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The Irish Plumber and Heating Contractor, October 1963 (complete issue)

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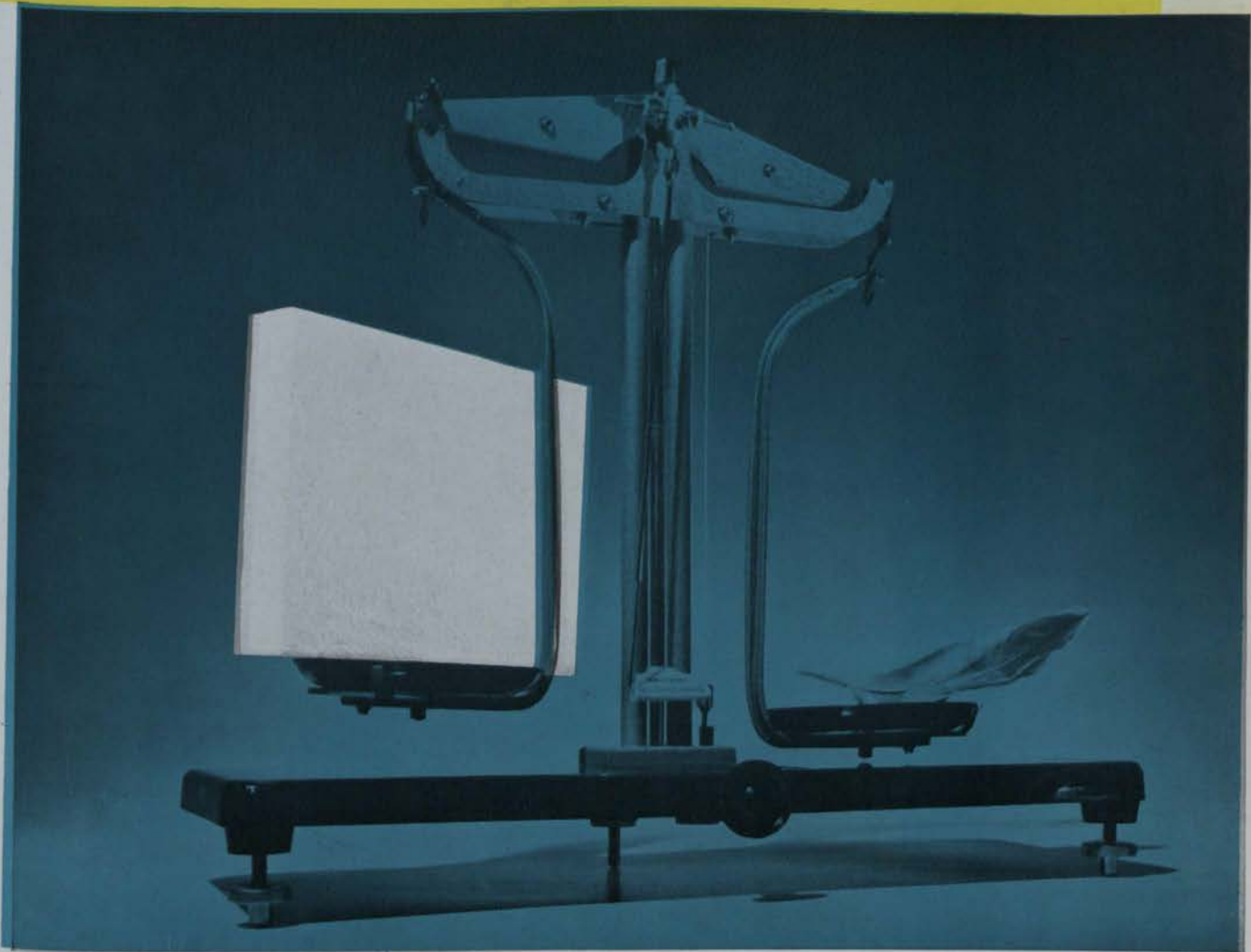
THE IRISH PLUMBER & HEATING CONTRACTOR

en: The Irish Plumber and Heating Contractor, October 1963, complete



Vol. 3. No. 7.

OCTOBER, 1963.



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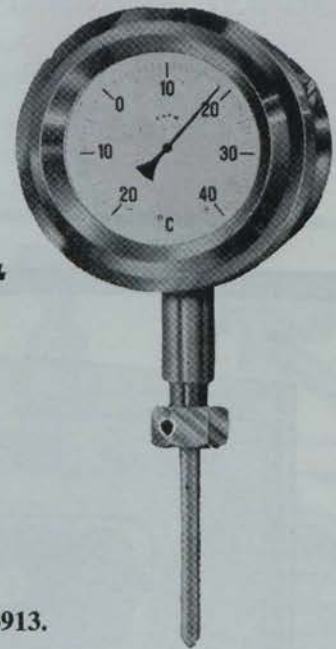
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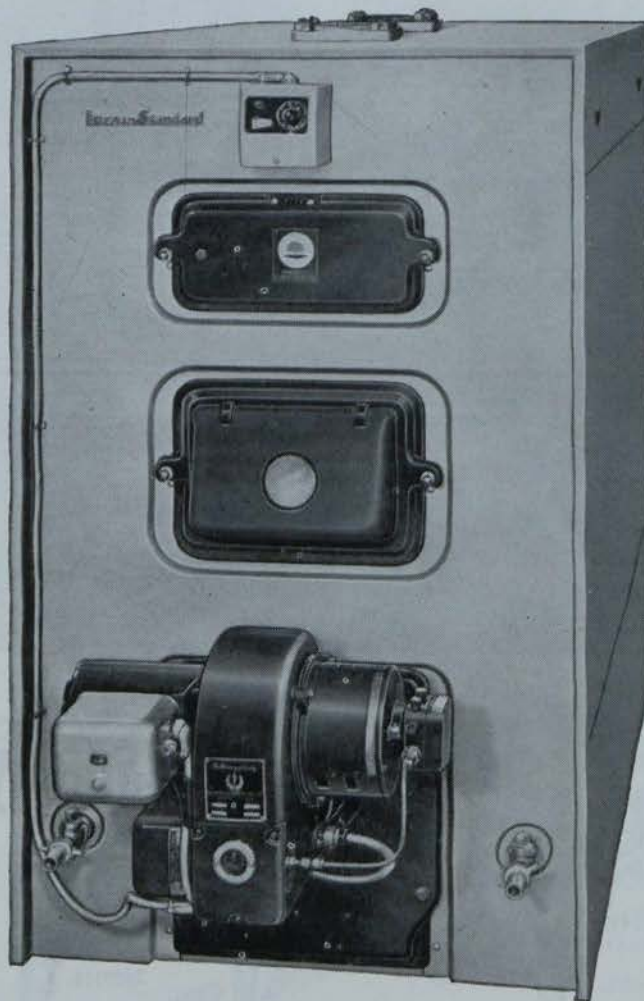
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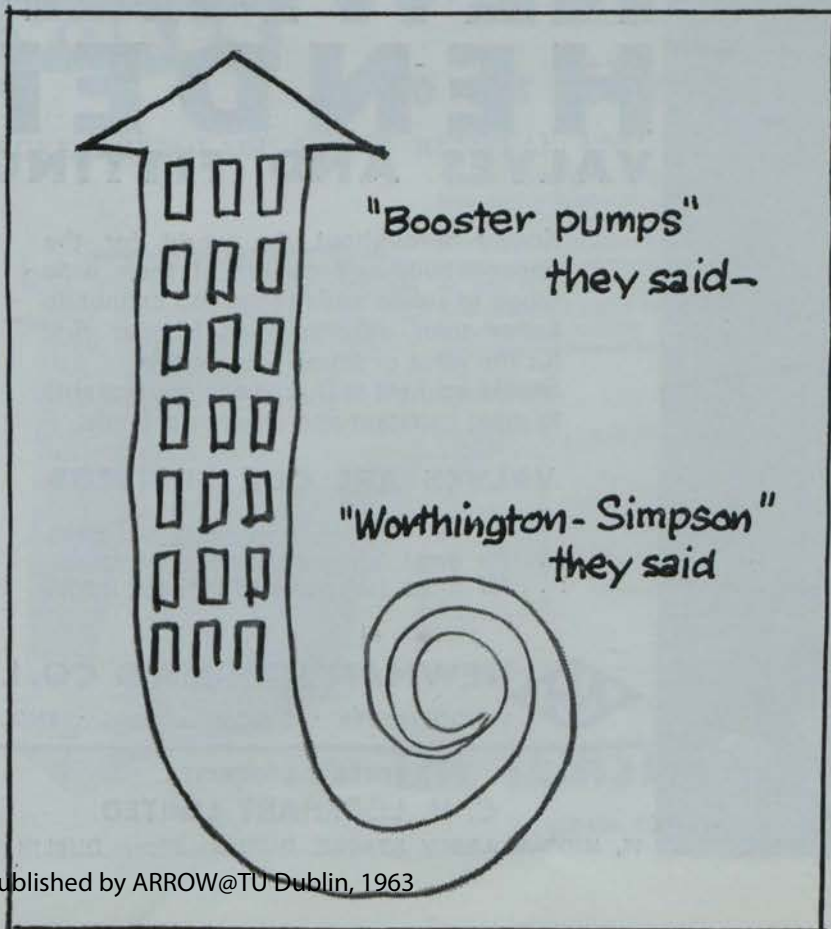


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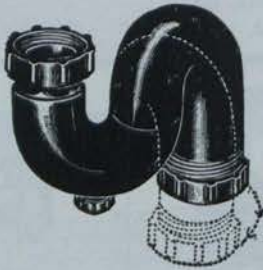
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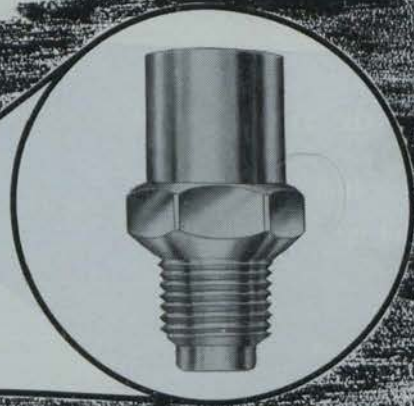
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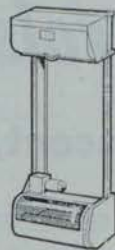
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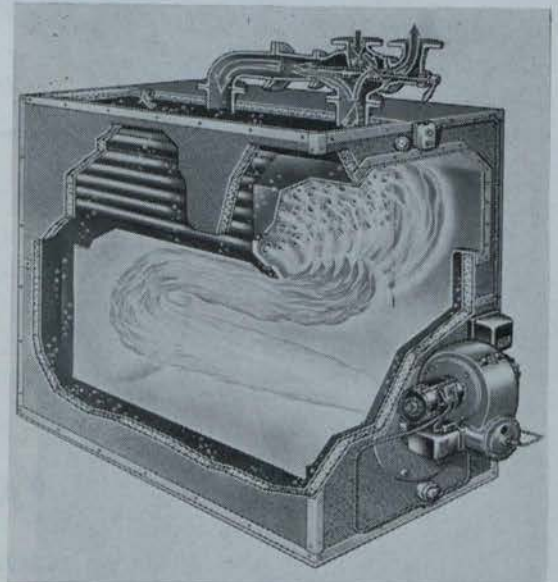


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Vol. 3. No. 7.

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OCTOBER, 1963.



THE IRISH PLUMBER & HEATING CONTRACTOR

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| THE FIRST of two important Special Surveys, dealing with unit heaters and warm air heating systems, begins on | Page 11 |
| THE SECOND SURVEY this month covers plumbers' and heating engineers' tools and begins on | Page 22 |
| THE A. L. TOWNSEND, M.R.S.H., M.I.P., contribution, which was to have dealt with domestic cold water supply, has been held over due to pressure on space. | |
| SIMILARLY, JOHN G. BOLTON'S further article on small bore heating has to be held over also. | |
| NORTHERN NOTES, from our correspondent Allen McDowell, appear on | Page 34 |

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The Irish Plumber and Heating Contractor.

TRADE FIGURES ON ENGINEERING COMMITTEE

A MECHANICAL engineering committee has been formed by the Board of the Institute for Industrial Research and Standards.

The committee which held its first meeting recently will develop and define policy and programmes for mechanical engineering in the institute that will make a substantial technological contribution to Irish industry. This will require an evaluation of the mechanical engineering needs of industry in Ireland from both the technological and economic points of view and the planning of a programme of work to meet as many of the urgent requirements as the available resources of manpower and money permit.

The members of the mechanical engineering committee are: P. H. Greer, M.I.E.E., M.I.C.E.I., director and general manager of Unidare Ltd. (chairman); M. Gleeson A.M.I. Mech.

TRADE

TOPICS

E., works manager Waterford Ironfounders Ltd.; A. Harkin, M.E., M.I.E.E., M.I. Mech.E., A.M.I.C.E.I., deputy chief engineer, Electricity Supply Board; J. Kinsella, B.E., M.I. Mech.E., managing director, Precision Alloys Ltd., Professor P. Leahy, M.E., Ph.D., M.I.C.E.I., M.I. Mech.E., department of Mechanical Engineering University College, Dublin; P. O'Halpin, B.E., A.M.I. Mech.E., A.M.I. C.E.I., A.M. Inst. F., Quadrant Engineers, Dublin; M. Sheehy, B.E., A.M.I. Mech.E., Irish Sugar Company Ltd., Carlow. The institute has appointed M. G. Park, A.M.I. Mech.E., A.M. Inst., W.S., senior scientific officer of the engineering department, to act as secretary and technical officer to the committee.

Venner display well attended

A DISPLAY in Dublin late last month of Venner time switches, process control gear, electronic instruments and accumulators was well attended.

Among the products which attracted keen interest were the Venner Minor central control units.

These units have been developed to meet the demand for a control, which from a central source, automatically provides heating in any individual room just when it is required and simultaneously effects a substantial economy in running costs.

Each room of the premises is wired separately to the control unit where three-position selector switches give instant selection of time switch control, thermostat control or 'off' in any room of the building.

Irish agents are Roper Bros. Ltd., 5 South Anne St., Dublin 2.

A new premises for Insulations Limited



A VIEW of the new premises of a new firm—Insulations Limited at 186 Pearse St., Dublin. Although Insulations Ltd. is a new firm the products for which the firm acts as hot and cold insulation contractors and consultants includes many names well known to the trade in Britain . . . names like Polyzote, Onazote, Rubazote, Therazote, Plastozote, Isoflex, and marine products, products of expanded rubber and plastics Ltd., London.

Polyzote is in fact manufactured in Dublin by Insulote Ltd., an associate Company of Insulations Ltd. It is interesting to know that Polyzote is also manufactured in London County Council

for all its vast housing schemes. This clean, snow-white, feather-light expanded polystyrene is supplied at low cost in the form of boards to the building industry and there are an infinite number of uses for the product.

Insulations Ltd. offer a free advisory service from their Dublin office and will supply literature on request. They are, of course, backed by their laboratories at Croydon. If required Insulations Ltd. can carry out complete insulation schemes for buildings or cold stores using their own team of experts, thus a full and comprehensive service for a growing need in the hot and cold insulation fields.

Aluminium rads

NEW APPLICATIONS for the "H.E." aluminium radiator, which is manufactured in Britain by Powell Duffryn Heating Limited of Camberley, were discussed at an international heating conference in Copenhagen last week.

Several delegates drew attention to the advantages of associating the radiator with gas fired boilers, while others spoke about its successful installation in schools, churches, cinemas, museums and gymnasias.

The "H.E." radiator, which is now being sold for private home heating throughout Europe, has the lowest water content, and is therefore the fastest radiator to heat up and cool down on the market. It has a built in valve, and can be tailored to individual requirements.

● G. F. Morley Ltd., 45 Quinn's Lane, Fitzwilliam Square, Dublin 2, announce that they have been appointed Agents in the Republic of Ireland for Wm. Willis and Co. Ltd., Belfast, manufacturers of the well-known Willis "All-Around" Crate Boiler.

TRADE

TOPICS

Air eliminator

THE NEW MIL D.20018 heavy duty automatic Air Eliminator from Midland Industries Ltd., Dean Road, Wolverhampton, has been designed to meet the demand for a high capacity air eliminator following the success of the small 1/2 inch unit of which over a quarter million are already in use.

The new Midland Industries product is suitable for hot water up to 240 degrees F, 1/2 inch BSPT male inlet, female outlet.

IN KEEPING with their policy of continually seeking new and improved methods of filtration equipment, Vokes have introduced a completely new refill for their K.600 Kompaks, a most widely used unit type air conditioning filter.

The 'H' Kompak Refill—it has been manufactured by Vokes to their own stringent specification at their Earby Works, Yorkshire—replaces the standard material. The 'H' Blend Refill offers an improved efficiency on BSS. 2831 and also on Blackness Test.

Irish Agents: The Leinster Engineering Co. Ltd.

THE GREAT Baxendale organisation celebrated its centenary last month, a hundred years after Leban Baxendale with a credit of £100 set up his own business in Manchester.

His first deliveries were made by handcart. Now Baxendale and Co. Ltd. is one of the main builders merchant firms in Britain with branches in many cities including Dublin.

THE LATEST addition to the range of B.S.A. Harford central heating products is the Kosmos thermostatic radiator regulator. This regulator will control the temperature of a room between 41°F and 77°F depending on the setting. It adjusts the flow of hot water through the radiator to meet the heat demands to keep the room at the selected temperature.

The Kosmos may be fitted direct to the radiator valve or away from the radiator. It is suitable for all low pressure hot water central heating systems. The Kosmos is robustly made, simple to operate and requires no maintenance. It does not require any power supply. A strainer which prevents dirt entering and obstructing the valve is built in. It is available in all sizes in

WORTH READING

● Sperryn and Co. Ltd. have produced fully illustrated brochure (W.452/1) dealing with their comprehensive range of bath and basin fittings. The brochure is now on issue to the trade. Irish agents: C. B. Sheridan, 10 Herbert Place, Dublin.

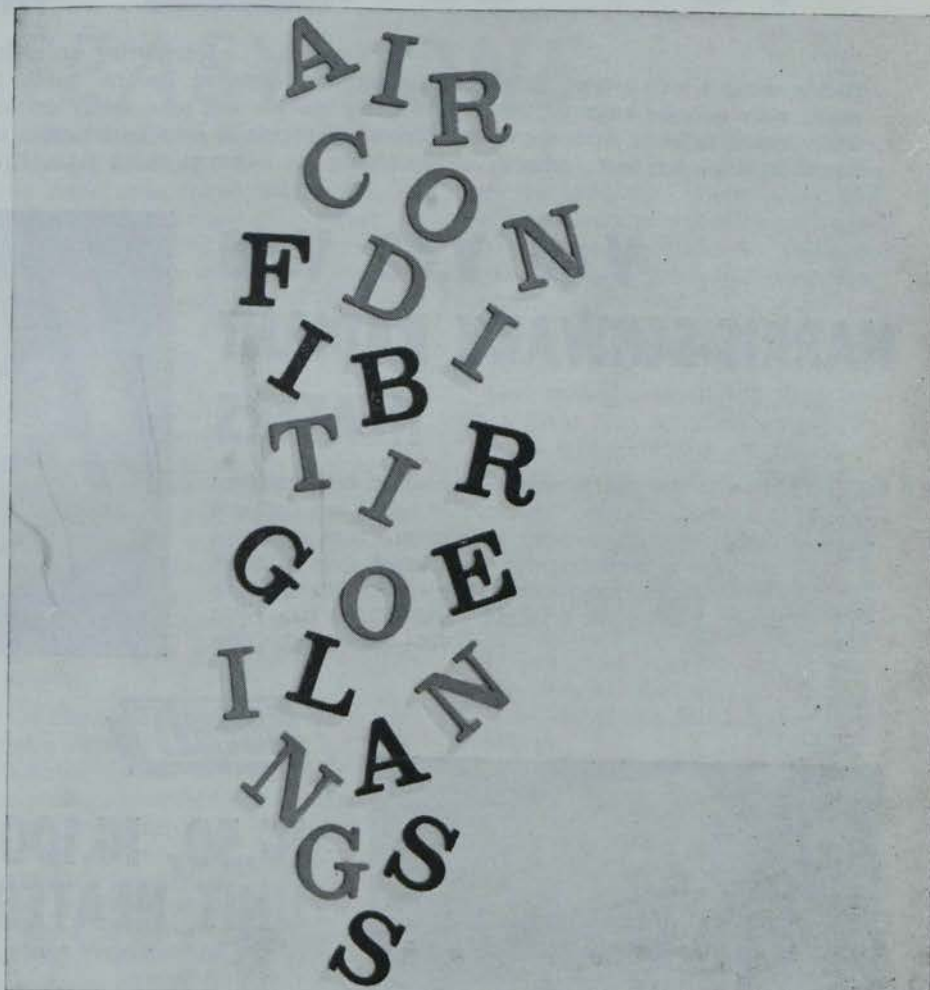
● Jeavons Engineering Company, Tipton, Staffs. have just published their catalogue 63/4/C illustrating Jevco brass compression joints for domestic copper and plastic tubes (water).

The current Jevco fitting with dual

grooved ring has proved "immensely popular" say the manufacturers and is dealt with in full in their new catalogue.

● Bahco-Condруп Ltd. announce the introduction of their new fourteen page Primus Industrial Propane Apparatus Catalogue No. 2067.

● A new attractive full colour four page leaflet on the B.S.A. Hotspur range of oil-fired boilers gives full details of these boilers together with full dimensions and specifications. Supplies are now available. Irish Agents: Heating Controls and Devices Ltd.



Fibreglass is a name found mixed up in the whole field of air-conditioning and heating. This is only to be expected; Fibreglass has been of inestimable value in providing the new forms of thermal and acoustic insulation that help to make modern air-conditioning so silent and efficient. The most recent advances are based on Fibreglass Superfine wool, a material far finer and more consistently fine than any previously available. It is used in many types of external and internal duct insulation. Fibreglass Rigid Sections for hot and chilled water lines are highly efficient and cheap to install; and Fibreglass air filters are probably more widely used than any.

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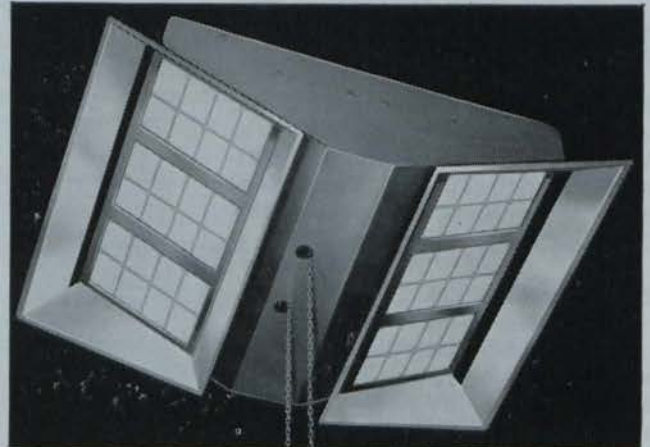


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SUITABLE CHOICE NOT AN EASY ONE

"TEMPERATE" as our climate is described, our winters are certainly chill enough to warrant some effective form of house warming.

The choice of suitable equipment is by no means an easy one. It will be affected, among other things, by initial costs, the ease with which it can be fitted into existing or new homes, and not least—we all hope—by its ability to do the job of room warming at a reasonable running cost.

The uncertain and ill-defined character of our changeable weather is another factor to be considered if desirable standards of warmth comfort consistent with reasonable fuel consumption, is to be achieved.

It is common experience that prolonged cold spells which demand full and continuous house warming, are often followed by relatively mild periods calling for a much reduced output from the heating appliances. Very often one very cold day is followed by a virtual "Indian summer." Such vagaries of weather do not ease the selection of a suitable home warming arrangement from the already bewildering array of equipment and fuels now available and individually championed in the National Press and glossy magazines.

Less obvious

Apart from the obvious need of any likely equipment to emit sufficient heat on really cold days, a less obvious but equally important property of flexibility of heat output and control is essential if the changeable weather conditions are to be contended with and a consistent warmth comfort-level maintained.

Some space heating equipment has a long "time-lag," that is, there will be some time elapse before any appreciable sensation of change in warmth or cooling occurs after it has been turned on, or off, as the case may be. This may not be of serious consequence in permanently heated buildings, or in buildings of high thermal capacity. In other circumstances the slow rate of "heating-up" can be a nuisance. Conversely, the slow cooling rate of the heating appliance can give rise to discomfort from overheating when the controlling thermostat has turned off the heat source yet the heating medium or mass of the appliance continues to dissipate heat whilst it cools to room temperature, or to suit milder weather conditions.

Water, with its high specific heat, has a time-lag when used in L.P.H.W. radiator systems. The effect of this is not so noticeable in continuously warm buildings after the initial lighting up of the boiler at the commencement of the heating season. It is still less marked in force circulated systems than in gravity circulated systems. This is because the pump circulated systems employ very much smaller bore pipes than gravity systems do and the reduced water content of the system is much more responsive in temperature change and control than the greater masses of water in gravity systems are. However, the fact remains, that even with more expensive thermostatic controls to individual radiators, there is more time-lag with water than with air.

Air, having a relatively low specific heat, is quickly warmed—and as

quickly cooled. It does not, therefore, offer a big time-lag and its temperature control is more easily and readily adjusted to momentary changes in room heat requirements. In short, air is more responsive to temperature control.

A boom

Air-warming systems, therefore, enjoy a boom now equal to that of the "Small Bore Force Circulated" L.P.H.W. systems when these were introduced just a few years ago. Better suited, perhaps, for installation in new homes planned to accommodate and use them to best advantage, warm air systems have much to recommend them. By suitable choice of equipment and some ingenuity on the part of the designer and installer, systems of this kind can be fitted into existing dwellings.

Solid-fuel, gas, oil-fuel and electricity may be used at the centrally disposed air warming "boiler" or furnace, from which silent running fans propel the warmed air by way of simple and small ducts to the various rooms.

Thermostatically controlled dampers may be incorporated for individual room temperature control if desired. In two-storey dwellings, or in bungalows for that matter, zonal controls may be employed to close off heating to bedrooms during the daytime and so save fuel. Alternatively, a less expensive system will provide room temperature control by manual opera-

Continued overleaf



This special survey—another in a series on important aspects of the plumbing and heating trades—has been compiled by technical expert A. L. Townsend, M.R.S.H., M.I.P.

from previous page

tion of dampers at the warm air registers to the rooms. By this simple yet effective means, rooms may be selectively warmed as the householder requires them. A room not in use need not be warmed and its quota of expensive fuel will be saved, but through the quick warming media of fanned warm air any such room can be quickly brought to comfort level simply by opening the warm air damper to it.

Clockwork programming controls can be had to stop and start the system at pre-selected times. For example, it may be set to start up at 6 a.m. to warm the whole house ready for the rising household, and the shut off, say, half an hour before the household retires to bed. Intermediate operations can be programmed and can be used to enhance the economic operation of this flexible and responsive form of house warming. Many married couples have business commitments which take them both away from home during the day.

Programmer

The programmer can be set to shut off the heating just before they leave home in the morning, and bring it back into operation about half an hour before they arrive back in the evening. To heat unoccupied space is uneconomic and the thermal capacity of most dwellings will suffice to counter any dampness which might be thought liable in unheated rooms. It must be remembered that the period of heat "shut-down" is not overlong, and anyway, how about the rooms in so many homes which never get heated at any time—here we can expect some manifestation of damp through condensation, if nothing else.

One other point worth quoting in favour of the ducted warm-air systems is that a measure of **summer cooling** can be achieved simply by running the fan, with the heater off, of course. Everyone is aware of the cooling effect of moving air, and a system which

warms effectively in winter yet also offers some cooling in summer. This is worth bringing to your customer's attention before he decides which system to invest in for his whole house warming.

Remember too that each home has its own warming problems bound up in the particular needs of the household, the space available to accommodate equipment, the capital available for system installation, and the allowable running costs. Each system needs "tailor made" care in design and installation and such care demands a high standard of competence on the part of the designer and installer.

Discerning

More and more, discerning householders have come to recognise the importance of satisfactory house warming equipment as a vital necessity to modern living. Manufacturers have done a splendid job in providing pleasing new styles of equipment with high performance rates, and competent modern home heating design is "with it." The welcome boom in domestic space heating has, unfortunately, given rise to the mushroom

growth of very many tiny installer concerns, not all of which are as well versed in the principles of heating as they may be in the practice of hack-sawing through a bit of 1/4-in. copper tube.

And so, as your customer ponders the inadequacies of his present arrangement and assesses its insatiable appetite for costly fuel, encourage him to think on, and consider the really comforting and economical to run installation you could provide for him.

The industrial application of warm air heating is well established. The quick heat-up from cold start is an advantage long recognised for factory heating.

Unit heaters comprising a battery of L.P.H.W. or steam heated coils, warm air which is force impelled to working areas by silent running fans, form not only a quick, responsive heating arrangement, they are space saving too. Mounted well above the floor together with their connected pipework, they leave the whole floor area uncluttered and dispense all-pervading warmth—where it is wanted—and when it is wanted.

Ventilation control may be incorporated as in the case of the Colt

THE KHAM SIN PORTABLE SPACE HEATER



★★★ **HOT AIR**—at the touch of a switch

★★★ **ECONOMICAL**—uses paraffin or fuel oil

★★★ **CIRCULATING WARM AIR**—covers 2,000-3,000 sq. ft.

★★★ **No exposed flames or fumes**

★ Available in four models—Model No. 85, 75,000 B.T.U.'s, £87-10. Model 125, 120,000 B.T.U.'s, £117-10. Model 140, 150,000 B.T.U.'s, £122-10. Model 200, 250,000 B.T.U.'s, £135.

SIMPLEX DAIRY EQUIPMENT CO. OF IRELAND LTD.
Bluebell Works, Inchicore, Dublin. Telephone 503288.

"Warm-flo" unit heaters. Such equipment has valuable summer cooling use as well as providing effective winter warming.

Commercial buildings, too, are being equipped with unit heaters of modern design of pleasing appearance. Offices and schools in particular are buildings, often of low thermal capacity, and generally intermittently heated.

It is in such circumstances that air warming equipment really scores through its quick response to de-

SPECIAL SURVEY

from previous page

mands for heat, and its economic operation, since it is only used when heat is actually required in occupied spaces.

Cabinet type fan-assisted warm air convectors may be used where space permits or aesthetic conditions suggest. There are a wide variety of such convectors now made for domestic, industrial and commercial heating. The literature of all advertisers

should be sought and studied with regard to the appearance, performance, and cost of this and other forms of air warming equipment.

Reverting to the domestic field, it is known that many customers are apt to discount warm-air heating installations because they think that a separate installation will be needed to provide D.H.W.

This is not necessarily so. Many manufacturers incorporate means of D.H.W. provision in the air-warming equipment. The "Sugg-Halcyon" gas fired equipment is an example.

Other appliances enable provision of air warming for space heating from the boiler equipment used to provide D.H.W. or L.P.H.W. for the conventional radiator systems. F. H. Biddle's Ltd. and The Allied Ironfounders make appliances especially devised to give air-warming and D.H.W. supply from conventional boiler installations using solid, gas or oil fuels.

Free-standing "local" warm air furnace equipment are now produced with outstandingly high thermal efficiencies. off alternative means of flexibly controllable space heating for factories, small workshops and even offices and churches.

Such appliances, burning gas, oil or solid fuel, may be had in floor mounting models in a wide range of outputs to suit all possible floor layouts and heating demands.

Equipment by F. H. Biddle, Woods of Colchester, and Clyde Fuel Systems, is a small, but well tried selection from this growing application.

Where floor space is at a premium, then models are available for suspension from trusses or similar suitable hangings.

The F. H. Biddle's "Torridaire," the Thermatic Heating Co.'s packaged oil-fired air heaters, and the Woods of Colchester "Airwoods" equipment, are typical items well worth investigating where factory or storeplace heating is being considered.

The Copperad Ltd. "Louvred" and "Downstream" pattern unit heaters for water or steam are a good example of aesthetic styling applied to high efficiency industrial, commercial and school heating. Unit heaters of this high level fixing kind leave the floor and walls uncluttered of pipework and equipment, are silent in operation, and may be used as cooling air movers in summer. For these reasons they are becoming very popular for space heating intermittently heated buildings where ease of installation, and maintenance, is coupled with good appearance and flexibility of control.

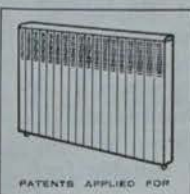
Thirteen



CONRAD a great step forward in space heating

Conrad is the happy result of a marriage between Convection and Radiation. Room air enters heater near floor level, is then evenly warmed and distributed throughout the room by convection which, combined with radiation from the front panel, offers hitherto unavailable new comfort and climate control. Examines Conrad's revolutionary new features:

- 1 Conrad is so designed that radiation from the panel face is always at optimum value. At low water temperatures the panel approaches the mean water temperature and the difference gradually increases as the water temperature rises.
- 2 Conrad is suitable for all two-pipe accelerated hot water systems. Ideal for multi-storied buildings, every Conrad is tested to 1300 p.s.i. pressure.
- 3 The low water content of Conrad ensures rapid heating up to the design room temperature giving quick response to water temperature changes.
- 4 Conrad's low installation costs bring a new concept of economy. One man can handle the fixing. There are no built-in wall brackets as with ordinary radiators—Conrad needs only 2 or 3 wood screws to firmly secure its lightweight efficiency. A 6 foot model weighs only 49 lbs.
- 5 The heater comes in 9 sizes, rising in increments of 6" from 24" to 72". It is 22" high, projects only 3" from the wall, and should be fitted not less than 4" above floor level.



BIDDLE

F. H. BIDDLE LIMITED

16 Upper Grosvenor
Street London W1
Tel: Hyde Park 0932

So there you have it. A quiet revolution in space heating. Further details from:

D. H. BUTLER, 7 Blackwood Crescent, Helen's Bay, Belfast. Telephone: Helen's Bay 2119.

QUADRANT ENGINEERS, 167 Strand Road, Sandymount, Dublin 4. Telephone: Dublin 693940

Quality Controlled Products

RADIATION'S Ductair 22 warm air central heating system, fired by the Parkray S.55 solid fuel boiler, provides the average small house or flat with full space heating for the living rooms and kitchen, background heating for the bedrooms by ducted or "spillover" warm air from the hall, and heats a bathroom towel rail.

It also maintains a plentiful supply of domestic hot water and provides hot air for a clothes drying cupboard.

Also from Parkray is the Ductair G.105/23 which, contained within a neat rectangular cabinet, and gas-fired, is an efficient warm air central heating unit. It is compact enough to be fixed on the kitchen wall or fit inside a cupboard and is designed for the popular sized house, bungalow, maisonette or flat.

* * *

THE PERKINS range of domestic boilers covers every combination of boilers and burners for domestic central heating, boilers and air heaters being available for firing by oil, gas or electricity.

Perkins Air Heaters are well known in their industrial and agricultural forms and they are also available in numerous sizes and capacities to suit every type of house.

Where Perkins score is in the complete versatility of their air installations. These are designed in Dublin to suit individual household requirements and complete arrangements for the local fabrication of ducting, with insulation and installation, are carried out by the Design Office of Oil Fired Homes (Ireland) Ltd., at the "Leinster Heating Centre," 6 Harcourt Road, Dublin 2. Several types of Perkins boilers may shortly be seen at these showrooms under actual firing conditions.

Perkins not only supply the units but design the system, supervise installation, fire the boilers and set them for maximum efficiency. They then take the whole worry from the installer by providing an after sale service contract at a reasonable charge to the householder.

* * *

TEMP-O warm air furnaces, type D, are available as standard up flow, counter flow and suspended units, and each model is fired by a Temp-O pressure-jet oil burner using domestic fuel oil (diesel). The three Type D models have an output rating ranging from 50-70,000 B.t.u.'s/hr. to 120-150,000 B.t.u.'s/hr.

These warm air furnaces by Weld-

In conjunction with this Special Survey we review here products from the leading manufacturers' ranges.

ryte Limited, South Quay, Arklow, are available through Irish Shell and BP. Ltd—Mercantile Credit Co. of Ireland Ltd. loan plan, repayable over five years. The interest rate is 4½ per cent. and usually no deposit is required.

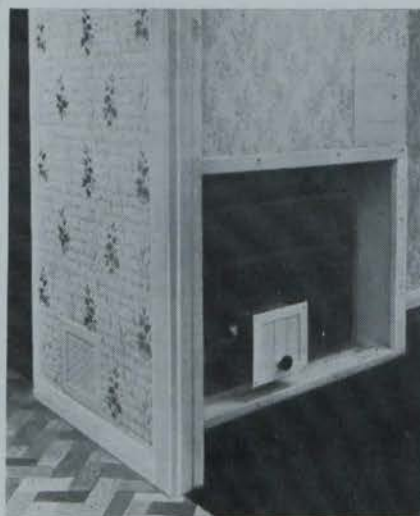
Other features of this Temp-O range include: static head available at outlet—2"-3" W.G. in each case; air flow, static head and leaving air temperature may be varied to suit specific requirements; all controls are fully automatic and furnaces are fitted with a combined fan and safety limit thermostat; air filters and plenum chambers (to specification) are available and all units are supplied complete with controls, oil filter and full installation instructions.

Also available from Weldryte Ltd. is their four-model range of free standing air heaters with ratings from 120-200,000 B.t.u.'s/hr. to 600-750,000 B.t.u.'s/hr.

* * *

A **COMPACT** new domestic heater known as the Mayfair has been added to the Forceflo range of fan assisted convector heaters manufactured by F. H. Biddle Ltd. This unit has been specially designed to answer the capital and running cost problems of space heating for flats and residences.

The new Mayfair is available in three sizes with a range of outputs from 8,000 B.t.u.'s/hr. to 27,000



● The Biddle Mayfair



● The Radiation Ductair 22—see review column on this page.

B.t.u.'s/hr. These units will heat two or three average size rooms in a modern home. Each area is completely and evenly heated; warm air is discharged near floor level through attractive grilles while room air is recirculated to the Mayfair through a grille near the ceiling. Dampers can be provided on the outlet grilles to enable the heat to be concentrated through a particular grille if desired. In warm weather the fan unit can be used on its own to circulate cool air.

The Mayfair can be incorporated into a new building or introduced into an existing building. It will adapt to any room lay-out as the spigots for discharging the air are situated in the front, rear, and one end panel of the unit, all of which are freely interchangeable. The space saving design, only requiring a short run of piping from the boiler, which can be gas, oil or solid fuel-fired, ensures low installation costs.

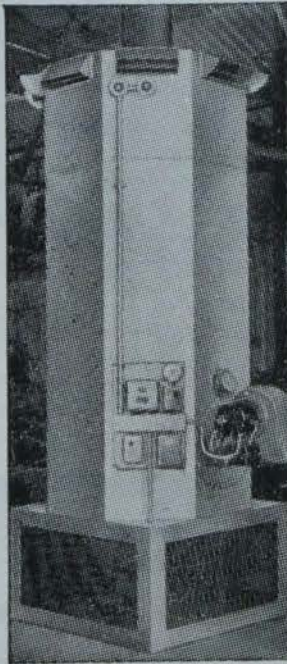
The Mayfair is fitted with a standard Biddle extended surface heating coil with aluminium plate fins, copper tubes and steel tubular headers.

One feature of production of the coil is the method of mechanical bonding of the tubes to the fins—a process which makes them completely unaffected by the continual strain of expansion and contraction. The coil is tested at 400 lbs. p.s.i.

Irish agents: Quadrant Engineers, 167 Strand Road, Sandymount, and D. H. Butler, 7 Blackwood Crescent, Helen's Bay, Belfast.

Another item of news from Biddle is that all their Uniflows now have a standard welded element suitable for

Continued page sixteen



EFFICIENT HEATING

for even the most difficult structures

HAINAULT

SPACE HEATERS

Large areas, with corrugated walls and roofs and high heat losses—factories, workshops, garages, stores—the most difficult heating problems can be solved with Hainault industrial heaters, oil or coke fired.

Look at these Features:

1. High heating efficiency—oil fired version rated at 82%.
2. Outputs from 80,000 to 1,000,000 B.Th.U./hr.
3. Centrifugal fan ensures positive heat distribution.
4. Negligible maintenance.

5. Can be utilised for ventilation in summer.

6. Independently adjustable air diffusers—direct the heat where you want it. Ducting systems to order.

7. Low cost—easy installation.

8. Delivery ex stock.

"Hainault" heaters are manufactured at Hainault, Ilford, Essex, and are widely used in heating installations throughout Great Britain and Ireland.

Send now for details and illustrated literature.

SOLE IMPORTERS:

HENNESSYS LTD.

Beasley Street, Cork. Tel. 24311/2.

Dealership available in some areas.

POTTEZ OIL BURNING HEATERS

Convectors and Ducted Warm Air Units

Models from
17,000 to 60,000 BTU/hr

Sole Concessionaires:

Tedcastle McCormick Ltd.

7 D'OLIER STREET, DUBLIN.

Telephone 76341.



MODEL 7R1. Output 37,440 BTU/hr.

Branches at WATERFORD, CORK, LIMERICK, SLIGO, DUNDALK and BELFAST.

The Irish Plumber and Heating Contractor.

every possible application and heating medium.

There will be three types of Uniflow available:—"H" Type: horizontal air discharge suitable for steam L.P.H.W. and H.P.H.W.; "L" Type: downward air discharge suitable for L.P.H.W. only; and "D" Type: downward air discharge suitable for steam, L.P.H.W. and H.P.H.W.

All motors will be single speed but available in one of the following three speeds:—N.S.: normal speed nominal, 1,400 r.p.m.; L.S.: low speed nominal, 900 r.p.m.; and ELS: extra low speed nominal, 700 r.p.m.

Units for H.P.H.W. can be supplied with alternative air intakes and discharge.

* * *

DUNHAM-BUSH Limited are manufacturers of three styles of unit heaters. (1) Circular Downflo unit heaters: This modern stream-lined Dunham-Bush vertical discharge unit heater is available to solve space heating problems in an almost endless variety of buildings. On account of its modern appearance, fine performance and general utility, this circular unit is saving space and preventing fuel wastage in a large number of industrial and commercial buildings and also has an application in many institutional buildings.

(2) Horizontal Discharge Unit Heaters: For over 50 years Dunham-Bush have been manufacturing unit heaters in many different forms. The considerable experience gained has now enabled them to develop this latest and most versatile heaters. Compactness in size and simplicity in design enable them to be suspended above floor level or connected directly to a high level fresh air inlet, thereby using no valuable floor space. Louvres allow individual adjustment for directing the flow of warm air.

(3) Vertical Discharge Unit Heater: This improved vertical discharge type downflo unit heater is designed primarily for industrial buildings to meet particular cases where the heaters must be placed at a height greater than is permissible with horizontal discharge type unit heaters.

Downflo heaters are installed at higher levels, frequently in the roof space to meet the situation where large machinery layouts, storage bins or cranes, overhead cranes or other

PRODUCT REVIEW

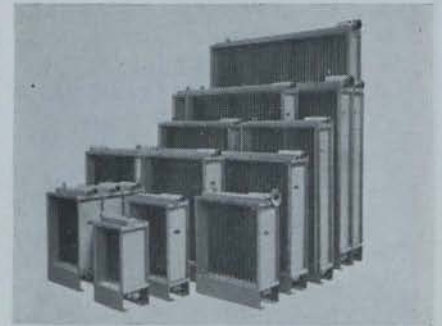
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production necessities make this essential. An additional advantage is gained owing to the fact that the heating mains and electric cables may be installed where they also are clear of obstruction.

* * *

WATERLOO GRILLE CO. (Great Britain) Ltd., in addition to their ex-

Continued opposite



● A batch of Cyclone copper gilled tube air heaters for air conditioning installations by Matthews & Yates Ltd.



LOW COST SPACE HEATING
need not use valuable floor space

- HEAT where you want it
- HEAT when you want it
- HEAT how you want it

ECONOIL Airheaters are light, compact sturdy units designed for roof mounting or mobile use. The warm air output can be spread either by a single diffuser, or a ductwork system with multiple outlets, as required).

(Units available from 150,000 to 380,000 B.T.U.s/hour).



Prices from
£269

Write for leaflet EC/XC/19,
ECONOIL DIVISION,
NU-WAY HEATING PLANTS LTD.
(John R. Taylor Ltd.),
5, Upper Fitzwilliam Street, Dublin.
Phone 61653.

Head Office: DROITWICH, WORCS.

tensive range of aluminium air diffusion equipment, have developed two types of aluminium registers suitable for domestic warm air heating. The design and construction is of the same high quality as their commercial range and is intended to meet a demand for a better product. A range of equipment will shortly be on permanent exhibition at the Dublin Building Centre.

Literature and information can be obtained from Eire agents, Quadrant Engineers, or Northern Ireland agents, Messrs. Peter Macfarlane and Sons Ltd., 23-27, Cupar Street, Belfast 13.

* * *

CYCLONE UNIT heaters, by Matthews & Yates Ltd., provide a constant volume of warm air at steady velocity and predetermined temperature to permeate a whole shop or building. Fixed overhead, these units project a steady stream of warm air downwards at any desired angle onto the floor.

By this method of recirculation the temperature of the air is quickly raised to give comfortable working conditions. The high rate of recirculation also achieves considerable fuel economy.

The heater is a neat, compact unit consisting of electric motor and propeller fan, heating section, and steel plate housing complete with louvres. The heater section is of gilled tube design for use with high or low pressure steam or hot water.

Ten unit sizes are manufactured, with a choice of two styles of casing for the three smaller sizes.

Irish agents: Heatavent Supply Co.

* * *

A **GAS** warm-air central heating unit has been produced by Baxi, Bamber Bridge, Preston, Lancs., and is at present undergoing final tests at Watson House. It is named Baxi-Gas.

The 30,000 B.t.u.'s/hr. self-contained unit has been designed to give full central heating to houses or bungalows of up to 1,000 sq. ft. floor area (two or three bedrooms).

The unit is compact—31 in. wide, 26 in. high and 18 in. deep—enclosed in a neat white cabinet. It can be placed high on the wall in line with fitted cupboards in the kitchen, under working tops or beneath the stairs, therefore taking up little floor space.

Irish agent: A. G. Smyth, Esq.

* * *

A **NEW** range of free standing air heaters has been introduced by Afos Limited of Hull. The range supple-

PRODUCT REVIEW

from previous page

ments their range of unit suitable for connection to duct systems.

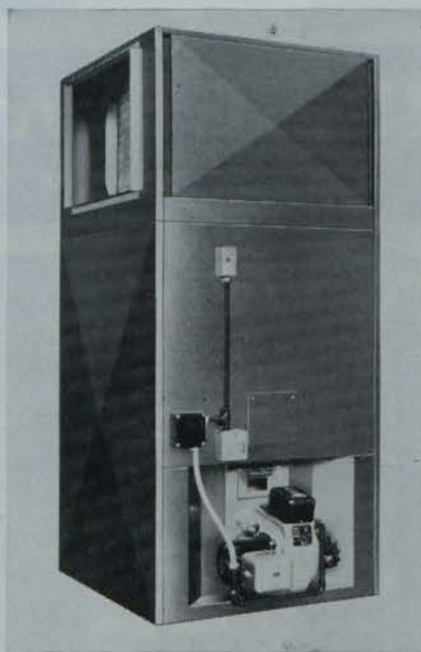
These units are from 150,000 B.t.u.'s/hr. to 2,000,000 B.t.u.'s/hr. and are suitable for oil and gas firing.

Irish agents: Peter Macfarlane & Co. Ltd.

* * *

NOW MATHER & Platt Ltd. of Manchester, can support a downflow version of their Thermolier range of unit heaters. It gives high performance in compact form, is designed for use with steam and hot water (high and low pressure) and has a comprehensive range: 35,000 to 350,000 B.t.u.'s/hr. Modified unit heaters can be supplied for fitting into ducting.

The downflow model, of course, joins the well proven horizontal range of Thermolier models. Enquiries to Mather & Platt's Belfast office.



● Our picture shows the **Downflow** model from the new range of **Waterbury** warm air heaters, the "F" series. At present only oil-fired models are available but gas models, both **Hiboy** and **Downflo**, will be introduced within the next few months.

The **Model DFF** shown here provides downward airstream for application to an underfloor ductwork system.

W. J. THOMPSON Ltd. of Mallow, manufacturers and distributors in Ireland of the "Kresky" Warm Air heating system, state that their complete range from 50,000 B.t.u.'s upwards is now immediately available. The design department welcomes plans of new buildings to be heated and will supply layouts and estimates for the complete installation. Enquiries are also invited from Architects, Heating Engineers and from Heating Installers who wish to carry out their own installations with the equipment supplied.

* * *

THE CLYDE 'Gen O-Therm' range of air heaters is enhanced by the introduction of a new model, the **CH 3A**, with a maximum rating of 550,000 BTU's/hour. Manufactured by Clyde Fuel Systems Limited, and based on the well proven "Gen-O-Therm" heat exchanger the **3A**, in common with models 1, 2, 3 and 4 offers distinctive features such as clean overall design, silent operation and clear visibility of combustion conditions through an amber coloured inspection port.

The psychological effect of the latter adds to the pleasing external appearance and affords ready access to the built-in pressure jet oil burner, which has been specially designed for this particular application.

The burner operates with light gas or diesel oil of 35-45 seconds viscosity Redwood No. 1 at 100c F., and is of extremely simple design requiring minimum maintenance.

Air filtration is effected by three large capacity filter elements of galvanised steel wire mech construction which can be easily removed for cleaning by hose, compressed air or vibration.

Emphasis has been placed on reliability and the fully automatic operation of the unit embodies comprehensive safety controls including photo-electric flame failure cut-out and built-in firevalve.

Sizes: **CH 1**—150,000 BTU's/hour; **CH 2**—250,000; **CH 3**—400,000; **CH 3A**—550,000, and **CH 4**—700,000.

* * *

THE MANUFACTURERS of **Khamsin** space heaters have now brought out an improved **Model No. 125** which is to take the place of the **Model 120**. The BTU output remains approximately the same, but there has

Continued page twenty

Seventeen

CENTRAL HEATING

Ductair

G 35 & G 45 Gas-fired Warm Air Units for FULL OR BACKGROUND HEATING IN 2-4 BEDROOM HOMES

Variable outputs permit accurate matching to required heating load.

Performances: Ductair G 3501 30,000—35,000 Btu/h.
Ductair G 4501 40,000—45,000 Btu/h.

These completely automatic Ductair units are quick and easy to install and require only an annual maintenance check. Extra-large slow-running fan gives really quiet operation—and there are many other important technical features. The units are completely safe in operation.

Variable Outputs: Units have identical cabinets and only two internal components that are different. Ductair 3501 can be de-rated to 30,000 Btu/h. or up-rated by easy conversion after installation into a G 4501 unit. The G 4501 can be de-rated to 40,000 Btu/h. This range of outputs means a truly economical system that will always be able to match heating needs accurately.

Easy installation: Everything has been designed to make installation simple—even down to packaged Flat-Pak ducting. The unit can be positioned on the base frame at the last minute. All gas and 'plug-in' electrical connections are at top rear of unit—so all wiring can be carried out prior to installation—no return visit of electrician is necessary. Conventional and balanced flue models are available and a Se-Duct model is being developed.



GAS FIRED (Warm Air or

These units provide the ideal, most practical

RADIATION

Ductair G 105/23 Warm Air Unit for FULL OR BACKGROUND HEATING IN SMALL FLATS AND HOUSES

Performance: Output 23,000 Btu/h.

This highly efficient Ductair unit will provide full heating in living rooms and kitchen plus background heating to bedrooms, or *selective* full heating throughout the home. It is specially suitable for multi-storey flats where it makes possible individual metering.

Conventional, balanced flue and Se-Duct models available.

Needs no floor space: The G 105/23 needs no floor space. Its neat cabinet, only 32" wide 23" high and 14½" deep will hang on the kitchen wall.

Economical to run: In a house of 1000 sq.ft. area insulated to the Egerton standard the G 105/23 will provide full heating to (65°-70°F.) in the living room 8 hours a day plus background warmth at all times for an annual consumption of about 400 therms of gas, 100 units of electricity.

Automatic control: A room thermostat automatically switches on fan and burner when heat is called for.

Maintenance: Like all Ductair units, maintenance is reduced to an absolute minimum—usually an annual check.



For further information about Parkray and Ductair central heating—backed by a comprehensive installer-to-use, technical service, write to:

L. F. Young, 85 Gransha Road, Bangor, Co. Down, or

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

dependable • practical • economical

Parkray

Parkray G 301/2 for SMALL BORE HEATING
FOR 2-3 BEDROOM HOMES (up to 100 sq. ft. of radiating surface) **PLUS** CONTINUOUS HOT WATER

Performance: Output 25,000 Btu/h.

Two Circuits: The G 301/2 is a highly efficient gas-fired small-bore unit designed to provide water heating as a continuous service. The time switch is therefore arranged to cover the central heating circuit only. This allows the water heating to recover when the central heating is off, and in conjunction with its other features, enables this unit to deal with peak loads in excess of the unit rating.

Special thermostat and High/Low burner control ensure that domestic water is always controlled to maximum of 155°F. and central heating to 175°F.

The G 301/2 is a balanced flue appliance. This means no unsightly flue pipes, easier fixing and reduced cost of installation. It is ideal for flats where conventional flues present a problem.

High or Low Level Mounting: The unit can be mounted on an outer wall at high or low level, in a cupboard, or under the draining board.

Minimum Maintenance: The unit has a stainless steel heat exchanger, is corrosion resistant and requires only an annual check.

Parkray G 301/1: For use when the full output of 25,000 Btu/h. is required for central heating only (up to 125 sq. ft. of radiating surface).



Small Bore) or SOLID FUEL ?

Solutions to your customers' central heating problems

Parkray 77 SOLID FUEL ROOM HEATER
WITH HIGH OUTPUT BACK BOILER

Performance:

Boiler rating: with (a) boiler damper closed 10,000 Btu/h.
(b) boiler damper open 15,000 Btu/h.

Space heating: Radiant heat and convected warm air space heating in the room in which it is installed (up to 1800 cu.ft.) and heating for up to 50 sq.ft. of radiating surface (including unlagged pipes) *plus* domestic hot water **OR** without hot water up to 80 sq. ft. of radiating surface (including unlagged pipes).

This open fire behind glass has the efficiency of an enclosed appliance and is an ideal replacement for old back boiler fires. The flued boiler has a damper control which enables the proportion of water heating to space heating to be varied. In other words, the water heating can be boosted without noticeably increasing the temperature of the room. Suitable for small-bore or gravity feed systems. It can be installed with a selective central heating system, allowing for the selective use of more radiators than the boiler can fully heat simultaneously.

Easy Installation: The Parkray 77 is quickly installed. A set of pre-cast concrete slabs is supplied and these ensure that the convection space is of correct dimensions. With new installations most types of tiled surrounds from manufacturers standard ranges can be employed. Projection from the surround is under 5".



RADIATION CENTRAL HEATING

PRODUCT REVIEW

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This is the latest addition to the Clyde Gen-O-Therm range of air heaters. It has a maximum rating of 550,000 B.t.u.'s/hr. It is manufactured by Clyde Fuel Systems Ltd. The new model is fully covered in this Product Review.

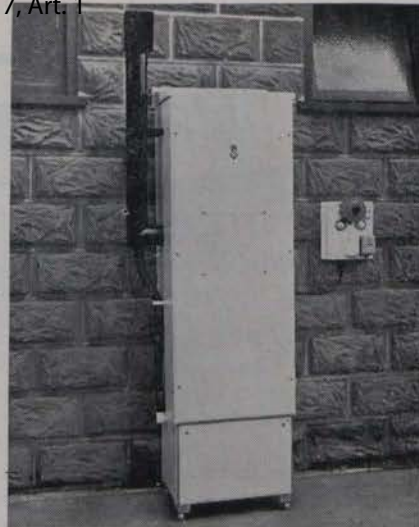
been a considerable reduction in price. On top of that the fuel tank capacities have been increased, so that all of the models will now run for approximately 12-14 hours.

In addition they intend to introduce a model with ability to work off a separate bulk tank in order to eliminate having to re-fill the tank of the heaters frequently. There is a further model due in addition to this i.e. the Model 140 which will have a capacity of up to 150,000 BTU's, and the Model 200 which is hoped to have an output up to 250,000 BTU's.

An additional application for Khamsin space heaters has been found successful in England, i.e., the drying out of houses after severe flooding. Any of the "Khamsin" models are extremely effective and provide a speedy solution to this problem.

* * *

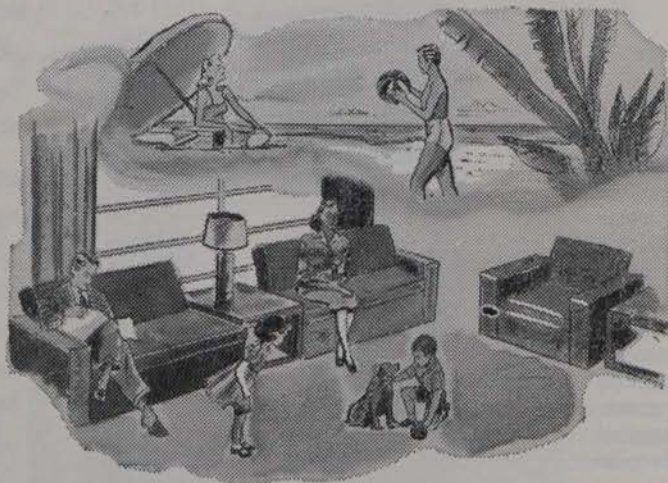
THE DANISH company A'S C. M. Hess' Fabrikker of Vejle, are seeking Irish agents for their range of Hess-O-Therm warm air oil-fired heating systems. The system is based on American methods and has been tested over the past ten years.



● This is the new Perkins Mini Warm Air Pilot unit which has a 50,000 B.t.u. rating. It is designed in a weatherproof cabinet so that it can stand outside the house and for this reason we are sending a photograph of the back of the unit showing the duct outlets.

The unit is designed to raise the temperature of air through 117°F. at the rate of 450 cu. ft. per minute, and is thoroughly thermostatically controlled. It can be provided with a vapourising pressure jet burner. From Oil Fired Homes (I.) Ltd.

For Tropic Comfort in Arctic Weather Install Kresky Oil Heat



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**FULL PERIMETER
WARM AIR
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rely, from manufacturers
with 130 years' experience.*

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25 UPPER MOUNT STREET, DUBLIN, 2.
Telephone 62636. Telegrams "Tepro-Dublin."



**REVIEW OF PLUMBERS,
HEATING ENGINEERS TOOLS**

1963 BROUGHT MANY EXCITING INTRODUCTIONS

WITH the autumn now well in hand and the advent of another new year on the horizon, we in the plumbing and heating industry can look forward and review some of the materials and equipment which are available to the trade at present.

In many ways 1963 can be looked on as an exciting year, with man's developments advancing to exciting new frontiers. All these developments are bewildering in their rapidity and one's mind turns to wondering what new developments will arise in the plumbing and heating industry in the next decade.

Although we in the trade still depend to a large extent on the skill and ability of the individual craftsman for the successful completion of a contract, manufacturers are also keeping abreast by producing materials and equipment to allow those in the trade to be masters of the craft, and carry out efficient and high quality work.

Essential

It is now fully realised how essential it is to keep in touch with modern techniques and to widen our knowledge, so also is it equally essential for everyone to "keep in touch" with new trends in equipment and materials in order to do our job more effectively.

For instance, new advances in design of pipe bending equipment is one aspect. Pipe bending techniques have improved to an extent that full bore bends can be produced with a minimum of loading and operational fatigue, whereas previously pipe bending by hand often led to bad workmanship and eventually possible

breakdown, or choke.

Bending machines can conveniently be divided into the Mandrel type and non-Mandrel type; both can be obtained hand operated or motorised. Generally speaking plumbers and heating fitters are chiefly concerned with the non Mandrel hand machines, producing bends with a radius equal to three or four times the diameter of the tube. This type of machine is ideal for jobs which require a large amount of repetition bending, such as housing sites, etc. The machines are portable and specially designed to facilitate the bending of long lengths of copper tube in confined spaces or awkward corners.

There is, however, a growing demand for the Mandrel type machine, which is very suitable for the multi-storied building, or for the pre-fabrication of full bore bends in a workshop. These machines have a slight advantage over the non-Mandrel type as they provide internal support at the point of bending during the bending process, and so leave wrinkle-free throats.

To-day the plumber or heating engineer who cannot use a bending machine is at a great disadvantage, and the firm without a machine is most unlikely to be in a position to compete with those firms who are using them on their various contracts. In this short survey of bending machines, it can be said with truth that the modern craftsman is becoming more and more dependant for good work on them. How pleasing to the eye to see pipes being installed with wrinkle-free bends and without unsightly fittings at every junction.

With the introduction of the small portable gas cylinder, a wide field has been opened to the craftsman. The ubiquitous blowlamp, so long the faithful friend of the plumber, has encountered opposition. These portable gas cylinders are a must on every site or installation and gone should be the day of struggling with the temperamental blowlamp. The portable gas cylinder with its rubber hose, and a varied selection of burners and attachments, can produce size and shape of flame to every requirement, from a small pencil flame to a powerful, voluminous, concentrated or coronary flame.

Scope unlimited

In actual fact its scope is unlimited, whether it be preheating prior to welding or a simple soldering job.

As in a number of other fields, there is a major revolution taking place in the many forms and facets of welding equipment. This was amply illustrated during a visit to the 1963 International Welding Exhibition, held recently at Olympia, London. A walk around the show clearly indicated the close association which exists between the manufacturers of welding equipment and the welder. There is no doubt that this intelligent co-operation and forward thinking can only contribute to the making of welding equipment of the best possible order.

Although oxy-acetylene welding still holds pride and place due to its adaptability and low initial cost, electric welding is gradually taking over in some fields. Manufacturers of

Continued page twenty-four

WELDING SERVICES LTD.

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WELDING RODS
FLUXES
ELECTRODES
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BLOWPIPES
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ARC WELDERS
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CIRCLE CUTTERS
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HANDSCREENS
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GLOVES
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POSITIONERS
TEMPILSTIKS

PREHEAT AND STRESS RELIEVING EQUIPMENT

- ★ WE SPECIALISE IN **PROPANE** FOR CUTTING - BRAZING - HEATING - LEAD MELTING - BENDING PVC PIPES - 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

gas welding equipment are introducing many new items. The buyer of gas welding equipment to-day is indeed faced with a varied selection of light and heavy weight blowpipes, and cutting torches. Gone now are the days of using faulty welding equipment which, of course, is both dangerous and wasteful.

In the flame cutting field new cutting attachments have been introduced giving better handling quality and greater safety.

New forms of profile cutting machines are available to the craftsman, making high quality mechanized oxygen cutting available to an ever widening range of plumbing and heating fields. These machines are of simple design, usually of the dual carriage type, consisting of a cutting bench and a tracing table spanned by a carriage which travels the length of the table. The cross carriage has a cutting head at one end, and at the other a magnet coil rectifier and electric motor.

They are most suitable for repetition work as the machine follows the template automatically, thereby giving a high degree of accuracy and efficiency. For the production of pipe flanges, etc., they are ideal.

Strides

Significant strides have been made in the application of electric arc welding during the past thirty years. Nowhere is this more noticeable than in the metal trades industry, which has undergone a complete change since the introduction of electric arc welding. One of the biggest strides forward in the development of electric arc welding took place with the introduction of the Argonarc process, which has become firmly established, and almost as well known as oxy-acetylene and metal arc welding.

Its earliest applications were confined to the aircraft industry, but its versatility was quickly appreciated by workers in aluminium, stainless steel and numerous other metals used in the welding industry. The Argonarc process requires no chemical fluxes for its efficient functioning; its pro-

from page twenty-two

NEW ATTACHMENTS GIVE BETTER HANDLING, SAFETY

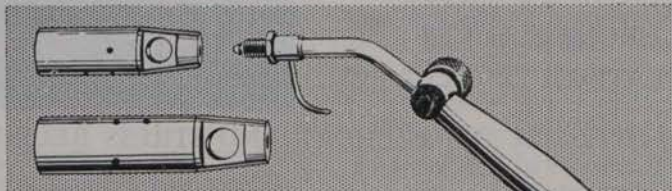
cess is one in which an electric arc is formed between a non-consumable refractory metal electrode, usually tungsten, and the work to be welded. The arc electrode and weld area are shrouded in an atmosphere of the inert gas "Argon," which prevents atmospheric contamination, allowing a clean and sound weld to be made without the use of chemical fluxes. Filler wire is added to the molten metal as required, as in normal gas welding.

Two main types of torches are available; generally an air-cooled type is used for the lighter gauges. A water-cooled type is used for heavy work. The Argonarc process employs both A.C. and D.C. power equipment. In welding aluminium and its alloys, A.C. current is the power medium. For stainless steel and copper D.C. is preferable.

PRODUCT REVIEW—See page twenty-six.

Kosangas Blow-Torches

for every plumbing job!



There's a wide range of Kosangas blow-torches, for all types of plumbing work. They're far more efficient than the conventional types. The Kosangas TH3 and TH4 high pressure blow-torches are specially designed for paint-burning, pre-heating and soldering. The Bullfinch Mark II has a full range of heads, including soldering attachment. Use Kosangas blow-torches, with the small Kosangas portable cylinder, also for roof-felting, jointing of plastic pipes, and other heating needs. A plumber's portable furnace with wind protected burner is available. Send for details to: McMullans Kosangas Ltd., 1 Upper O'Connell St., Dublin. Tel: Dublin 40761-4.



This special survey—another in a series on important aspects of the plumbing and heating trades—has been compiled by technical expert, Brendan Rooney of the College of Technology staff, Bolton Street, Dublin.

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

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**'Quasi-Arc' Electrodes And
Welding Plant**

THE MOST OUTSTANDING NAME IN THE
FIELD OF ELECTRIC ARC WELDING

**'British Oxygen' Equipment
Blowpipes & Cutters**

FOR SAFETY, ECONOMY, DEPENDABILITY.
THE MOST POPULAR PRODUCTION AND
MAINTENANCE TOOL IN INDUSTRY.

Why Not Consult Us? Phone 55471

Industrial Gases (I.F.S.) Ltd.
BLUEBELL, INCHICORE, DUBLIN



*All Direct Fixings
are child's play
with*

HILTI

Sole Agents:

**Calumet Trading
Co. Ltd.**

74, Northumberland Road,
Ballsbridge, Dublin, 4.
Telephone 65971/5.

In conjunction with this Special
Survey we review here products
from the leading manufacturers'
ranges.

PIPE BENDING machinery specialists, Hilmor Limited, of Caxton Way, Stevenage, Herts, offer a staggering range of benders to meet every situation.

Their range of portable tube benders includes lightweight bending tools (types GL. 2B, and GL. 3B); and the Easy-Work ratchet bender type RP. 5B.

This is a machine of new design with a rotary bending action through a powerful ratchet operated screw. Completely portable, it produces good quality bends speedily, accurately and with minimum of manual effort.

The Hilmor range can be seen in Dublin on permanent exhibition at the Building Centre, Baggot Street.

* * *

THE BRITISH OXYGEN Co. Ltd., and their associates have combined their policy of developing new items and improving their existing range of electric and gas welding equipment. 1963 saw the introduction of a number of interesting developments to supplement the already comprehensive range of plant available. Some details are set out below.

The British Industrial Gases, Limited, Pipe Bevelling Machine operates on the novel principle of rotating the tube against a stationary cutting flame and will cut tubes of different diameters, at any desired angle, by means of the protractor provided. The self aligning bases ensure accuracy and cleanliness of cut.

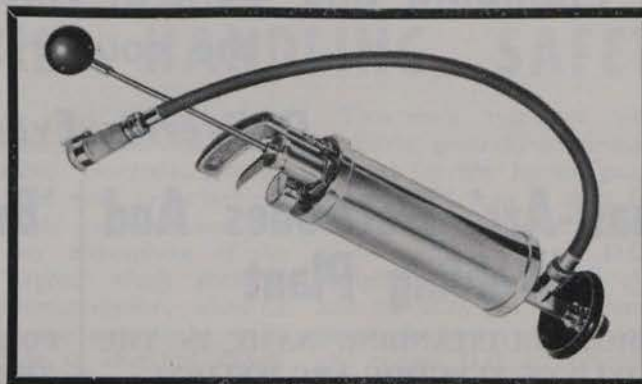
Carrying pipe cutting a stage further is the Alyn range of cutting machines, which are designed to profile the ends of right angle branches to suit mains equal to, or greater, in diameter than the branch.

B.O.C. introduced their new type "M" range. This range offers a high quality two-stage gaugeless regulator of strong construction, with a pop-out indicator for registering contents and a simple working pressure system. These regulators are M-100 and M-15 A1. They are also available with gauges, if required, the gauges being of a new small strengthened

Continued opposite

THE NEW R.C.P.

KINETIC WATER RAM



CLEARs PIPES, DRAINS AND SEWERS SWIFTLY AND SAFELY

- ★ NO ROD
- ★ NO SNAKES
- ★ NO COSTLY DISMANTLING

SIMPLE TO OPERATE SUCCEEDS IN MINUTES WHERE ALL OTHER METHODS MAY FAIL COMPLETELY

W. & L. CROWE, LTD.
 EAST WALL, DUBLIN, 3. PHONE 43101/2.



Pour OXYPIC, the **guaranteed** leak repair preparation, into a hot water installation and seal leaks, no matter where they are, in **30 minutes!**

Faulty fittings, bad threads, sand holes, any leak through any cause is sealed economically and quickly. No dismantling needed; no patches or welding; no need to even **find** the leak; no trouble at all! *Oxyptic prevents rust and scale. It can also be used as an active leak preventive.

N.B.—Unsuitable for domestic or draw off systems. Retail Price £1 per tin C.O.D., money refunded if not satisfied.

Full details from:

PICKUPS of Scarborough and York

Dept. I.P.C.1, Roscoe Works, Scarborough. Tel. 4997/8/9.
 6 Charlton Street, York. Telephone 24611.

Established 1892.

type under the reference M.70-OG and M-15-AG.

The popularity of B.O.C. and B.I.G. blowpipes continues and here the top favourites are the Saffire Combined Outfit, a lightweight alloy set for welding up to 1" and cutting up to 2", and the B.I.G. Model 19/36, a sturdy lightweight combined unit for welding up to 1" and cutting up to 3". These can be supplemented by a heavy cutter for cutting up to 12", the Saffire Universal, and a lightweight welding torch, the Saffire lightweight.

B.I.G. have made two most interesting additions to the equipment available for the popular Model 43 Oxy/Propane Heating Torch. One is an adjustable ring burner for pipe heating. This is available in pipe sizes 4", 6", and 8". The second item is a flame cleaning attachment for the removal of scale, etc.

* * *

BRAZING RODS—B.O.C. have just made an addition to the well known range of Alda welding. This is a new flux coated brazing rod called Fluxobronze. Immediate results from field trials were that this new rod is easier and faster to use than conventional rod and flux. It flows freely and is easy to control. While the

PRODUCT REVIEW

from previous page

flux residue cleans off easily and quickly, the actual flux coating is tenacious and withstands hard wear.

The items just mentioned are some of the large range made available by Industrial Gases (I.F.S.) Limited.

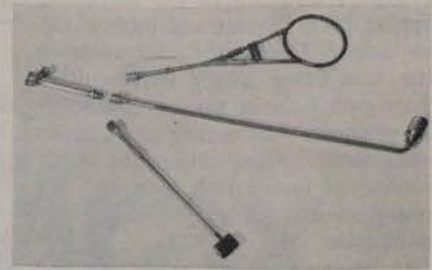
* * *

THE 418 pattern ratchet diestock by Thomas Chatwin & Co., Victoria Works, Gt. Tindal St., Birmingham 16, offers better threads, easier cutting and simple and quick die and guide changing. Dies are available for the Standard range of B.S.P. threads and to Whitworth, U.S. Standard and Unified, within capacity of stock.

Also by Thomas Chatwin is the range of Stillson pattern pipe wrenches. Heat treatment of the handle and jaw gives correct degree of hardness and prevents bending and breakages.

* * *

WITHIN the last three months a total of five new products have been introduced by Fry's (London) Limited. (Irish Office: Fry's Metal



● This is the Harris flame cleaning heating outfit from British Oxygen Co. Ltd.

Foundries Limited).

These are the new American type hole cutters, interchangeable in all respects with American pattern hole cutters; Enox Multi hole cutters, reference No. M.C.47, supplied complete with 4 blades and pilot drill; Enox Multi hole cutters, reference No. M.C.7, supplied complete with 7 blades and pilot drill; Enox No. 220 all purpose Artizan Saw (see leaflet enclosed), and the Enox No. 300 Pad Saw, which holds hacksaw blades and Pad Saw blades.

* * *

HEATING CONTRACTORS, especially those who specialise in pipe lines, will be interested to know that new pre-heating and stress relieving equipment is now available in Eire. Developed by Cooper Electroheat Ltd., of Southport, sintered alumina ceramic elements are used. These elements are flexible and can be wrapped round pipes of various diameters. They will stand up to severe site conditions without failure.

Compared with induction heating, the Cooper system has the very definite advantage that the welding set on site can be used for the operation of the elements. Both AC and DC sets are suitable provided the output is not less than 300 amps. Four 4" pipes can be stress relieved simultaneously on a 300 amp. set.

A well known Dublin erection firm have recently successfully stress relieved a chimney in "Corten" steel for the E.S.B. Contractors wishing to do their own stress relieving or pre-heating can purchase the necessary equipment, and Cooper also offers a fast site service when they will undertake the work under contract at short notice.

Irish agents: Welding Services Ltd., Amiens St., 14-16, Dublin.

PRODUCT REVIEW continued overleaf



Instant heat - just where you want it!

PROPANE GAS TORCHES



Eight different supports interchangeable with nine different burners

Plumbers and Painters quickly appreciate the advantages of SIEVERT Propane Gas Apparatus. Time saving and cheap to use. A burner for every job, all interchangeable. Even Furnaces and Soldering Butts — SIEVERT have thought of everything.

Send now for illustrated brochure and full details of the complete range of Sievert Propane Gas Appliances.

WM. A. MEYER LTD., 9-11 Glensdon Road, London, S.W.16.

LATEST addition to the Rawlplug range of fixing devices and tools is the New Super Drilanchor, a precision made bolt fixing which swiftly drills out its own hole in the hardest masonry or concrete by means of its penetrating teeth. Most important is its reduction of installation time and the elimination of drill usage for various applications.

Its design and special hardening process imparted on the shield to give maximum strength against load pulls make it one of the finest self-drilling anchors on the market to-day. The eight sizes range from the small 2 BA, used for fastening electrical ducting, to the large 7/8" diam. size, used in major constructional projects.

* * *

THE PRIMUS PROPANE Universal set has just been introduced in England with great success, reports its manufacturer, Bahco Condrup Limited.

The one handy Primus propane cylinder serves a wide variety of fittings, soldering bits, burners, emergency light, brew-up stove, etc.

A new Primus Industrial kit gives wide choice of burners ranging from pin-point flame to full power brazing. All operate from the one handle, saving weight and facilitating change over.

* * *

THE NEW Tubela tube bending machine is designed with the requirements of the installers of small bore heating systems in mind. This small lightweight tool requires no bench or stand fixing.



● The Tubela Mini-Bender

The Tubela Mini-Bender is used directly on the floor for bending up to 90° in 1/2" and 3/4" i.d. BSS.659 copper tubes, and may be used in the hands for bending up to 180° in 1/4" and 1/2" i.d. BSS.659 copper tubes. It is manufactured by Tubela Engineering Co. Ltd., Fowler Rd., Hainault, Ilford, Essex.

* * *

PRODUCT REVIEW

from previous page

A NEW range of equipment, particularly adaptable to the gas welding, brazing and soldering of general pipe-work and small precision work, is now available from Technical Engineering Services Limited, 55 Lr. Mount Street, Dublin, the distributors here for Welding Equipment Service Co. Ltd. of Wolverhampton, and the All-State Welding Alloys Co. Inc. of New

York.

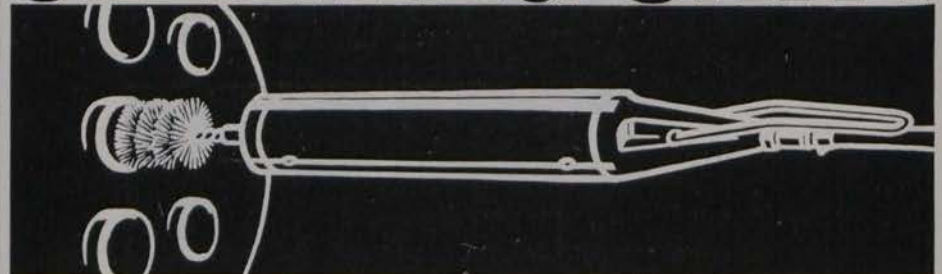
This range includes the Wescol Witch featuring swaged tips or detachable nozzels on the one shank; the range of ZZ Wescol regulators for CO₂ acetylene oxygen and Propane and other industrial gases; and the remarkable All-State Jet Flux and dispensing unit. This unit is available in two sizes, jumbo and standard.

* * *

WARNING beacons operated by Propane gas are now available in Eire.

Continued overleaf

A UNIQUE BOILER-TUBE CLEANING UNIT!



The Ferret is a completely unique type of boiler-tube cleaning unit. Attach It to a standard tube brush and it will creep along the tube—without revolving—and without any need for manual pushing and pulling! When it reaches the tube end, the double thrust action then reverses and the Ferret returns—ready for the next tube!

- THE FERRET**
- *Cuts labour time—no manual pushing and pulling
 - *Does away with extension rods.
 - *Gives cleaner tubes.
 - *Works quickly.

For full details, or a demonstration in your own plant, contact —

AIRNESCO PRODUCTS LIMITED

4 New Road, Rochester, Kent. Chatham 42217.

PRODUCT REVIEW

Continued

Manufactured by the Patent Lighting Company Ltd—specialists in marine lighting for harbour authorities since 1878—quality of craftsmanship and absolute reliability are the hallmark of their range of lighting equipment. Beacons with different flashing intervals or continuous lighting are available in white, green or red lens.

Enquiries to Welding Services Ltd., 14-16 Amiens St., Dublin.

A USEFUL addition to any engineer's tool chest is the Tucker "Pop" rivet kit. "Pop" riveting acts as, for instance, a reliable fastener for pipe brackets and guttering. Each kit contains a setting tool and a selection of rivet sizes in different materials, all supplied in a steel box.

From Geo. Tucker Eyelet Co. Ltd., Walsall Rd., Birmingham.

* * *

W. KENNEDY Limited, with an export depot at Marlon House, 71/4 Mark Lane, London, EC3, will be introducing a new range of "site benders" in time for the November Building Exhibition. Full details are not yet available.

* * *

ONE of the latest developments in inert gas equipment comes from ESAB Ltd. of Kent—their new A9 Semi-automatic CO₂ welding machine. Irish agents: C. J. Burns Ltd., Dublin, and Southern Engineering Co. Ltd., Cork.

* * *

Employing all the latest techniques, Virax tools offer a fully comprehensive range of strong tools.

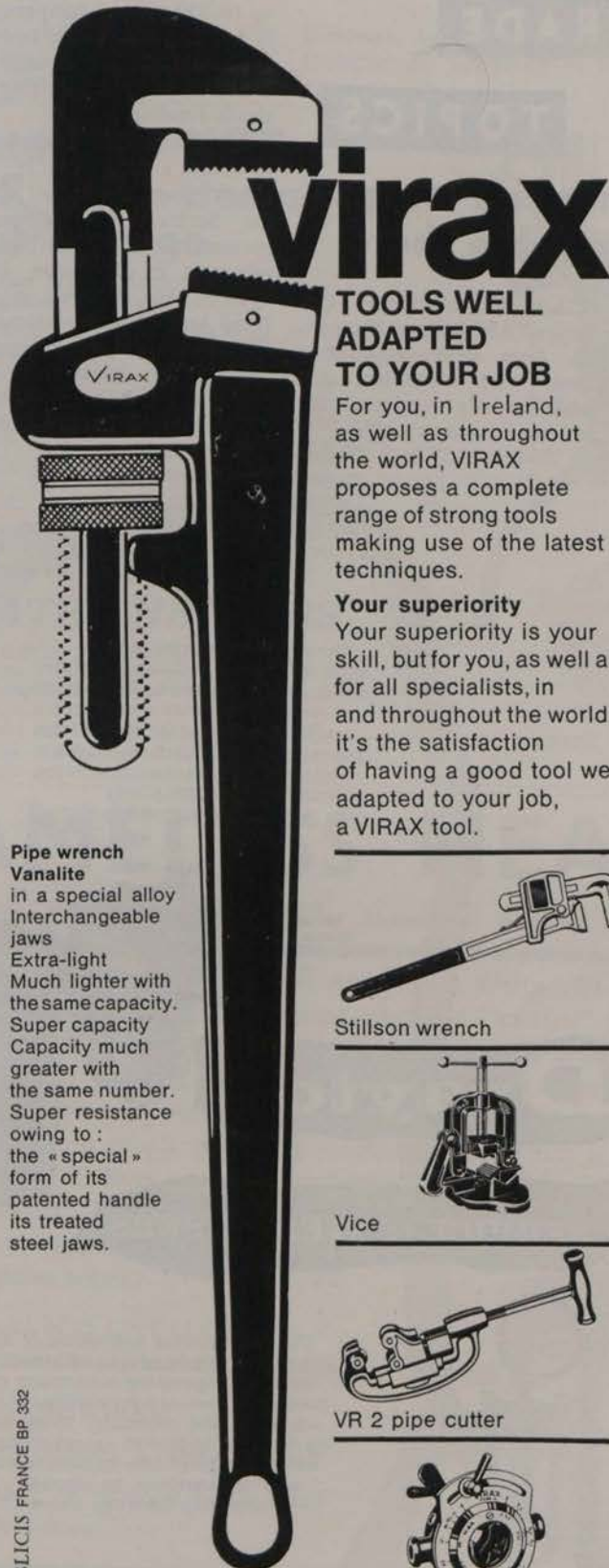
From the Virax range—J. S. Lister Ltd., Dorset Row, Dublin, are agents—we look at the pipe wrench Vanalite in a special alloy and featuring adjustable jaws. This tool is of great capacity and has superb resistance because of the special design of its patented handle and treated steel jaws.

Other vital tools by Virax are their Stillson wrench, vice, pipe cutter and adjustable die.

* * *

With the accent, these days, on economy of time and motion, it is not

Published by ARROW@TU Dublin, 1963



Pipe wrench

Vanalite
in a special alloy
Interchangeable
jaws
Extra-light
Much lighter with
the same capacity.
Super capacity
Capacity much
greater with
the same number.
Super resistance
owing to :
the « special »
form of its
patented handle
its treated
steel jaws.

PUBLICIS FRANCE BP 332

virax

TOOLS WELL ADAPTED TO YOUR JOB

For you, in Ireland, as well as throughout the world, VIRAX proposes a complete range of strong tools making use of the latest techniques.

Your superiority

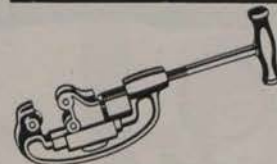
Your superiority is your skill, but for you, as well as for all specialists, in and throughout the world, it's the satisfaction of having a good tool well adapted to your job, a VIRAX tool.



Stillson wrench



Vice



VR 2 pipe cutter



Adjustable die

J. S. Lister Ltd.
Dorset Row
DUBLIN - Tel. 47881



TRADE

TOPICS

American traps available here

FROM Clark Manufacturing Co. comes the Series "AS" bellows thermostatic steam trap with a built-in monel strainer that minimises dirt clogging and greatly reduces installation and maintenance costs. The Clark Series "AS" is a freeze-

proof trap that is suitable for pressures up to 250 psi and temperatures to 450° F. It has a cast baffle body design and a directional flow change that extend bellows life by minimising the effect of shock loading.

The Series "AS" is the latest addition to Clark's long list of thermostatic steam traps. As in all Clark models, the Series "AS" utilises a vapour pressure rather than a liquid expansion principle of operation. In the Clark system, the bellows are completely filled with liquid—instead of partially filled—in order to protect the bellows from water hammer or other shock loading. Irish agent: Hendron Bros. (Machinery) Ltd., 9 Little Denmark St., Dublin.

The Drayton service will cope with any problem of steam usage. Administered by competent technicians with considerable practical experience, it includes pre-sales consultation and advice, planning and after-sales service, as well as the supply and commissioning of apparatus.

The Drayton/Armstrong Steam Trap—reliability indeed!



Drayton

SERVICE to STEAM USERS

The outstanding attributes of all Drayton equipment—be it steam traps, self-operating controllers or float switches—are reliability, efficiency and economy. They are all designed to give an exceptionally long and useful life, to save steam and to continue to operate accurately over the years.



The VT self-operating controller. The easiest of steam savers to install and use.

For full details write to Sole Agents for Republic of Ireland:

MONSIEUR MITCHELL & Co. Ltd.

67-73 Townsend St., Dublin, 2. Phone 76282.

APPOINTMENT

IN ORDER to "promote a better service to the industrial and heating fields in Ireland" Drayton Controls Limited announce that they have appointed Mr. F. Byrne, 157 Larkhill Road, Whitehall, Dublin, as their resident sales/service engineer.

Mr. Byrne will be complimentary to those of Drayton Agents—Monsell, Mitchell and Co. Ltd.—and will be augmented by periodic visits from Mr. J. P. D. Kerr, who will continue to be in charge of and take an active interest in the area.

SIGMUND AGENTS

WE ARE advised that the Irish Agent for Messrs. Sigmund Pulso-meter Pumps Ltd. is Mr. N. A. Spiller, 77a Rathgar Rd., Dublin and 128 Gt. Victoria St., Belfast. In the 1963 Directory of Manufacturers, Agents, etc., Messrs. O.B.C. Ltd. were incorrectly quoted as Agents for the Republic of Ireland.

PRODUCT REVIEW

from previous page

surprising that the Hilti Direct Fixing System has had a phenomenal success with the building and allied trades since its introduction to the Irish market a few years ago. This absolutely safe system, which is a big advance on the older type of gun tool fixing methods, offers a wide variety of tools and accessories. For the plumber and heating contractor, who has to make much of his fixings, such as pipe and radiator brackets, on to finished surfaces, the Hilti System is an added economy in that, due to the almost complete avoidance of damage to walls and paint work, the need for patching up and re-decorating is reduced to a minimum.

Hilti tools that are suitable for the plumber or heating engineer include the BD I. This tool is ideal for the direct fixing of small saddles or pipe clips by means of special Hilti pins and a few taps of a hammer. For heavier fixings or where a threaded bolt of 5/32" Whit or 1/4" Whit are required, the Hilti D 66 L tool is available. These are purely hammer driven tools.

For details and demonstration, the agents in Ireland, Calumet Trading Company Ltd., 74 Northumberland Road, Dublin, should be contacted. In Belfast, 3/5 Commercial Court. 32

CHANGE OF TITLE AND WIDER COVERAGE FROM JANUARY 1964

AS a further stage in the development of this Journal the title of the magazine will be changed with the January, 1964, issue to "THE IRISH PLUMBING & HEATING ENGINEER."

* * *

Commencing with this issue also we shall be including a monthly supplement devoted exclusively to industrial heating and ventilating under the title of "Industrial Heating and Ventilating in Ireland." The circulation of the Journal will, accordingly, be increased to include all Consulting and Plant Engineers, Architects and Building Contractors throughout the country.

The existing Journal will continue to deal with Domestic Heating and Plumbing news, product information and technical articles by specialist contributors.

If you are not already a subscriber to the Journal we suggest you take out

a subscription without delay. The annual subscription is 21/- post free, and includes the Directory of Manufacturers, Agents, Representatives and Distributors, published in June each year.

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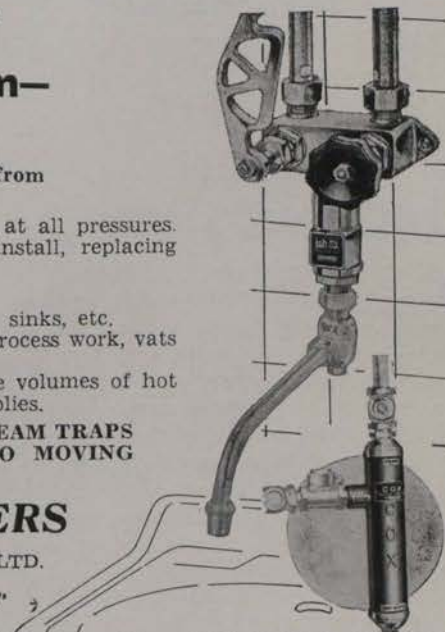
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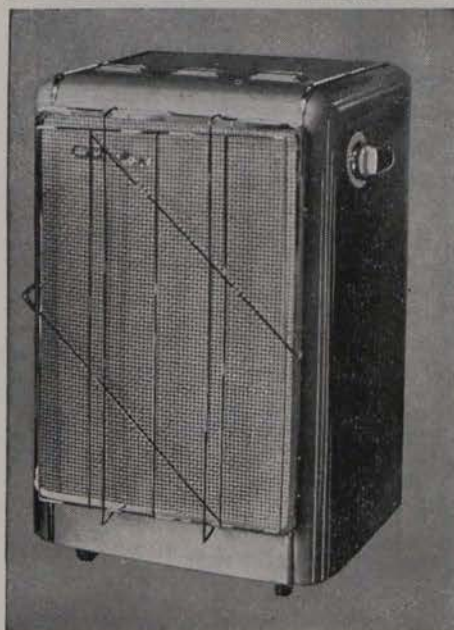
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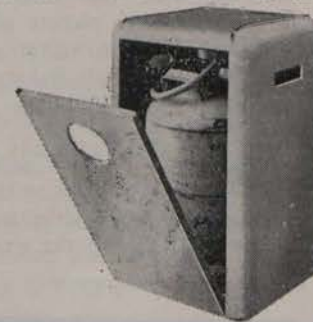


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Left: Model 6035 CATALOR
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TRADE

TOPICS

IRISH FIRMS WILL EXHIBIT AT LONDON BUILDING SHOW

AT the 30th International Building Exhibition at Olympia this November Coras Trachtala have organised a stand for eight Irish firms who will exhibit products ranging from marble to stainless steel sinks and locks. One or two of these firms have exhibited independently in previous Building Exhibitions but this will be Ireland's first official appearance. For the first time in Britain, a comprehensive display of methods and systems of industrialised building will be on show to architects, builders and contractors and local authorities at the exhibition.

This feature will comprise a complete survey of the scope and principles of industrialised building. A central exhibit will outline these principles and their practical demonstration will be provided by exhibits from manufacturers and licensees of systems in a fully representative section of this important part of the building industry.

The Building Exhibition has commissioned David Rock, B.Arch., ARIBA, associate partner of Building Design Partnership, to act as co-ordinating designer for the feature. He will be responsible for relating individual exhibits in a form laid down by him so that the total display presents a complete picture of development and progress within a sector of the industry which has been described as "the building of the future."

The display will also serve as a valuable practical adjunct to the series of conferences on industrialised building being held during the exhibition.

NEXT MONTH

A fully illustrated preview of the London Exhibition will be carried.

Thirty-two

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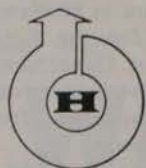


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BH.2

Thirty-three

BIG PAKISTAN POWER STATION ORDER IS LANDED

ASSOCIATED Electrical Industries is to supply electrical and mechanical plant for a power station extension in Pakistan.

The firm will supply a 15 megawatt turbine-generator set complete with condensing, feed heating and auxiliary plant, generator transformer switchgear, station service switchgear, control gear and cables.

And the contract, worth nearly three-quarters of a million pounds, will mean more work for A.E.I.'s factory at Larne. The Co. Antrim branch will make the turbine for the Hyderabad job, slicing £200,000 off the overall figure.

The waste heat boiler and water treatment plant order goes to John Thompson Water Tube Boilers Ltd., while a cooling tower, which will deal with this extension as well as with an existing eight megawatt set, is being supplied by Head Wrightson Ltd.

Naturally the companies involved are very pleased with the contract for it is believed to be the first all-British power station equipment to be ordered by a Pakistan public authority since the partition of the country.

Davidson Appointments

MR. NEILL M. CLARK, B.Sc. (London), A.M.I.Mech.E., has been appointed chief research engineer



**THE NEW
DAVIDSON
MEN**
Mr. Neill M. Clark (left) becomes chief research engineer, and Mr. Paddon Row is now managing director of the Australian subsidiary.

NORTHERN FROM ALLEN MCDOWELL NOTES

of Davidson & Co., Ltd., Sirocco Engineering Works, Belfast.

Formerly chief engineer of Power Jets Ltd., Mr. Clark entered W. H. Allen, Sons & Co., Ltd., Bedford, in 1945. Two years later he became gas turbine designer to the company and in 1950 was appointed gas turbine development engineer.

From 1952 to 1954 he was process engineer in the technical department of the Esso Petroleum Co.'s Fawley refinery and following this took up a post as a senior scientific officer with the Royal Navy Scientific Service at Bath.

From here Mr. Clark, who was educated at Hampton Grammar School and the City and Guilds College, joined the research and development office of Power Jets, where he became chief engineer in 1959.

Sirocco also announce the appointment of Mr. R. H. Paddon Row as managing director of their Australian subsidiary, Davidson of Australia (Pty) Limited.

Mr. Paddon Row, M.I., Mar.E., M.I.Mech.E., was formerly chief engineer of Foster Wheeler Ltd's steam department and of the Foster Wheeler-John Brown (Land Broilers) Consortium.

Born in India and educated in England, he served in the Royal Navy from 1929 to 1946 before taking the Foster Wheeler post of test engineer, where he became chief in 1961.

Death of trade figure

MR. CYRIL W. DRYSDALE, Mount Charles, Belfast, who died early this month, was Northern Ireland manager of G. N. Haden & Sons Ltd., the British firm of heating engineers. He was 60.

A member of the committee of Heating and Plumbing Employers' Association, Mr. Drysdale was chairman in 1958. Later he took a leading part in the setting up of a Joint Industrial Council for the heating, ventilating and domestic engineering industry. He was also a member of the Belfast Association of Engineers.

He was responsible for the heating installations of many major projects in Northern Ireland during his 14 years as manager of the Linenhall St. branch. Among others were various buildings at Queen's University, the A.E.I. factory at Larne, and extensions to the Belfast City Hospital.

Mr. Drysdale is survived by his wife and two daughters, Mrs. D. J. Rollins and Mrs. W. D. Sloane, Belfast.

ANOTHER BIG ORDER FOR LOCAL FIRM

HOT on the heels of the A.E.I. half million pound contracts comes news of yet another big order for a local engineering firm.

Musgrave and Co. Ltd. have secured orders worth £650,000 from the Central Electricity Generating Board for dust collecting equipment.

Consisting of electromechanical precipitators and mechanical dust collectors, the equipment will be used in power stations in the Manchester, Warrington and Croydon areas, as part of a programme to bring the C.E.G.B.'s older power plants up to date.

Similar contracts, worth £75,000 each, have been won for a new pulp mill at Fortwilliam in Scotland and for ventilating fans for the Ford Motor Company plant at Dagenham, Essex.

The orders have been won in face of intensive competition from other British manufacturers.

The future certainly looks rosy for

Continued page thirty-six



GROHE

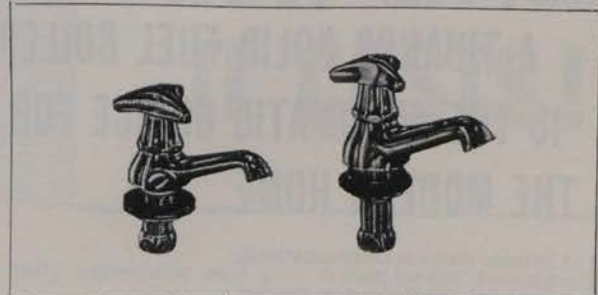


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NORTHERN NOTES

From page thirty-four

this long established heating and ventilating concern for the production director, Mr. J. Johnston, hinted that further substantial orders may be forthcoming if negotiations—at present moving smoothly—are completed.

Following redundancy at the factory last year, the labour force had been built up again and in the face of present trends the directors now plan to increase their technical staff.

Sales push

● A free electro turbo-fan heater with every 39 guinea or 59 guinea washing machine—that's the latest move by Mr. John Bloom, the millionaire manufacturer, to push sales.

The turbo-fan heater made in Wales, takes a three kilowatt load—one kilowatt more than most domestic heaters.

in brief...

● MR. V. H. CAMPBELL, 11 University Road, Belfast 7, is the sole agent in Ireland for Temple Tubes, Ltd., Temple Mill, Passfield, Liphook, Hants. The firm sells only through approved builders' merchants.

* * *

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* * *

130 M.P.H.—AND FRIDGE

THE DAIMLER Benz Company has announced a new luxury Mercedes car which will carry eight passengers at a maximum cruising speed of 130 m.p.h.

The car, which costs about £7,000, has a 6,300 c.c. engine fed from a thirty-gallon tank, while one of the luxuries is a built in refrigerator.

At 130 m.p.h. on our roads you'd need that fridge!

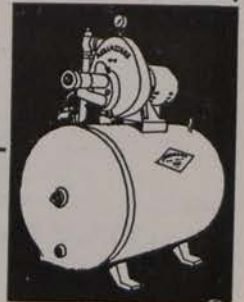
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