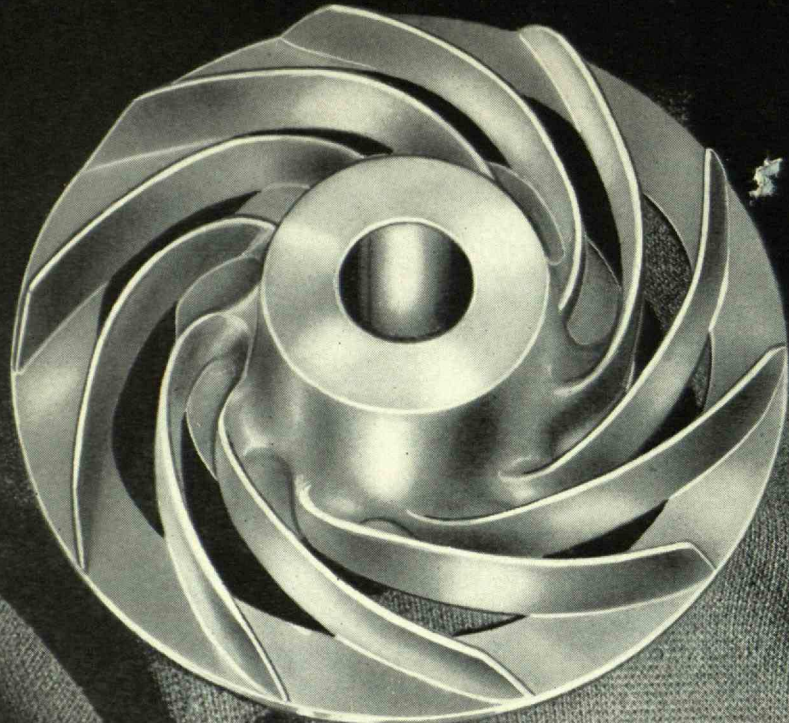


June 1946

TECHNOLOGY REVIEW

Title Reg. in U. S. Pat. Office

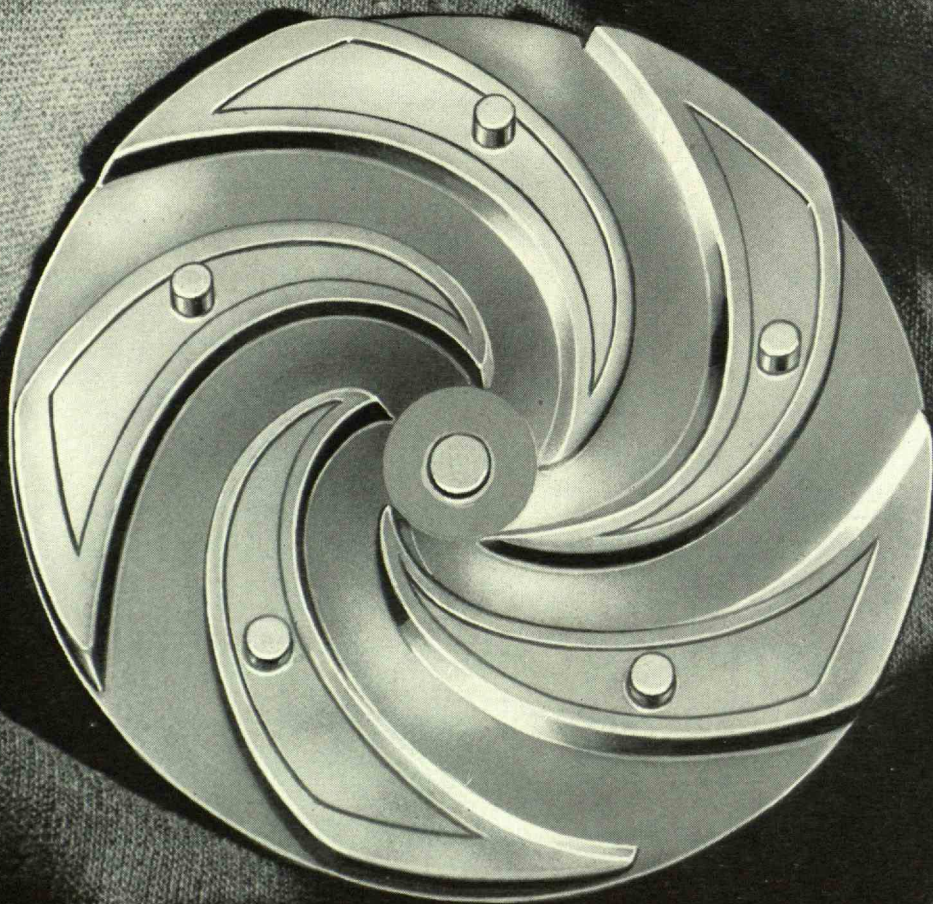




**PRECISION
FORGED**

Impellers

FOR ECONOMICALLY
POWERED AND SIZED
HIGH CAPACITY PUMPS



THE
HARVEY

METAL CORPORATION

HAROLD B. HARVEY '05 • *Engineers & Manufacturers* • SHERRY O'BRIEN '17

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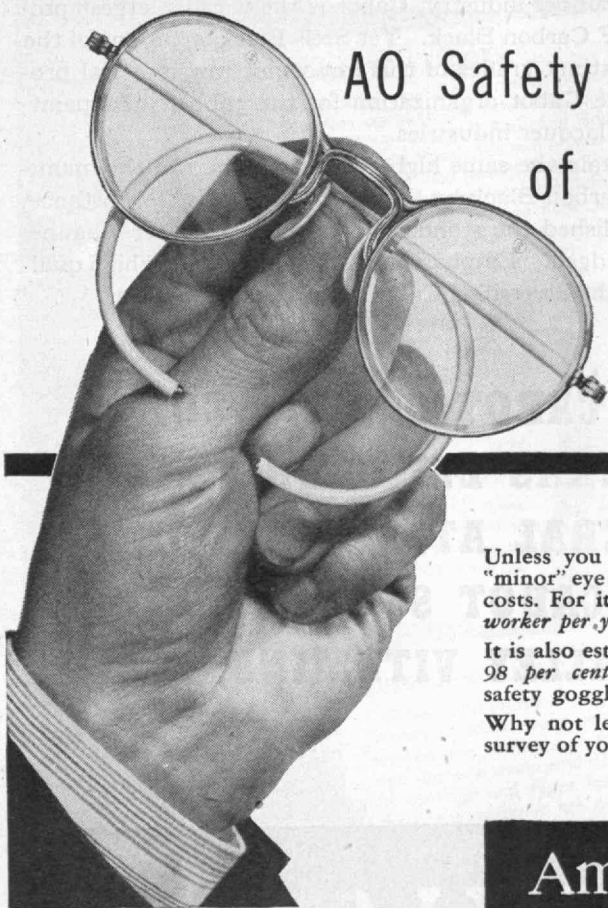
FORGINGS IN ALUMINUM • BRASS • BRONZE • COPPER • MAGNESIUM • MONEL • ALLOYS

MACHINING FACILITIES

You Might Be Surprised If
You Check on What Eye
Accidents are **Costing**
You



AO Safety Goggles Safeguard the Eyes
of Industry . . . **Reduce**
Production **Costs**



Unless you have an adequate eye-protection program, even so-called "minor" eye accidents are probably adding substantially to your production costs. For it is reliably estimated that eye accidents run to \$5 per shop worker per year.

It is also estimated (by the Society for the Prevention of Blindness) that 98 per cent of these accidents are avoidable—through the use of safety goggles.

Why not let an AO Safety Representative make a complete eye-hazard survey of your plant? There's no obligation.

American  Optical
COMPANY

Safety Division

SOUTHBRIDGE, MASSACHUSETTS
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES



FOR INDUSTRY

*Carbon Black
Oil*

Natural Gas

Natural Gasoline

Pumping Equipment

Pine Tar

Charcoal

Carotene

Chlorophyll

Products of the Cabot group of enterprises meet many of the essential needs of American industry. One of these products is Pro-Vitamin A, for the fortification of foods and feed-stuffs. Another is Chlorophyll, a coloring agent for soaps and other products. Still another use for Chlorophyll, in an entirely different field, is in the manufacture of air wicks. Chlorophyll also has very definite therapeutic values.

For the rubber industry, Cabot is the world's largest producer of SRF Carbon Black. Yet SRF Black is but one of the forty-one distinct grades of this important raw material produced by the Cabot organization for the rubber, ink, paint, varnish and lacquer industries.

All maintain the same high characteristics. In the manufacture of Carbon Black by the Channel process, for instance, Cabot established the standards by which all other Channel Blacks are judged. Emphasis always is on sustained high quality in all of the diversified Cabot production schedules.

CABOT CARBON CO.

TEXAS ELF CARBON CO.

GENERAL ATLAS CARBON CO.

CABOT SHOPS, INC.

VALLEY VITAMINS, INC.



GODFREY L. CABOT, INC.

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Are You Acquainted with the **WHOLE Norton Family?**

ABRASIVE PRODUCTS

Grinding wheels ranging from tiny internals 3/16 x 3/16" to the 72" diameter segmental type — wheels of Alundum[®], Crystolon[®] and diamond abrasives, of many different bonds; a wide variety of abrasive bricks, sticks, hones and segments; mounted points and mounted wheels in nearly 200 sizes and shapes; abrasive grain for polishing, lapping and tumbling.

NORBIDE[®]

"The hardest material made by man for commercial use" — that is NORBIDE, the trade name for Norton Boron Carbide. It is serving industry in three forms: (1) Norbide Abrasive for grinding and lapping carbide tools, and for lapidary work; (2) Norbide Molded Shapes for pressure blast nozzles and for plug, ring and other types of gages; (3) Norbide Metallurgical Compound for improving the hardness and cutting ability of tool steels and as a deoxidizing agent.

NORTON FLOORS

The hardness, toughness and abrasive properties of Alundum abrasive are made use of in NORTON FLOORS — Alundum Stair and Floor Tile, Alundum Ceramic Mosaic Tile and Alundum Aggregate for terrazzo and cement floors. They are for use in public and commercial buildings wherever it is necessary to provide floors and stairs with an extremely wear-resisting and permanently non-slip surface (wet or dry).

REFRACTORIES

The terrific heat of the electric furnaces, which produce Alundum and Crystolon abrasives also gives these materials valuable refractory properties — properties which are made use of in a complete line of Norton refractory grain, cements, bricks, plates, tiles and other shapes for metal melting and heat treating, for enameling furnaces, ceramic kilns, boiler furnaces, gas generators; also refractory laboratory ware for ignition, incineration and filtration.

OILSTONES AND COATED ABRASIVES

Oilstones and sharpening specialties in sizes and shapes to meet every need of the industrial worker, the farmer and the home craftsman; and abrasive paper and cloth in a wide variety of coatings and types for both industry and the home mechanic are available through the Behr-Manning Corporation of Troy, New York, Division of Norton Company.

GRINDING AND LAPPING MACHINES

Norton cylindrical grinders range from the neat, compact 4 x 12" Type C to the gigantic 36 x 816" Type D and include special types for grinding crankshafts, camshafts, rolls and car wheels. Norton surface grinders are available in three sizes, 6", 10" and 12". There are three Norton Tool and Cutter Grinders and the Norton Buraway. Lapping Machines range from the small 10-U to the large Hyprolap[®] for flat and cylindrical work, and include special machines for crankshafts and camshafts.

PULPSTONES

Norton ingenuity developed for the pulp and paper industry a line of segmental stones running as large as 72 x 54" and weighing up to ten tons — stones that convert the logs of the forest into wood pulp for newspaper, wall paper, towels, toilet tissue, cartons, wall board, paper plates and countless other uses.

POROUS MEDIUMS

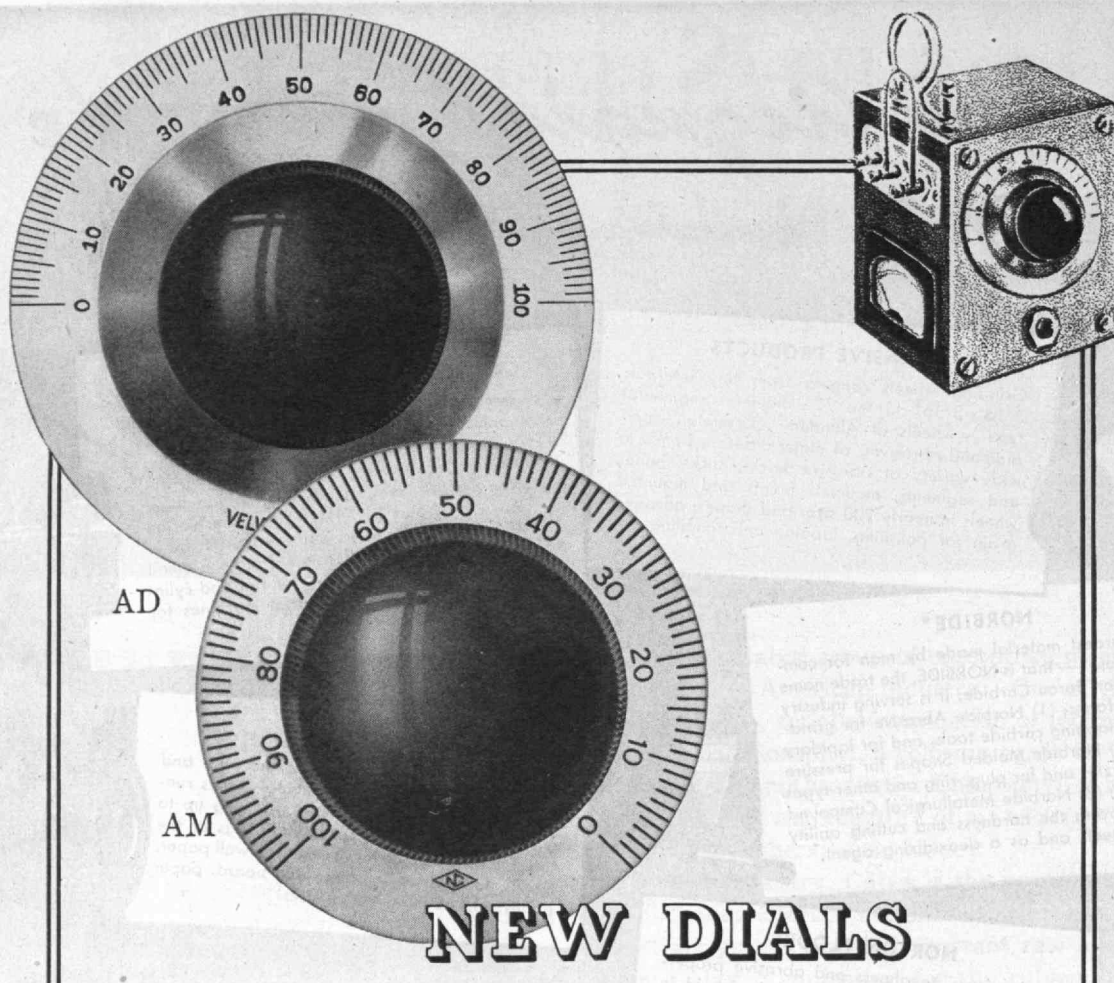
Norton Porous Mediums are made in a wide variety of shapes and rates of permeability for the aeration, filtration and diffusion of liquids, solids and gases. Important uses are in activated sludge sewage disposal plants, for municipal water filtration plants and in many commercial filtration and aeration processes.

Informative literature in any or all of these Norton products available on request — also Norton engineering service. Write today.

* Trade-marks registered U. S. Patent Office

**NORTON COMPANY
WORCESTER 6, MASS.**

NORTON



NEW DIALS

Wartime requirements for accurate smooth-working dials resulted in the design of these two new models. Both make use of the time-tested "Velvet Vernier" drive unit which for more than twenty years has been a favorite because of its incomparably smooth action and sensitive control. The Type AM Dial is three inches in diameter and is available with 2, 3, 4, 5 or 6 scale. The four-inch Type AD Dial is made with 2, 3, 4 or 5 scale. Both are handsome in appearance and moderate in cost.

DIAL SCALES			
Scale	Divisions	Rotation	Direction of Condenser Rotation for increase of dial reading
2	0-100	180°	Counter Clockwise
3	100-0	180°	Clockwise
4	150-0	270°	Clockwise
5	200-0	360°	Clockwise
6	0-150	270°	Counter Clockwise



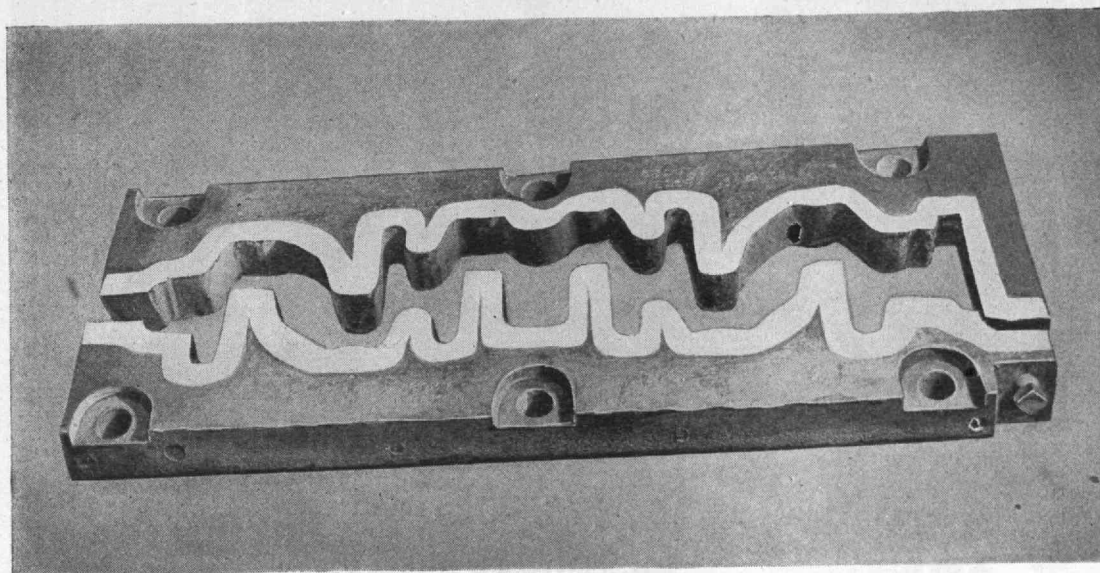
NATIONAL COMPANY,



INC., MALDEN, MASS. U.S.A.

HAYNES STELLITE

*Makes Dies Last Longer
and Saves Refitting Time*



This crankshaft trimming die is hard-faced at points of wear with HAYNES STELLITE. It trimmed from 150,000 to 155,000 pieces before it was returned to the die shop for touching up. Before the practice of hard-facing these trimming dies was adopted, they produced less than 500 pieces before it was necessary to refit them.

HAYNES STELLITE increases the life of all types of dies because it resists abra-

sive wear even on hot work. Maintenance costs are reduced—as dies have to be changed less frequently, and, also, you can refit a hard faced die in less time than is required for refitting a plain steel die.

For further information on savings that can be made by hard-facing with HAYNES alloys, write for the 100-page book, "Hard-Facing With Haynes Stellite Products."

HAYNES STELLITE COMPANY

Unit of Union Carbide and Carbon Corporation



General Offices and Works, Kokomo, Indiana
Chicago—Cleveland—Detroit—Houston—Los Angeles—
New York—San Francisco—Tulsa

HAYNES

TRADE-MARK

Alloys

The registered trade-marks "Haynes" and "Haynes Stellite" distinguish products of Haynes Stellite Company.

with

**PENFLEX FLEXIBLE METALLIC INTERLOCKED
GALVANIZED STEEL HOSE, BRONZE
STEAM HOSE**



you get

ALL-METAL SAFETY with **FLEXIBILITY** for
your **TANKS, VATS, PROCESSING EQUIP-
MENT** and **PIPE SYSTEMS**

PENFLEX—Four-wall Interlocked gives you high resistance to wear, absorption and fire. It is vibration-absorbing . . . severe pulsations of pressure and frequent flexure do not affect its useful life. Four-wall Interlocked construction provides a combination of great strength and flexibility, yet *the metal itself does not bend* . . . the hose remains tight. Full flow area is always maintained; this hose cannot collapse.

AVAILABILITY—**PENFLEX GALVANIZED STEEL HOSE** — for oil, grease, hot tar, paint, gas, air or any other free-flowing material or liquid. Fire-resistant. Has inherent electro-static protection. Is easy to handle. Resists vibration and high temperatures. Is strong and flexible.

PENFLEX BRONZE HOSE—for water or steam, and for many types of application on processing equipment. Has all of the advantages of galvanized steel and is resistant to corrosive action. **NOTE:** Also available in various alloys.

For engineering data on **PENFLEX GALVANIZED STEEL, BRONZE HOSE** and **COUPLINGS**—write for Bulletin 52-9.

THREE BASIC TYPES—STANDARD FOUR-WALL INTERLOCKED

—for heavy duty service. Interlocked construction provides maximum strength with simple construction.

TYPE HR HIGH RIDGE—medium duty hose. High ridge joint affords greater relative motion between corrugations than does the Standard Four-wall Interlocked.

TYPE FP LIGHTWEIGHT—most flexible hose. An extremely flexible construction with lubricated packed joints.

All of the three types can be reinforced by the addition of braiding and armor.

PENFLEX COUPLINGS—Available in two types

SOLDERED-ON TYPES for use at temperatures to 250 degrees Fahrenheit and **HEAT-PROOF TYPES** for temperatures above 250 degrees Fahrenheit.

Both types can be supplied in brass or malleable iron . . . plain or reinforced.

PENFLEX SALES COMPANY

DIVISION OF THE

PENNSYLVANIA FLEXIBLE METALLIC TUBING CO.

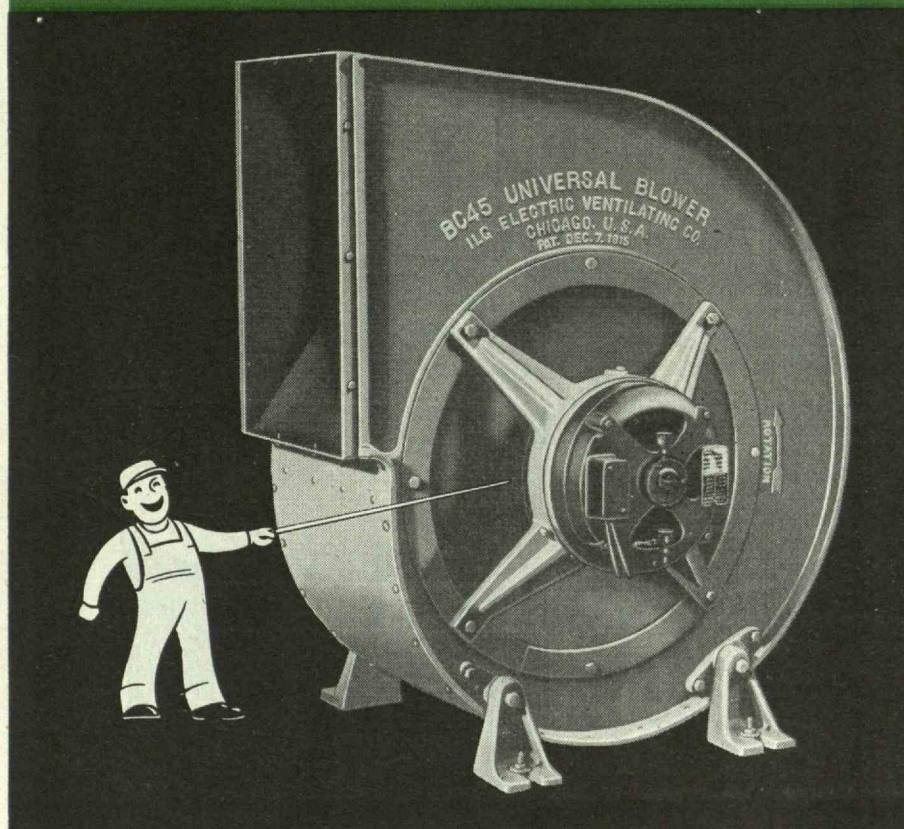
Established 1902

7215 POWERS LANE

PHILADELPHIA 42, PA.

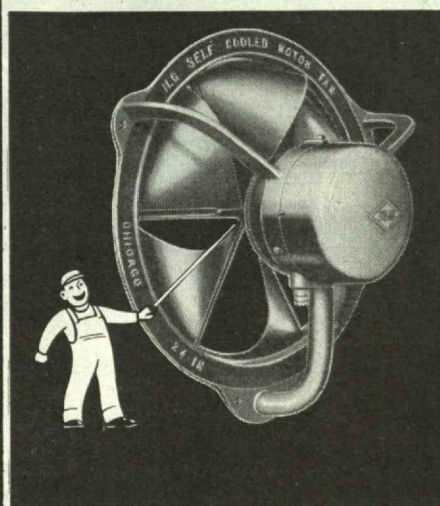


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Centrifugal Fans

Direct-Drive
Self-Cooled Motor Propeller Fans



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Raytheon Voltage Stabilizers

DELIVER OUTPUT VOLTAGE CONSTANT TO $\pm \frac{1}{2}\%$

FLUCTUATION of line voltage need not impair the performance of your electrical equipment. Such variations are easily corrected with magnetic-type, entirely automatic Raytheon Voltage Stabilizers.

Positive control is gained. Power supply is stabilized to $\pm \frac{1}{2}\%$. Reliability and accuracy of performance are effectively improved, *and at low cost.*

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- Control of output voltage to within $\pm \frac{1}{2}\%$ of 115 or 230 V.
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