>
<tr>
<td>Rheostatic Co. Ltd.</td>
<td>R. E. Ayres</td>
<td>SATCHWELL</td>
</tr>
<tr>
<td>Thermocentral Installations Co. Ltd.</td>
<td>John Thompson Ltd. (N.I. Office)</td>
<td>ZONE-A-TROL</td>
</tr>
</tbody>
</table>

## Time Switches

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>O.B.C. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td>O.B.C.</td>
</tr>
<tr>
<td>O.B.C. Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd.</td>
<td></td>
</tr>
<tr>
<td>Venner Ltd.</td>
<td>Roper Bros. Ltd.</td>
<td>VENNER</td>
</tr>
</tbody>
</table>

## Tools

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black &amp; Decker Ltd.</td>
<td>Electric Tools Service Ltd.</td>
<td>BLACK &amp; DECKER</td>
</tr>
<tr>
<td>British Oxygen Co. Ltd.</td>
<td>Industrial Gases (I.F.S.) Ltd.</td>
<td></td>
</tr>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Hendron Bros (Dublin) Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Interlas Ltd.</td>
<td>Welding Services Ltd.</td>
<td>ZIPEWELL</td>
</tr>
<tr>
<td>Kielberg's Successors A.B.</td>
<td>Enquiries direct</td>
<td>OPTIMUS</td>
</tr>
<tr>
<td>Peugeot &amp; Cie</td>
<td>Irimesco Ltd.</td>
<td></td>
</tr>
<tr>
<td>Philplug Products Ltd.</td>
<td>Expundite (Ireland) Ltd.</td>
<td>PHILPLUG</td>
</tr>
<tr>
<td>The Rawplugs Co. Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>The Ridge Tool Co.</td>
<td>Hendron Bros. (Dublin) Ltd.</td>
<td>RUGPLUG</td>
</tr>
<tr>
<td>F. W. Talbot &amp; Co. Ltd.</td>
<td>S. W. Carty &amp; Son</td>
<td>TALBOT</td>
</tr>
<tr>
<td>Ucan Development Ltd.</td>
<td>Calumet Trading Co. Ltd.</td>
<td>HILTI</td>
</tr>
<tr>
<td>Wolf Electric Tools Ltd.</td>
<td>P. E. O'Brien &amp; Sons Ltd.</td>
<td>WOLF</td>
</tr>
</tbody>
</table>

## Unit Heaters

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. H. Biddle Ltd.</td>
<td>Quadrant Engineers</td>
<td>BIDDLE</td>
</tr>
<tr>
<td>Calovent Ltd.</td>
<td>British Steam Specialties Ltd.</td>
<td>CALOVENT</td>
</tr>
<tr>
<td>Copperad Ltd.</td>
<td>British Steam Specialties Ltd.</td>
<td>COPPERAD</td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>General Electric Co. Ltd.</td>
<td>General Electric Co. of Ireland Ltd.</td>
<td></td>
</tr>
<tr>
<td>Ideal-Standard Ltd.</td>
<td>E. J. Coaker</td>
<td>THERMOVECTEUR</td>
</tr>
<tr>
<td>Keith Blackman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Mather &amp; Platt Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td></td>
</tr>
<tr>
<td>Citerns Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Conex-Terna Ltd.</td>
<td>Sunbra-Conex (Ireland) Ltd.</td>
<td>CONEX</td>
</tr>
<tr>
<td>Crane Ltd.</td>
<td>Enquiries direct</td>
<td>CRANE</td>
</tr>
<tr>
<td>Danfoss Ltd.</td>
<td>J. J. Samson &amp; Son Ltd.</td>
<td>DANFOSS</td>
</tr>
<tr>
<td>Delmore Engineering Co. Ltd.</td>
<td>O.B.C. Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Dunham-Bush Ltd.</td>
<td>Henry R. Ayton Ltd.</td>
<td>DUNHAM-BUSH</td>
</tr>
<tr>
<td>J. S. &amp; F. Falkard Ltd.</td>
<td>A. H. Massey Ltd.</td>
<td></td>
</tr>
<tr>
<td>Fordham Pressings Ltd.</td>
<td>R. T. Large &amp; Son</td>
<td>ENDEX</td>
</tr>
<tr>
<td>Fyffe Couplings (Ireland) Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Glenfield &amp; Kennedy Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td></td>
</tr>
<tr>
<td>Gummers Ltd.</td>
<td>McGrath &amp; Kenny</td>
<td>GUMMERS</td>
</tr>
<tr>
<td>Harford Pumps Ltd.</td>
<td>George E. Reid</td>
<td>TWIN ACTION</td>
</tr>
<tr>
<td>Hatterday (Ormskirk) Ltd.</td>
<td>W. H. Leech</td>
<td>DEL-FLO</td>
</tr>
<tr>
<td>Hindle, Joshua &amp; Sons Ltd.</td>
<td>D. P. Engert &amp; Co.</td>
<td></td>
</tr>
</tbody>
</table>

---

LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.
RELIABLE

("OF SOUND AND CONSISTENT QUALITY")
—OXFORD ENGLISH DICTIONARY

You can rely on equipment made by

HARTLEY & SUGDEN Ltd.
Halifax, England

OILEX
Steel Boilers for turf or oil firing.

WHITE ROSE
Cast Iron Sectional Boilers.

CALORIFIERS
Standard or special designs.

Agents in Ireland:
McGRATH & KENNY
48 TOWNSEND STREET, DUBLIN.

Investigate the Manotherm Range of Gauges and Corrosion Resistant Thermometers —

MANOTHERM LTD.,
14 CORN EXCHANGE BUILDINGS, BURGH QUAY, DUBLIN. Tel. 73913.
### The Irish Plumber and Heating Contractor

<table>
<thead>
<tr>
<th>Name</th>
<th>Associate Co., Irish Office, Agent, Representative or Distributor</th>
<th>Proprietary Name or Trade Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeywell Controls Ltd.</td>
<td>Honeywell Controls Ltd. (Irish Office)</td>
<td>HONEYWELL</td>
</tr>
<tr>
<td>Koswa Ltd.</td>
<td>C. H. Lockhart &amp; Co., Ltd.</td>
<td>KOSWA</td>
</tr>
<tr>
<td>Newman, Hender &amp; Co. Ltd.</td>
<td>O. B. C. Ltd. (Irish Office)</td>
<td></td>
</tr>
<tr>
<td>Odin Clorius</td>
<td>Modern Plant Ltd.</td>
<td>CLORIUS</td>
</tr>
<tr>
<td>O. B. C. Ltd.</td>
<td>O. B. C. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Southern Engineering Group Ltd.</td>
<td>Peter Macfarlane &amp; Son Ltd. (N.I.)</td>
<td></td>
</tr>
<tr>
<td>Stewarts &amp; Lloyds Ltd.</td>
<td>R. T. Large &amp; Son</td>
<td>VICTORY</td>
</tr>
<tr>
<td>The Silent Ballcock Co. Ltd.</td>
<td>Irish Equipment Co. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Trent Valve Co. Ltd.</td>
<td>Halpin &amp; Hayward Ltd.</td>
<td>TRENTE</td>
</tr>
<tr>
<td>Walker, Crosswell &amp; Co. Ltd.</td>
<td>Modern Plant Ltd.</td>
<td></td>
</tr>
<tr>
<td>Charles Winn &amp; Co. Ltd.</td>
<td>J. S. Lister Ltd.</td>
<td>WINN</td>
</tr>
<tr>
<td>Rheostatic Co. Ltd.</td>
<td>R. E. Ayers</td>
<td>SATCHWELL</td>
</tr>
<tr>
<td>James Barnell Ltd.</td>
<td>C. B. Sheridan</td>
<td>BARWELL</td>
</tr>
</tbody>
</table>

### Valves, Reducing

- British Steam Specialties Ltd.
- F. W. Talbot & Co. Ltd.
- S. W. Carty & Son

### Ventilating Panels

- Colt Ventilation Ltd.
- F. W. Norman
- Technical Sales Company

### Ventilators

- Buck & Hickman Ltd.
- F. H. Biddle Ltd.
- Colt Ventilation Ltd.
- Hugh C. Maguire
- Technical Sales Company

### Wastes Disposal Units

- W. & G. Sissons Ltd.
- C. B. Sheridan
- Whirl-A-Waste
- Tayco Boilers Ltd.
- Enquiries direct
- Tayco
- Wynbourne-Satoba Equipment Ltd.
- Enquiries direct
- In-Sink-Erator

### Water Treatment Equipment and Processes

- Albright & Wilson Ltd.
- A. H. Masser Ltd.
- D. P. Engel & Co.
- George A. Reid
- Halpin & Hayward Ltd.
- R. S. White Ltd.
- R. T. Large & Son
- C. H. Lockhart Ltd.
- Shires (Ireland) Ltd.
- C. Brinsley Sheridan
- R. T. Large & Son
- T. R. Favers

### WC’s and Urinals

- Adamsez Ltd.
- Enquiries direct
- Adamsez
- Alfred Goslett & Co. Ltd.
- Enquiries direct
- Swanlyne
- Armitage Ware Ltd.
- E. J. Cocker
- Unisyla
- Fordham
- Ideal-Standard Ltd.
- E. J. Cocker
- Standard
- Hoverkan A.B.
- Norman Stewart Ltd.
- Vitragrid/Pyramid
- Johnson, Ainsworth & Son Ltd.
- C. Brinsley Sheridan
- Shanks
- Shires & Co. (London) Ltd.
- C. Brinsley Sheridan
- Westwood
- Slater, John (Stoke) Ltd.
- R. T. Large & Son
- Royal Venton
- John Steventon & Sons Ltd.
- T. R. Favers
- Twyfords Ltd.

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**
Manufacturers of:

- Copper Hot Water Storage Cylinders and Tanks
- Indirect Cylinders of all types
- Steam and Hot Water Calorifiers to Engineers' specifications
- Capacities from 20 to 1,000 gallons

ENQUIRIES INVITED

INVITATION . . .

We extend a hearty invitation to our many friends in the plumbing trade and all those interested in modern kitchen and bathroom furniture and fittings to visit our extensive showrooms.

- Compression Joint Fittings
- Copper Piping
- Copper Cylinders
- Open Top Tanks
- Pressed Steel and Cast Iron Radiators
- Oil Fired and Solid Fuel Boilers
- Baths, Basins, Toilet Sets, Shower Fittings
- Mixer Fittings
- Stainless Steel, Enamel Steel, Fire Clay Sinks
- Blow Lamps, Solder
- Bathroom and Kitchen Furniture
- Double Compartment Tanks

For a full comprehensive supply of plumbing materials:

DOCKRELLS of Georges St., Dublin

TRADE ENQUIRIES INVITED.
## Welding Plant and Equipment

<table>
<thead>
<tr>
<th>NAME.</th>
<th>ASSOCIATE CO., IRISH OFFICE, AGENT, REPRESENTATIVE OR DISTRIBUTOR.</th>
<th>PROPRIETARY NAME OR TRADE MARK.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. P. Barrus (Concessionaires) Ltd.</td>
<td>Monsell Mitchell &amp; Co. Ltd</td>
<td>DEVCON</td>
</tr>
<tr>
<td>British Oxygen Co. Ltd.</td>
<td>Industrial Gases (I.F.S.) Ltd</td>
<td>SIEVERT</td>
</tr>
<tr>
<td>British Oxygen Co. Ltd.</td>
<td>British Oxygen Co. Ltd, (Northern Ireland)</td>
<td></td>
</tr>
<tr>
<td>Buck &amp; Hickman Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>English Electric Co. Ltd.</td>
<td>Welding Services Ltd</td>
<td>ENGLISH ELECTRIC</td>
</tr>
<tr>
<td>Fry's (London) Ltd.</td>
<td>Enquiries direct</td>
<td>FRY'S</td>
</tr>
<tr>
<td>Hendron Bros (Dublin) Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interlas Ltd.</td>
<td>Welding Services Ltd</td>
<td>INTERLAS</td>
</tr>
<tr>
<td>Kpk &amp; Co. (Tubes) Ltd.</td>
<td>D. P. Engert &amp; Co</td>
<td></td>
</tr>
<tr>
<td>McKechnie Bros Ltd.</td>
<td>C. H. Lockhart</td>
<td>&quot;QUASILARC&quot;</td>
</tr>
<tr>
<td>McMullans Kosangas Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Meritus (Barnet) Ltd.</td>
<td>Welding Services Ltd</td>
<td>MERITUS</td>
</tr>
<tr>
<td>Messrs. Industrial Engineering Ltd.</td>
<td>Welding Services Ltd</td>
<td>MESSER</td>
</tr>
<tr>
<td>Metalace Ltd.</td>
<td>Enquiries direct</td>
<td></td>
</tr>
<tr>
<td>Murex Welding Processes Ltd.</td>
<td>Hendron Bros, (Dublin) Ltd</td>
<td>MUREX</td>
</tr>
<tr>
<td>Pressure Control Ltd.</td>
<td>Welding Services Ltd</td>
<td></td>
</tr>
<tr>
<td>Pollock &amp; Peel Ltd.</td>
<td>Welding Services Ltd</td>
<td>ASTRA</td>
</tr>
<tr>
<td>Saturn Industrial Gases Ltd.</td>
<td>Welding Services Ltd</td>
<td>SATURN</td>
</tr>
<tr>
<td>Suffolk Iron Foundry (1920) Ltd.</td>
<td>Welding Services Ltd</td>
<td>S.I.F.</td>
</tr>
<tr>
<td>Tempil Corporation</td>
<td>Welding Services Ltd</td>
<td>TEMPISTIK</td>
</tr>
<tr>
<td>Unidare Ltd.</td>
<td>Enquiries direct</td>
<td>FERRODARE</td>
</tr>
<tr>
<td>Welding Industries Ltd.</td>
<td>Welding Services Ltd</td>
<td></td>
</tr>
<tr>
<td>William Stephens &amp; Sons Ltd</td>
<td>Welding Services Ltd</td>
<td></td>
</tr>
</tbody>
</table>

**LIST OF ADDRESSES OF MANUFACTURERS AND AGENTS STARTS ON PAGE 47.**

---

**for CENTRAL HEATING**

at its wonderful best install . . .

**WATER RADIATORS**

for direct systems

**Dimplex Copper Radiators**

- Attractively styled
- Non rusting
- Non corrosive
- Full conformity to BSS
- Models from 3½ to 15 sq. ft.
- Stove enamel finish

Eire Agents:
A Bell & Co. (Eire) Ltd. (Rene), 156 Botanic Road, Glenagevin, Dublin, 9. Tel.: 37361/2.

---

**for CENTRAL HEATING**

at its wonderful best install . . .

**Dimplex**

**WATER RADIATORS**

for direct systems

**Dimplex Copper Radiators**

- Attractively styled
- Non rusting
- Non corrosive
- Full conformity to BSS
- Models from 3½ to 15 sq. ft.
- Stove enamel finish

Eire Agents:
A Bell & Co. (Eire) Ltd. (Rene), 156 Botanic Road, Glenagevin, Dublin, 9. Tel.: 37361/2.
Alphabetical list of names and addresses of principals, Irish Offices, associate companies, agents, representatives and distributors.

The names of all companies or individuals listed in this issue appear also in the catagorised directory in this issue. All Irish addresses are shown in bold type.

A

Adamson, Daniel & Co., Ltd., Dukinfield, Cheshire
Adamez Ltd., 72 Victoria Street, London, S.W.1.
A.E.I. BiLEC Ltd., Tyburn Road, Birmingham 24.
A.E.I. Export Ltd., 20 Stowe St., Dublin 1
Aerotaps Ltd., Castle Works, Stalybridge, Cheshire.
Aerotaps, Ltd., Hudson's Drive, Cotteridge, Birmingham 30.
Afo Ltd., Hull.
Ahern, F.N.S., 46 Wymering Park, Strabrook Rd., Blackrock, Co. Dublin
Greenford, Middlesex.
Airenesco Products Ltd., Knight Road, Strood, Rochester.
Albright & Wilson Ltd., 1 Knightsbridge Gt., London S.W.1.
Albright & Wilson (Ireland) Ltd., Dcx Works, Dun Laoghaire, Co. Dublin
Alley & MacLellan Ltd., Worcester.
Andrew Air Conditioning Ltd., Stockport, Cheshire.
Andrew Bros. Ltd., Regen, St., Liverpool 3.
Arklow Pottery Ltd., South Quay, Arklow.
Armitage Ware Ltd., Armitage, Rugeley, Staffordshire.
Asbestos Cement (Pipes) Ltd., Athy.
Asbestos Cement Ltd., 19 Lr. Pembroke St., Dublin.
Associated Metal Works (Glasgow) Ltd., 30 St. Andrew's Square, Glasgow, C.1.
Associated Metal Works (Glasgow) Ltd., 8 Long Lane, Belfast.
Associated Metal Works (Glasgow) Ltd., 168 Pearse St., Dublin.
Audo Bros., Newport, Shropshire.
Auto-Combustions (Ireland) Ltd., 141 Lr. Baggot St., Dublin.
Ayers, R. E., Grayslake, Nashville Rd., Howth.
Ayton, Henry R., Ltd., 20 Harcourt St., Dublin.

B

Banagher Tiles Ltd., Banagher, Co. Offaly
Barrett, John & Sons, 18 Morrison's Island and 7 South Terrace, Cork.
Barrhead Engineering Co. Ltd., Irvine Rd., Barrhead, Scotland.
Baslton & Allen Ltd., Ferndale Terrace, Harrow, Middlesex
Baxendale & Co. Ltd., 7 Capel St., Dublin.
Bax Ltd., Bamber Bridge, Lancs.
Bell Bros. Ltd., Denton, nr. Manchester.
Bendz Ltd., Lister St., Birmingham, 7.
Beresford, James & Son Ltd., Kitts Green, Birmingham 33.
Berry Hill (Engineers) Ltd., Stoke-on-Trent.
Beesley Boiler Co. Ltd., P.O. Box No. 2, Beeston, Nottingham.
Bigwood, J. & Son Ltd., Wednesfield Rd., Wolverhampton.

Black & Decker Ltd., 206 Pearse St., Dublin.
Black & Decker Ltd., Harmondsworth, Middlesex.
Blackrock Engineering Works Ltd., 11 Sweetman's Avenue, Blackrock, Co. Dublin.
Boby, William Ltd., Rickmansworth, Herts.
Boiler Stamping Co. Ltd., Crown Works, Keighley, Yorks.
Bolton Superheater & Pipeworks Ltd., Manchester.
Brooks & Walker Ltd., 47 Great Eastern St., London.
Bourner, F. H. (Fittings) Ltd., Manor Royal, Crawley, Sussex.
Boylan, M. A., Ltd., 50a Harcourt St., Dublin.
Bray, Geo. & Co. Ltd., Leicester Place, Blackman Lane, Leeds 2.
Briggs, Alfred Ltd., Belfast.
Brightside Engineering Co. (Ireland) Ltd., 31 Upper Mount St., Dublin 2.
Brightside Heating & Engineering Co., G.P.O. Box No. 118, Sheffield 1.
British Insulated Callenders Cable Ltd., 21 Balmoral St., London, W.C.1.
British Insulated Callenders Cables Ltd., 53 St. William St., Dublin 2.
British Berkeley Filters Ltd., Town Mills, Cannon Lane, Tonbridge, Kent.
British Steam Specialties Ltd., Fleet St., Leicester.
British Steam Specialties Ltd., 33 Leeson Park, Dublin.
British Steam Specialties Ltd., 98 Lisburn Rd., Belfast 9.
Brook Pottery Ltd., Wexford Rd., Arklow.
Brooks Ventilation Unif Ltd., Trafalgar House, Bedford Park, Craydon, Surry.
Bruty, A. G. Ltd., 38 Dawson St., Dublin.
Buck & Rickman Ltd., P.O. Box 74, Whitechapel Rd., London, E.1.
Buderus/sche, Eiseiwerke, Wetzlarn, Schiessfach, 201/202, Germany.
Burco Ltd., Rose Grove, Burnley, Lancs.
Burgess & Co. (Engineers) Ltd., Bracknell, Berks.
Burn Bros. (London) Ltd., Cray Avenue, St. Mary Cray, Orpington, Kent.

C

Calovent Ltd., 9 Albion St., Leeds 1.
Calovent Ltd., 37 Blackheath Park, Clontarf, Dublin.
Calomet Trading Co. Ltd., 41 Upper Mount St., Dublin.
Camron Engineering Co. Ltd., Westgate Works, Chichester, Sussex.
Carille & Co. Ltd., Drury St., Dublin.
Carlyle Air Conditioning and Refg. Ltd., 1 King St., St. James's, London, S.W.1.
Carthorn (1949) Ltd., Commercial Buildings, Dame St., Dublin.
Casey, P. J., 38 The Rise, Mount Merrion, Dublin.
Celtic Engineering Co. Ltd., 25 Great Strand St., Dublin.
Chadwicks (Dublin) Ltd., Greenhills Rd., Walkinstown, Dublin.

Forty-seven
The Irish Plumber and Heating Contractor.

Christ, Theodor, Switzerland.
Chrysler Aircelmp Ltd., P.O. Box 317, 68 Knightsbridge, London, S.W.1.
Cisterm Ltd., Addington, Ilkley, Yorks.
Clayton, Reginald Ltd., Branksome Rd., St. Leonard-on-Sea, Sussex.
Cleveland Meters Ltd., Redcar, Yorkshire.
Clyde Fuel Systems Ltd., 80 Queen Elizabeth Avenue, Hillington, Glasgow, S.W.2.
Cochrane & Co. (Annan) Ltd., Annan, Scotland.
Co Expo Ltd., Toldhogade, Copenhagen, Denmark.
Cole, W., "Dunblanc", 7 Whitebeam Avenue, Clonskeagh, Dublin.
Colt Ventilation Ltd., 5 Newcourt Avenue, Bray, Co. Wicklow.
Colt Ventilation Ltd., Surbiton, Surrey.
Concrete Products of Ireland Ltd., Laraghcon, Lucan, Co. Dublin.
Combination Equipment Ltd., Hampstead, London.
Continue Flow Heating Products Ltd., Hamilton, Ontario, Canada.
Copperad Ltd., Poyle Rd., Colington, Buckinghamshire.
Coppercraft Metal Works, 58 Leeson Close, Lower Leeson St., Dublin 2.
Cork Growers Trading Co. (1931) Ltd., Vulcan St., Bootle, Lancs.
Corrie J., Co. Ltd., Bailieborough, Co. Cavan.
Corrosion Ltd., Warsash Rd., Warsash, Hants.
Cor-Tex Proofer Ltd., 4a Garville Avenue, Rathgar, Dublin.
Couper Distrs. Ltd., 28 Herbert Park, Ballsbridge, Dublin.
Cox Engineering Co. Ltd., 14 Park Lane, Sheffield 10.
Craig & Co., W. D., 32 Arthur St., Belfast.
C.S.A. Industries Ltd., Warwick.
Curran Ltd., Prior Park, Clonmel, Co. Tipperary.
Curtis (Onx) Ltd., London Rd., Chatteris, Cambs.
Delmore Engineering Co. Ltd., 51 Gresham Rd., Staines, Middlesex.
Dimplex Ltd., Millbrook, Southampton, Hants.
Dockrell, Thos., Sons & Co. Ltd., South Great Georges St., Dublin.
Drayton Controls Ltd., Bridge Works, West Drayton, Middlesex.
Dublin Glass & Paint Co. Ltd., 41 Middle Abbey St., Dublin.
Dunham-Bush Ltd., Farlington, Portsmouth, Hants.
Dunwood & Dobson Ltd., 32 Lombard St., E., Dublin.
Duroplast, N.V., Belgium.

Instantaneous HOT WATER from steam—without storage

Cox Steam and Water Mixers deliver from 50 to 24,000 gallons per hour.
They operate with the highest efficiency at all pressures. Silent, efficient, compact and easy to install, replacing bulky and costly calorifiers.

MODELS:
1. BABY COX (1") for wash-basins, sinks, etc.
2. JUNIOR COX 1—5 (3"—2") for process work, vats and general purposes.
3. SENIOR COX (2½"—8") for large volumes of hot water for process hot water supplies.

NO TIME LAG — NO STORAGE — NO STEAM TRAPS
NO LOSS OF CONDENSATION — NO MOVING PARTS TO GO WRONG

COX WATER HEATERS
Manufactured by COX ENGINEERING CO. LTD.
Dept. IP.8., 14 Park Lane, Sheffield, 10.
Tel.: 62463. Telegrams: "Heaters Sheffield" Agents: Haipin & Hayward Ltd., Unity Buildings, 16-17 Lower O'Connell St., DUBLIN. Tel. 43270. Bedford Buildings, 7 Bedford St., BELFAST. Tel. 26343.

Cast Iron BOILERS and RADIATORS
Manufactured by H. RASMUSSEN & CO. LTD.
Denmark

Agent in Ireland:
HUGH C. MAGUIRE A.M.I.H.V.E.
37, Blackheath Park, Clontarf, Dublin. 'Phone 335869.

D
E 
Easclene Porcelain-Enamel (1938) Ltd., Lord St., Wolverhampton.
Edwards Engineering Corporation, 101 Alexander Avenue, Pompton Plains, New Jersey.
Electric Tools Service Ltd., 296 Pearse St., Dublin.
Electro-Diesel (Ireland) Ltd., 16/26 Moss St., Dublin 2.
Elsby & Gibbons Ltd., Simmonside, South Shields, Co. Durham.

Engineering Products Ltd., 128 Francis St., Dublin.
Esso Petroleum Co. (Ireland) Ltd. Stillorgan, Co. Dublin.
Everton Engineering Ltd., Whitehouse, Newtonabbey, Belfast.
Evode Industries Ltd., Swords, Co. Dublin.
Evomastics Ltd., Common Rd., Stafford.
Expandite (Ireland) Ltd., Greenhills Rd., Walkinstown, Dublin.

Falk, Stadelmann & Co. Ltd., 29 Exchequer St., Dublin 2.

Farnell Engineering Co. Ltd., Dalkey Ave., Co. Dublin.
Farrar, Wm. E., Ltd., Hall Green, Birmingham.
Fibreglass Ltd., Ravenhead, St. Helens, Lancs.
Fibreglass Ltd., 21 Merrion Square, Nth., Dublin 2.
Fisher & Ludlow Ltd., Kingsbury Road, Birmingham 14.
Fleming's Fireclays Ltd., The Swan, Athy.
Floors & Walls Ltd., 60 Mespil Road, Dublin 4.
Foley, Duffy & Co. Ltd., 11 Flemings Place, Dublin.
Fordon Pressings Ltd., Melbourne Works, Dudley Rd., Wolverhampton.
Forfa, N. V., Holland.
Fry's (London) Ltd., Paraday Rd., Manor Royal, Crawley, Sussex.
Fry's Metal Foundries Ltd., 197 Pearse St., Dublin.

Fyffe Couplings (Ireland) Ltd., Instantor Works, James's St., Dublin 8.

G 
General Electric Co. of Ireland Ltd., 54 Dame St., Dublin 2.
Glenfield & Kennedy Ltd., Kilmarnock, Scotland.
Goodbody Ltd., Ithex Buildings, Dun Laoghaire.
Grange-Camelon Iron Co. Ltd., Falkirk, Scotland.

50 YEARS OF CONTINUED EXPANSION

Hats off to Frys!

Celebrating this year 50 years of continued expansion, Fry's now lead the world in Specialist Solder and Fluxes for Industry and Space Research Projects.

Fry's Metal Foundries Limited
197 Pearse Street, Dublin.
Telephone: Dublin 74243.

and at LONDON - MANCHESTER GLASGOW and KIDDERMINSTER.
The Irish Plumber and Heating Contractor.

Griffin Bros., Gardiner Lane, Dublin.
Grasby, Friedrich GmbH, Armaturenfabrik, Hemer-in-Westf.,
W. Germany.
Grasby, Thermostat, Lahr, Schwarzwald, Western Germany
Grasby, Hans K. O., Schlitach-Schwarzwald, Western
Germany.
Grummers Ltd., Effingham Valve Works, Rawmarsh Rd.,
Rotherham, Yorks.
Gwynne's Pumps Ltd., 62 Chancellor's Rd., Hammenmuth,
Gypsum Industries Ltd., South Richmond Place, Dublin.

H
Hackethal Cable & Wire Works, Hanover, Germany
Hall-Thermostatk Ltd., Regina House, 1/5 Queens St.,
London, E.
Hall, J. & E., Ltd., 34 Anglesea St., Dublin.
Hall, J. & E., Ltd., Dartford Ironworks, Dartford, Kent.
Halpin & Hayward Ltd., Unity Buildings, 16-17 Lower
O'Connell St., Dublin.
Halpin & Hayward Ltd., 7 Bedford St., Belfast
Hammelrath & Schwener Pummpfabrik K.G., ABT, A
Dusseldorf.
Hammond Lane Industries Ltd., 111 Pearse St., Dublin 2.
Hans Grohe, Schiltach, Western Germany
Hainault Engineering Co. Ltd., Tubula Works, Fowler Rd.,
Hainault, Eford, Essex.
Handcock, E. C., Ltd., 17 Fleet St., Dublin...
Harland Engineering Co. Ltd., B.E.P. Works, Alloa,
Clackmannanshire, Scotland
Harford Pumps Ltd., Harford House, 7-9 Charlotte St.,
Haslam, A. P., 39 Lower Gardiner St., Dublin 1.
Hartley & Sugden Ltd., White Rose Boiler Works, Halifax.
Hattersley (Ormskirk) Ltd., Burscough Rd., Ormskirk,
Lancs.
Harvey, G. A. & Co. (London) Ltd., Greenwich Metal
Heating & Building Services Ltd., 4 The Mead, Carpenders
Park, Watford, Herts.
Heatvent Supply Co. Ltd, 5 Upper Fitzwilliam St., Dublin 2
Heatrae Co., Heatrae Works, Norwich.
Heiton, Thomas, & Co. Ltd., 18 Westmoreland St., Dublin
Hendren Bros. (Dublin) Ltd., Broadstone, Dublin.
Hendren Bros. (Machinery) Ltd., 9 Little Denmark St.,
Dublin.
Hennessey's Ltd., Beasley St., Cork
Heywood-Hewlett Ltd., Bayhall Works, Huddersfield.
Heywood, W. H. & Co. (Ireland Ltd., 63 Upper O'Connell
Street, Dublin.
Hind, J. & Sons Ltd., Lowan Engineering Works, Prince
Regent Rd., Castlecliff, Belfast.
Hindley, Joshua & Sons Ltd., Hindle House, Leeds 1.
Holden & Brooke Ltd., Sirius Works, West Gorton, Man-
chester 12.
Holfield, H. R., Ltd., 24 Merville Rd., Stillorgan, Co. Dublin
Honeywell Controls Ltd., 38 Upper Mount St., Dublin 2
Honeywell Controls Ltd., Ruasip Rd., East, Greenford,
Middlesex.
Hovold Boilers (UK) Ltd., Kirkman House, 54a Tottenham
Hovold, George & Sons Ltd., P.O. Box No. 6, Eastwood
Sanitary Works, Clifford St., Hanley, Stoke-on-Trent.
Hughes & Coyle Ltd., 12 Blackhall Parade, Dublin 7
Hughes, Cyril, 49 Kingsway Park, Belfast.
Humex. W. F. F., Ltd., 6-12 Hyndford St., Belfast 5
H.V.E. (Electric) Ltd., Vioduct Works, Kirkstall Rd.,
Leeds 4.

I
Ideal-Standard Ltd., Ideal House, Great Marlborough St.,
Ifoverkan, A. B., Bromma, Sweden
Ivers, T. R., Corby, Corr Bridge, Sutton, Co. Dublin

Indola, N. V., Rijswijk Z. H., Holland
Industrial & Domestic Heaters Ltd., 23 Fitzroy Square,
Industrial Gases (I.F.S.) Ltd., Bluebell, Inchicore, Dublin
Interlas Ltd., 9 Church St., Amphill, Bedford.
International Boilers & Radiators Ltd., Terminal House,
Irmesco Ltd., 9 Dawson St., Dublin 2.
Irish American Pipes Ltd., Maudlins, Naas.
Irish Equipment Co. Ltd., Ballymount Rd., Walkinstown,
Dublin.
Irish Feedwater Specialists Co. Ltd., Unity Buildings, 16-17
Lower O'Connell St., Dublin.
Irish Foundries Ltd., Galboly, Ballieboro, Co. Cavan.
Irish Industrial Suppliers Ltd., 26 Charles Lane, Mountjoy
Square, Dublin 1.
Irish Technical & Production Co. Ltd., 25 Upper Mount St.,
Dublin 2

J
Janitor Boiler Ltd., Camberley, Surrey
J.C. Engineering Co. Ltd., Ongate Farm Works, Coles
Johnson, Alfred & Sons Ltd., Queensborough, Kent.
Johnson Fireclay Co. Ltd., Excelsior Works, Cliff Vale,
Stoke-on-Trent.
Jones & Aptwood Ltd., Stour Bridge, Worcester.

K
Kay, Fredk. (Engineering) Ltd., Nashleigh Works, Chesham
Bucks.
K.D. Reinforced Plastics Ltd., Collooney, Co. Sligo.
Keele, J. H. Ltd., 185-191 New Town Row, Birmingham 6
Keith Blackman Ltd., Mill Mead Rd., Tottenham, N.17
Keith Blackman Ltd., 20 Harecourt St., Dublin.
Kelly, Dan & Co., 31 Upper Baggot St., Dublin 4
Kemp & Lauretzen, En Grǿ, Vester Voldgade 9, Copen-
hagen.
Key Engineering Co. Ltd., Larkfield, nr. Maidstone, Kent.
Kilkenny Products Ltd., Engineering Works, Hebron Rd.,
Kilkenny.
Kingdom Engineering Co. Ltd., Wolverhampton.
Kingdom Tubes Ltd., Rock St., Tralee.
Kirk & Co. (Tubes) Ltd., 74-82 Paradise St., London, S.E.16
Kjellbergs Successors A.B., 13 South Frederick St., Dublin
Kilgore, Ltd.,, Luton, Bedfordshire.
Klaus Rehahn, Bachscha/KB/S, Offenbach Main, Western
Germany.
Koninklijke Machinefabr.rie Gebr. Stork & Co., N. V.
Heugel, Holland.
Kosmos Armaturen-Und Apparatbau, Franz Beaumester.
K.G., Rodenkichen/Rhein, W. Germany.
Kozawa Ltd, Ansley Mill Lane Works, Alton, Hants.
Kresky Manufacturing Co. Ltd., Mallow.

L
Lamont, James H. & Co. Ltd., Gylemuir Works, Corstorphine,
Edinburgh 12.
Lancashire & Corby Steel Manufacturing Co. Ltd., 8 Gough
Square, London.
Lancaster & Tonge Ltd., Lancaster Works, Pendleton,
Manchester, 6.
Langhans, Alfred Ltd., 290 Queen St., Harrow.
Large, R. T. & Son, Stephen's Place, rear 47 Merrion Sq.,
Dublin.
Leinster Engineering Co. Ltd., 158 Church St., Dublin
Lenahan, Thomas & Co. Ltd., 124 Capel St., Dublin 1
Lightfoot Refrigeration (Ireland) Ltd., 121 St. Stephen's
Green, Dublin 2
Lincoln Furnaces Ltd., Oxted Mill, Oxted, Surrey
Lister, J. S. Ltd., Dorset Row, Dorset St., Dublin 1.
Lister, R. A. & Co. Ltd., 17a Hogan Place, Dublin 1
Liverpool Borex Co. Ltd., Maxwell House, St. Paul's Square
Liverpool.
Lockhart, C. H. Ltd., 75 Middle Abbey St., Dublin
Lockyer Industries Ltd., Warrington
London Fan & Motor Co. Ltd., 331 Sandycombe Rd., Rich-
mond, Surrey.

M
M.A.B. Insulations, 45 Waterloo Rd., Dublin.
MacFarlane, Peter & Son Ltd., 23-27 Cupar St., Belfast 13
MacNaughton, Norman & Sons (Dublin) Ltd., East Rd.,
Dublin 3
Maguire, Hugh C., 37 Blackheath Park, Clontarf, Dublin
Mangan, John F. & Co., 105b Morehampton Rd., Dublin
Manley & Regulus Ltd., Showell Rd., Wolverhampton
Manotherm Ltd., Corn Exchange Buildings, Dublin 2
Manotherm (E.N.F.M.), Newpoortweg 10, Schiedam,
Holland
Murex Welding Processes Ltd., Waltham
Cross, Herts.
Marley Tile Co. Ltd., London Rd., River-
head, Sevenoaks, Kent.
Marshall & Anderson Ltd., Manse Rd.,
Motherwell, Lanarkshire.
Martin, T., & C. Ltd., D'Olier House,
D'Olier St., Dublin.
Masser, A. H., & Co., 6 Shaftesbury Sq.,
Belfast.
Mather & Platt Ltd., Park Works,
Manchester 10.
Matthews & Yates Ltd., Swinton, Man-
chester.
McAuley & Cunningham, 9 Pearse Build-
ings, Pearse St., Dublin.
McFerran & Guilford Ltd., 8 Tara St.,
Dublin.
McGeech, William & Co. Ltd., Warwick
Works, Bordesley, Birmingham 10.
McGrath & Kenny, 48 Townsend St.,
Dublin.
McKechnie Bros Ltd., Aldridge, nr.
Walsall.
McMulians-Kosangas Ltd., 1 Upper
O'Connell St., Dublin 1.
Meritus (Barnet) Ltd., Barnet, Herts.
Messer Industrial Engineering Ltd., 43-45
Knights Hill, London, S.E.27.
Metalarc, France.
Micatalite & Insulators Co. Ltd., Empire
Modern Plant Ltd., Crumlin Rd., Dublin.
Mono Pumps Ltd., 31b Central Hotel
Chambers, Dame Court, Dublin.
Monsell, Mitchell & Co. Ltd., 67-72
Townsend St., Dublin 2.
Mono Pumps Ltd., Mono House, Sekforde
Morlite Ltd., Castleton, Co. Dubl'in.
Morheat Ltd., Church Path, Fareham,
Hampshire.
Morley, G. F. Ltd., 45 Quinn's Lane,
Fitzwilliam Square, Dublin 2.
Moraccrete Ltd., Dolphin Works, Crumlin
Rd., Dublin.
Mullane, E. G., St. John's, Wynberg
Park, Blackrock, Co. Dublin.
Myers, F. E. & Bros., Co., Ashland, Ohio,
U.S.A.

June, 1962.

N
National Agencies Ltd., 7 Upper Camden St., Dublin 2
Newalls Insulation Co. Ltd., Rossmore House, Bally, Howth
Co. Dublin.
Newalls Insulation Co. Ltd., 200 Agnes St, Belfast
Newman Hender & Co. Ltd., Woodchester, Glos.
Newman Hender & Co. Ltd., 75 Middle Abbey St., Dublin
Newton, Chambers & Co. Ltd., Thornecliffe, nr. Sheffield
Norman, F. W., 5 Newcourt Avenue, Bray, Co. Wicklow
Nu-Way Heating Plants Ltd., Driotwich, Worcs.
Nu-Way Heating Plants Ltd., 5 Upper Fitzwilliam St.,
Dublin.
N.V. Nederlandse Steenwolfabric, Rotterdam 2, Holland
Nuralite Co. Ltd., Whitehall Place, Gravesend, Kent.

NOW IN IRELAND

world's finest Refrigeration and Air Conditioning Equipment

317-13 ROOM UNIT.
A range of capacities through from 8,000-28,000
B.T.U. at Standard Conditions.

We are here to help you draw on Chrysler's
25 years of experience in this young industry.
To show you the 300 models in the Airetemp
range. And to advise you—free and without
obligation—on how Chrysler Airetemp can fit
into your next project.

PACKAGED UNIT—water and air cooled motor
3-15 H.P. Complete with sealed motor compressor.

Distributors in Ireland: EVERTON ENGINEERING LIMITED
WHITEHOUSE, NEWTOWNABBEY, CO. ANTRIM. Tel.: Whitehouse 3456.

Fifty-one

Published by ARROW @TU Dublin, 1962
The Irish Plumber and Heating Contractor.

O

O.B.C., Ltd., Droitwich, Worcs.
O.B.C., Ltd., 5 Upper Fitzwilliam St., Dublin
O’Brien, P. A., and Co. Ltd., 83 Lower Gardiner St., Dublin
O’Brien Plastics Ltd., Rockbоро, Old Blackrock Rd., Cork
O’Connor, Peter (Insulations), Ltd., 68 Dame St., Dublin
Ocresifabrik N.V., Baarn-Holland
Odn Olivier, Kalvebod Brygge 20, Copenhagen.
Oll-Age Boiler Co. Ltd., Windsor House, 46 Victoria St., London, SW.1.
O’NeIl, H. A., Ltd., 162 Lower Rathmines Rd., Dublin 6
Or & Sembower, Inc., Reading, Pennsylvania, U.S.A.
Osma Plastics Ltd., Grove House, 551 London Rd., Isleworth, Middlesex.
Oster Manufacturing Co. Ltd., Cleveland, Ohio, U.S.A.
Oxley, F. C., 9 Westmoreland St., Dublin

P

Pan Aer Sales Ltd., 12 Lower Mount St., Dublin
Parnas, Thomas and Sons Ltd., Church Rd., Mitcham, Surrey
Parsons, Thomas and Sons Ltd., Mount Shannon Mills, Davitt Rd., Crumlin, Dublin 12.
Paul, W. H., Ltd., Breslau, Denby
Peet, William and Sons, Daley, Co., Dublin
Penn Controls N.V., Amsterdam, Holland
Peugeot et Cie, France
Perkins Bollers Ltd., Mansfield Rd., Derby
Phillips, T. J., 112 Landscape Park, Churtchtown, Co. Dublin
Philplug Products Ltd., Aldbury Lodge, 242 High Rd., Wembley, Middlesex.
Pillinger, G. C., & Co., 602 Purlsy Way, Croydon, Surrey
Pillinger, G. C. & Co. (Ireland), Ltd., 29 Sycamore St., Dublin 2.
Plenty and Son Ltd., Newbury, Berks.
Pollock & Peel Ltd., 82/86 South End, Croydon, Surrey.
Poron Insulation Ltd., Poron Works, Torpoint, Cornwall.
Portway, Charles & Sons Ltd., Halstead, Essex.
Potters Insulation Ltd., Tameside Mills, Park Rd., Dukinfield, Cheshire.
Potez Industries of Ireland Ltd., 5 Eyre Square, Galway
Pope Duffryn Heating Ltd., Vale Rd., Camberley, Surrey.
Powell, Duffryn Modulator Ltd., Vale Rd., Camberley, Surrey.
Powell Pressure Control Ltd., Davis Rd., Cheshington, Surrey.
Pressurisation Ltd., Wyndham Works, Welbeck St., Ashton under-Lyne, Lancs.
Preston Ltd., 261 Pearse St., Dublin

Q

Quadrans Engineers, 6 Mount St., Crescent, Dublin

R

Range Boilers Ltd., P.O. Box No. 1, Bridge St., Stalybridge, Cheshire.
Rasmussen, H. & Co. Ltd., Odens, Denmark.
Rathcoole Tin & Pipe Works Ltd., Rathcoole, Co. Cork
Recold Ltd., 27 Pearse St., Dublin 2
Reid, G. A., 16 Fade St., Dublin.

Reynolds, Kenneth M., Ltd., 36 Essex Quay, Dublin
Rhossasit Co., Ltd., The Fernham Rd., Slough, Bucks.
Rhodes, Brydon & Youatt Ltd., Redheugh Engineering Works, Stockport, Cheshire.
Richard Ginori, Via Bigli, 1, Milano, Italy.
Rigge Pool Co., Ltd., 644 Broadview Ave., Cleveland, Ohio, U.S.A.
Roper Bros. Ltd., 5 South Anne St., Dublin 2.
RoIs, Charles, 115 Crawfordsourn Rd., bangor, Co. Down
Rototools (U.K.) Ltd., Liverpool.
Rotherham Mats Ltd., 90 St., Coventry.
Rototherm Precision & Instrument Co. Ltd., 17 Merchants Quay, Dublin.
Rowan, M. & Co. Ltd., 51-52 Capel St., Dublin.
Rowe, Lausanne, Switzerland
Ruston & Hornsby Ltd., Bolier Division, Lincoln.
Kuston & Hornsby Ltd., 190 Pearse St., Dublin 2.
Royal Pumps Ltd., Condor Works, Rusholme, Manchester 14.
Ryax Heating Ltd., Britannia Works, Rushule, Manchester 14.
Ryder, Edmund D., 46 Lower Drumcondra Rd., Dublin.

Sanbra-Conex (Ireland) Ltd., Santry Ave, Dublin.
Saunders Valve Co. Ltd., Camrurin, Newport, Mon.
Sapapoa, J., and Co. Ltd., 12a Wexford St., Dublin
Santon Ltd., Newport, Mon.
Sectru Ltd., 43 Corn St., Bristol 1.
Shanks and Co. Ltd., Barrhead, Scotland.
Shaw and Sons Ltd., Sheffield.
Sheet Metal Engineering Ltd., Dublin Rd., Howth, Co. Dublin.
Sheridan, C. B., 10 Herbert Place, Dublin.
Shires and Co. (Ireland), Ltd., Stannaway Drive, Crumlin, Dublin.
Silent Balloch Co. Ltd., Monifieth Foundry, Monifieth, Dundee, Angus Scotland.
Simplex Electric Co. Ltd., Cread Works, Grindle Lan, Blythe Bridge, Stoke-on-Trent.
Simpson (of Ireland) Ltd., Inghirio, Dublin.
Simpson Smith, W. and Sons Ltd., Ireland’s Rd., Sheffield 2.
Slater John (Stoke) Ltd., Berry Hill, Stoke-on-Trent.
Societe Generale De Pondera, 8 Place d’Iena, Paris 16.
Spirax Sarco Ltd., Charlton House, Catenham, Glos.
S. Smith and Sons (England) Ltd., Industrial Division, Kelvin House, Wembley Park Dr., Wembley, Middlesex.
Stanton Ironworks Co. Ltd., Near Nottingham.
Steel Radiators Ltd., Bridge Rd., Southall, Middlesex.
Sterne, L. and Co. (Ireland) Ltd., 186 Pearse St., Dublin
Stevenson and Turner Ltd., Belfast.
Steventon, John and Sons Ltd., Royal Pottery, Burslem.
Stoke-on-Trent.
Stewarts and Lloyds Ltd., Lloyd House, 2 Colmore Circus, Birmingham 4.
Stewarts and Lloyds of Ireland Ltd., East Wall Road, Dublin 3.
Stewart, Norman Ltd., Central Hotel Chambers, Dame Court, Dublin.
Stuart Turner Ltd., Holyoak-on-Thames Oxon.
"NEOLINE"

IS THE NEW "IDEAL"

"Ideal Neoline" radiators harmonise in every setting

New IDEAL "Neoline" is as good-looking as it is practical and durable. The styling is simple, clean, graceful—as happily at home in elegant domestic settings as in the largest commercial projects. "Neoline" fits snugly to the wall; distance from wall to front of radiator is only 3½ inches. And "Neoline's" unique, fluted panel design with rear integral fins gives highest all-round heating efficiency.

You can specify "Neoline" to any length you require. "Neoline" cast-iron sections can be made up in any length, enabling you to plan radiators in one unbroken flowing line from wall to wall, no matter how long the space to be filled. Three heights are available—all with a section width of 16 inches. "Neoline" gives you new style and planning flexibility, with all the long-life advantages of cast-iron construction. Now "Neoline" is today's ideal radiator.

"Ideal Neoline"
cast-iron proof that "IDEAL" lead in radiators

For details of the full range of IDEAL cast-iron radiators, please write to:
Ideal-Standard Limited, Hull. Telephone: HULL 6671
or Ideal House, Great Marlborough Street, London W1. Telephone: GER3309.

IDEAL-Standard
BRITAIN'S LEADING MANUFACTURERS OF DOMESTIC HEATING EQUIPMENT

"IDEAL" and "NEOLINE" are trade marks of IDEAL-STANDARD LIMITED
BRONZE WELDED JOINTS ON COPPER TUBE

flow freely. In addition it will protect the joint during welding from any oxidising tendency due to the oxygen in the atmosphere.

Some craftsmen, instead of dipping the rod in the flux, prefer to mix the flux powders into a paste and then paint it on the joint. This is, of course, quite satisfactory, but no matter what method is used, the flux should be applied in minimum quantities.

In previous articles it was mentioned that the neutral flame—equal proportions of oxygen and acetylene—was essential to success in welding. Here we have one of the few exceptions. We must, in this case have a slight excess of oxygen in the flame so that the inner cone will be somewhat sharper but not shorter than normally used.

It is important also to have the correct gas pressures and correct size of nozzle for the job. These will vary with the type of blowpipe used, but as a guide, the oxygen and acetylene gas pressures should be from 2 to 3 lbs. per sq. in. for light gauge copper tubes up to 4 in. diameter. The nozzle sizes, using the normal classification, should be about a 3 to 5 tip for copper tubes up to 1½ in. diameter. An 1½ in. to 2 in. 5 to 7 t.p. on 2 in. to 3 in., a 10 to 13 tip, and on 3 in. to 4 in. a size 13 to 18 tip. It will be appreciated that these figures are approximate and only applicable to equipment in good condition.

Reputable

WHERE the welding gear is not of the best, slightly higher figures must be used, but, of course, any reputable firm will always ensure that its equipment is kept in first-class condition, otherwise good results cannot be expected.

The leftward method of welding (explained fully in the March issue) is used, and provided that the copper is not overheated, the weld metal will be found to flow freely and "tin" each side of the joint. In fact, when the filler rod begins to flow freely, we know that correct welding temperature has been reached, and conditions are then perfect for a good joint. If, however, the operator allows the copper to reach a higher temperature, control of the metal may be lost, and so a burnt weld with poor bond will be the outcome.

Localised

DUE TO the localised nature of the flame the bronze will not spread unduly when being applied, and so it is possible, in the hands of a skilled man, to produce welds in all positions, including overhead. That this fact is recognised is shown by the widespread increase in the use of bronze welding during the past decade.

Before concluding, a word of warning must be mentioned in connection with dezincification problems. This trouble has caused much concern to contractors in recent years,

continued page fifty-nine
ZINC ROOFWORK

ZINC is a plumber's metal. Apart from its extensive use in hot dip galvanising as a protective coating for mild steel tubes, cylinders and cisterns, it is regularly used in the form of thin sheets for roof weathering.

Zinc is quite light in the gauges specified for roofing. It is relatively cheap and offers a reasonably good resistance to atmospheric corrosion. A roof laid in accordance with recommended practice may be expected to give a useful and trouble-free life of forty years, and, quite probably, much longer.

Examples of zinc roofing 100 years old are not uncommon, a notable one being the spire of Wellington College Chapel in Berkshire, which was weathered with zinc sheets in 1868 and has needed no maintenance since.

Working techniques

ZINC is a "hard" metal, and the methods of working it are the same as those for the other "hard" sheet metals.

Zinc is said to have a "grain." This runs lengthwise down the sheet just as grain in timber runs down the length of the piece. The grain does not affect the normal working of zinc, but great care should be taken when one is forming folds along the grain; such folds should not be too sharp. A rounded fold of radius at least twice the thickness of the metal will be satisfactory.

The marking out of zinc sheets is best done with a blunt centre punch or similar tool. A pencil mark does not show up well, and a sharp tool such as a scribe will cut into the zinc.

This does not matter on a line which is to be cut later on with the snips, but if the set out line for a fold is cut it could seriously weaken the metal at this point. The sharp scribe is not therefore recommended for the purpose.

Brilliant

COMMERCIAL quality zinc to B.S. 849 is chiefly used for the specially developed system of zinc roofing known as roll cap roofing, a system so brilliantly worked some sixty years ago that it has not been possible to improve upon it.

Ordinary commercial quality zinc sheets work more easily when slightly warm. In cold weather it is therefore an advantage to store the sheets in a warm place. In really severe weather a sheet may be warmed by passing over it a few times a blow-lamp burning with a not too powerful flame. A high temperature is not necessary, and indeed should be avoided since this can permanently upset the crystal structure of the metal and make it brittle. The zinc need only be heated to about or a little above hand temperature.

Some roofing details in this quality zinc involve cutting and soldering. Soldering in any form is not considered to be good practice in roofwork and should be avoided if it is possible to do so by using a different design or fixing method.

Quite easy

SOLDERING on sheet zinc, where this is unavoidable, is quite easy. Care must be taken to see that the soldering iron is not too hot because of the relatively low melting point of the zinc. Solder should be of the tin rich tinner's variety, with a proportion of 50 per cent., or better still, 60 per cent. of tin to lead. It should be quite free of antimony, since this would tend to produce brittle joints. The flux generally used for this work is a solution of zinc chloride commonly known as "killed spirits." The plumber often makes it by dissolving zinc scraps in hydrochloric acid, taking care not to breathe in the fumes which are given off during the process.

Zinc ammonium chloride solution is an improvement on killed spirits, and is made simply by adding sal-ammoniac to the killed spirits. Many proprietary brands of flux obtainable at the ironmongers are of a similar composition, and it is really much easier to buy it than to make it.

All soldered joints should be well swilled with water when they are finished so as to remove all traces of the flux, since this is corrosive.

Copper bit soldering will be dealt with in a later issue.

continued opposite
from previous page

**Soft temper zinc**

SPECIAL Soft Temper Zinc is now available. It is chiefly used for covering roofs by the standing seam method, described earlier in this series, for copper and aluminium.

This material can also be used on simple seamed details. Ridge pieces, chimney back gutters and chimney front aprons are easily and quickly made in it by the method again described earlier. Simple ridge pieces can also be made in soft temper zinc.

Here are some points to be noted when one is making these details in this material:

1. Allow 4” seams as with copper.
2. The second turn of seam will be found to move much more easily if it is lightly warmed by having a blowlamp flame, or a gas jet, passed over it once or twice.
3. Zinc is much stiffer than copper or aluminium. In other words, it has more “spring back.” Once the material has been handled for a while and the extent of this springiness gauged, due allowance can be made for it.
4. The zinc does not work-harden to an appreciable extent, and there is no need for annealing.

The recommended Zinc Gauges for roofwork are as below.

<table>
<thead>
<tr>
<th>Zinc Gauge number</th>
<th>Nearest S.W.G.</th>
<th>Weight of Zinc/foot super, approx. ounces.</th>
<th>Thickness in decimal inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>23</td>
<td>15</td>
<td>0.025</td>
</tr>
<tr>
<td>13</td>
<td>22</td>
<td>16.75</td>
<td>0.028</td>
</tr>
<tr>
<td>14</td>
<td>21</td>
<td>18.5</td>
<td>0.031</td>
</tr>
</tbody>
</table>

Soakers: 12.Z.G.
All other work in 14.Z.G.

**NEW INTERNATIONAL PRESSED STEEL RADIATORS**

*In Single, Double and Treble Panels*

EX STOCK

* Also — THERMOPAK and SILENTFLO ACCELERATOR PUMPS

PRICE LIST AND ILLUSTRATED LEAFLETS ON REQUEST FROM

Sole Agents for Republic of Ireland:

Monsell, Mitchell & Co. Ltd

67-73 TOWNSEND STREET — DUBLIN, 2. Phone 76282.
DON'T RISK MEN'S LIVES

In the interests of public safety, the E.S.B. has statutory authority to prohibit the erection of buildings and structures within twenty-five yards on either side of the E.S.B. lines. Should such building be necessary, the Board should be given, in writing, two months notice of such intention in order that the feasibility of such building may be investigated.

The Board has also issued repeated warnings to farmers and other operators of special equipment to exercise care in the use of high machinery near E.S.B. lines.

The ignoring of such regulations and warnings has caused a number of accidents, and in the last five years six of these accidents were fatal.

When work becomes necessary adjacent to E.S.B. lines, local E.S.B. staff will, in the interests of public safety, make arrangements so that the work can be done in safety.

PROTECT LIFE

STAY CLEAR OF ELECTRIC POWER LINES
**QUESTION ANSWERED**

**Greater flow resistance?**

Do you think plastic tubing offers much greater resistance to flow of water than other tubing at present on the market?

**PLASTIC** Tubes are made by an extrusion process. They have quite smooth bore and thus have excellent flow characteristics.

The more flexible polythene tubes may, by deflection from straight line, offer negligibly extra frictional resistance to fluid flows. Rigid P.V.C. tubes are becoming increasingly popular for this and other more practical reasons of easier fixing and neater jointing. The trade must expect to see much more plastic tubes used in the future.

---

**Bronze welding copper tubes**

**A QUESTION** often asked in the trade is about the removal of flux residue from the finished weld—is the flux harmful if not removed?, and what is the easiest way to get it off the joint if it should be necessary?

As to the first part of the question, the flux is not harmful if left on, but may be unsightly, and so should be removed if at all possible.

The usual and easiest way to remove it is by pouring cold water over the hot metal immediately welding has finished. This will cause sudden contraction and chipping of the flux, which will then flake off. There are many brands of proprietary fluxes on the market, each with specially blended ingredients to assist fusion.

**BLOWPIPE FLAME**

As the normal bronze filler rod is a brass of the 60% copper and 40% zinc type and in addition may contain silicon, nickel, tin, manganese, etc., to improve the quality, it is important that the flame be adjusted and has resulted in failure of brass cocks and valves, etc., when in contact with certain types of waters. As our bronze filler contains zinc, bronze welded joints are best avoided on copper and other tubes used for carrying hot or cold sea water, or for use in districts where dezincification is a problem.

---

**M.A.B. INSULATIONS**

Estimates and Specifications Free on request.

45, WATERLOO ROAD, BALLSBRIDGE, DUBLIN. Telephone: 684017.

---

**Insulation Contractors & Sheet Metal Specialists**

Sole Agents in Irish Republic for OPPANOL Waterproofing for Insulated Pipe Lines

June, 1962.
INDEX TO ADVERTISERS

Asbestos Cement Ltd. ............................................. Cover iii
British Steam Specialties Ltd. .................................. 5
Boylan, M. A. Ltd. .................................................. 2
Barwell, James Ltd. ................................................ 8
Bell, A., & Co. (Eire) Ltd. ......................................... 46
Concrete Products of Ireland Ltd. ............................. 20
Cox Engineering Co. Ltd. ......................................... 48
Coppercraft Metal Works Ltd. .................................... 45
dockrell, Thos., Sons & Co. Ltd. ............................... 45
Dunwoody & Dobson Ltd. .......................................... 38
Esso Petroleum Co. (Ireland) Ltd. ............................ 15
E.S.B. ................................................................. 58
Engert, D. P. & Co. ................................................. 38
Everton Engineering Ltd. ......................................... 51
Fyffe Couplings (Ireland) Ltd. ................................... Cover ii
Fry's Metal Foundries Ltd. ....................................... 49
Hans Grohe, K.G. .................................................... 27
Hartley & Sugden Ltd. .............................................. 43
Heiton, Thos., & Co. Ltd. ......................................... 27
Irish Shell & B.P. Ltd. ............................................ Cover i
Industrial Gases (I.F.S.) Ltd. ................................... 2
Ideal-Standard Ltd. .................................................. 54
Irish Equipment Co. Ltd. ......................................... 36
Irish Technical & Production Co. Ltd. ....................... 13
Kelly, Dan, & Co. .................................................... 30, 46
Leinster Engineering Co. Ltd. .................................. 17
M.A.B. Insulations Ltd. ........................................... 59
Monsell, Mitchell & Co. Ltd. .................................... 57
Masser, A. H. Ltd. .................................................. 35
Manotherm Ltd. ...................................................... 43
Maguire, Hugh C. ................................................... 22, 48
McAuley & Cunningham .......................................... 30
O.B.C. Ltd. .......................................................... 33
Rheostatic Co. Ltd. .................................................. Cover iv
Radiation Parkray Ltd. ............................................ 19
Radiation New World Ltd. ....................................... 22
Rowan, M., & Co. Ltd. .............................................. 36
Ryder, Edmund D. .................................................. 17
Sanbra-Conex (Ireland) Ltd. ..................................... 9
Stewarts & Lloyds of Ireland Ltd. .............................. 25
Southern Engineering Group Ltd. ............................ 53
Sampson, J. J., & Son Ltd. ....................................... 10
Temple Tubes Ltd. .................................................... 1
Thompson, John (Wilson Boilers) Ltd. ....................... 10
Technical Sales Co. Ltd. .......................................... 41
Wavin Pipes Ltd. ..................................................... 5
Walker Crossweller & Co. Ltd. .................................. 35
Welding Services Ltd. .............................................. 28
Ease of erection and the wide range of fittings available make ASBESTOS CEMENT soil and waste pipes an extremely economic and speedy method of construction.

write for details

Asbestos

ASBESTOS CEMENT LIMITED,
19 Lower Pembroke Street,
Dublin  Tel. 65491
In small-pipe heating the simplest—and most economical—way to give efficient, fully automatic control is to install the Satchwell BMT. In response to a temperature sensitive phial outside the building, the BMT mixing valve prevents temperature changes inside before they can occur. This way, inside temperatures remain constant whatever happens outside, with considerable savings in fuel consumption.

For more information on the Satchwell BMT—just write to Rheostatic.
Ease of erection and the wide range of fittings available make ASBESTOS CEMENT soil and waste pipes an extremely economic and speedy method of construction.

write for details

Asbestos

ASBESTOS CEMENT LIMITED,
19 Lower Pembroke Street,
Dublin  Tel. 65491
In small-pipe heating the simplest—and most economical—way to give efficient, fully automatic control is to install the Satchwell BMT. In response to a temperature sensitive phial outside the building, the BMT mixing valve prevents temperature changes inside before they can occur. This way, inside temperatures remain constant whatever happens outside, with considerable savings in fuel consumption.

For more information on the Satchwell BMT—just write to Rheostatic.

ONLY the BMT reacts to every change in the weather
ONLY the BMT gives fully automatic control of small-pipe systems
ONLY the BMT ensures maximum efficiency, by controlling all the heating. Not even the water in the pipes is left uncontrolled.
And she knows just where to get it. Because the hard hitting advertising which first sells her on the idea of installing Shell and BP Housewarming also tells her of the superb service offered by her local Appointed Installer. The special Shell and BP Appointed Installer's sign is prominently featured in each advertisement to help her remember it. There are hundreds of Mrs. 1970's. All looking for the Irish Shell and BP Limited Appointed Installer's sign — the sign which they know means prompt efficient service. Hundred's of Mrs. 1970's—hundreds of systems to install and service. It's obviously very good business to give Mrs. 1970 what she wants!