

*May* 1945

# TECHNOLOGY REVIEW

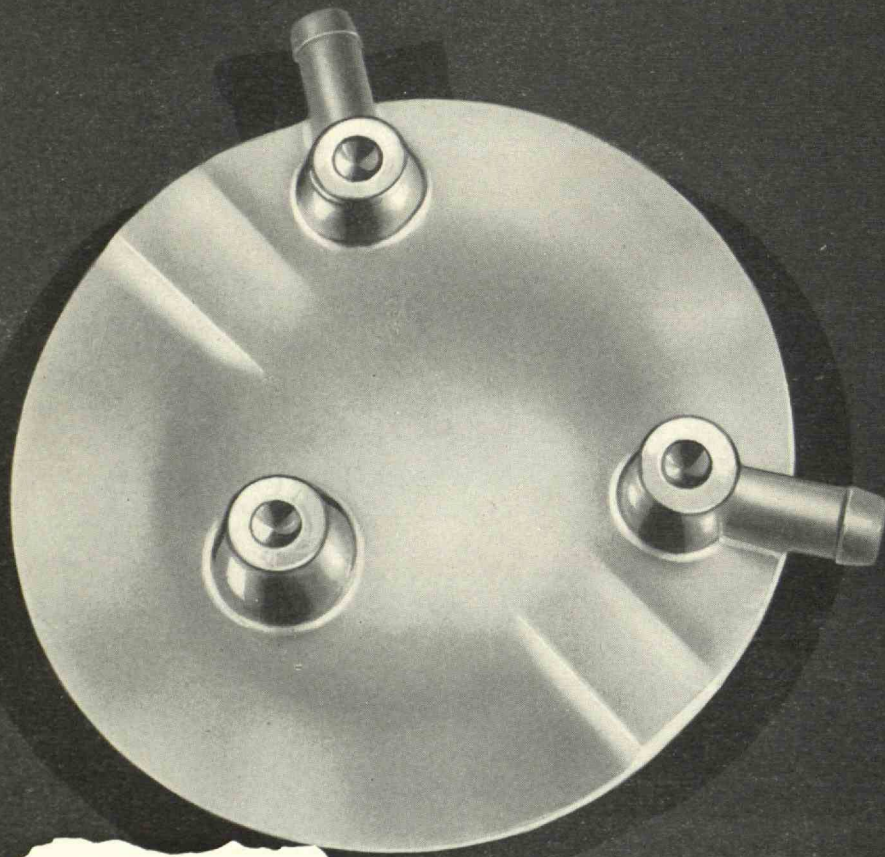
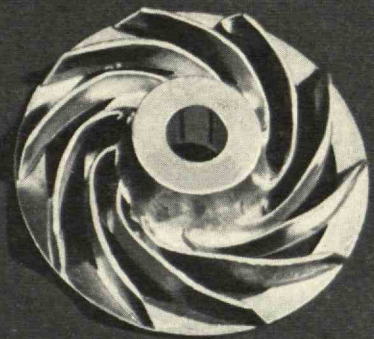
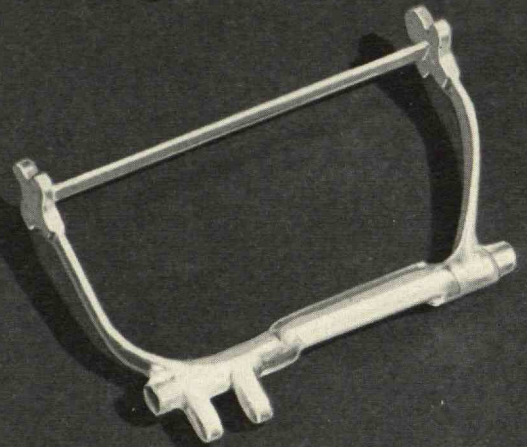
Title Reg. in U. S. Pat. Office





# Brass...

## SMOOTH FORGED



**SIMPLE OR  
INTRICATE**

THE  
**HARVEY**

**METAL CORPORATION**

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

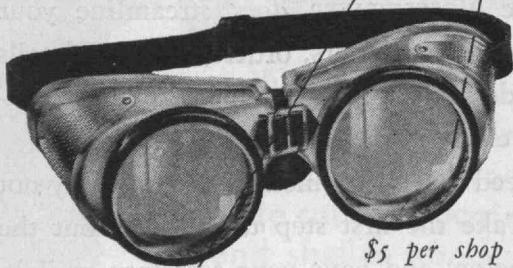
74th STREET and ASHLAND AVENUE • CHICAGO 36, ILLINOIS

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





**for eye injuries...**



Perhaps your plant has never had to pay a four-figure claim for an eye accident. Yet — unless you already have an adequate eye protection program — eye accidents are, without doubt, adding materially to your production costs. How much? Well — if your experience is average — better than \$5 per shop worker per year.\*

Why let these unnecessarily excessive costs continue, when you can equip your workers with AO Safety Goggles — *proved positive protection* — for about \$1.50 a pair?

An AO Safety Representative will be glad to consult with your Safety Director, and help work out a sound program for lower costs through safer methods. Write nearest AO Branch Office, or direct to American Optical Company, Southbridge, Massachusetts.

\*Estimated by the Society for the Prevention of Blindness.



**American Optical**



COMPANY

SOUTHBRIDGE, MASSACHUSETTS



**Yours—to make your job easier . . .**

**a 13<sup>TH</sup> MONTH in '45!**

Maybe you *can't* get all the help you need, but you can lick the manpower problem another way —*get yourself more time!*

A whole extra month every year can be *made* for you by the Edison Electronic VOICEWRITER. Made by giving you *better control* of your working hours. Made out of the time that now *gets away from you* day by day.

This is fact, not just theory. Many busy execu-

tives like yourself have proved that the Edison Electronic VOICEWRITER *does* streamline your work, *does* speed letters, orders, memos, details off your desk, *does* give you more time for constructive effort.

You need that "13th month" in '45! Why not get it? Take the first step today—tear out the coupon below and have your secretary mail it, now.

## EDISON VOICEWRITER E d i p h o n e

Thomas A. Edison, Inc.  
Dept. MIT, W. Orange, N. J.\*

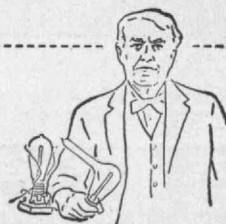
I would like to know more about the new Edison Electronic VOICEWRITER and how it can save time and streamline business operation.

Name.....

Address.....

Company.....

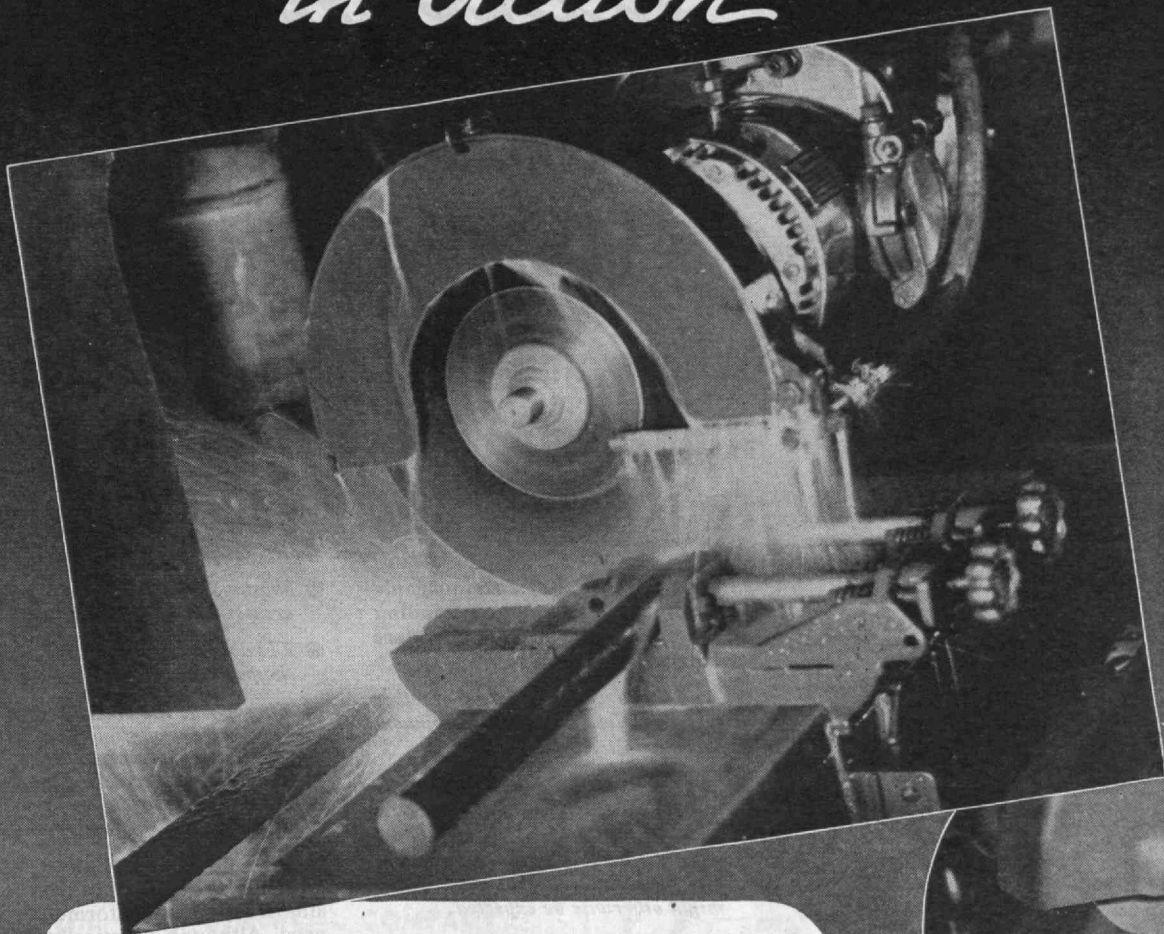
\*In Canada, mail this coupon to Thomas A. Edison of Canada, Ltd., 29-31 Adelaide Street West, Toronto 1, Ont.





# NORTON CUT-OFF WHEELS

## *in Action*

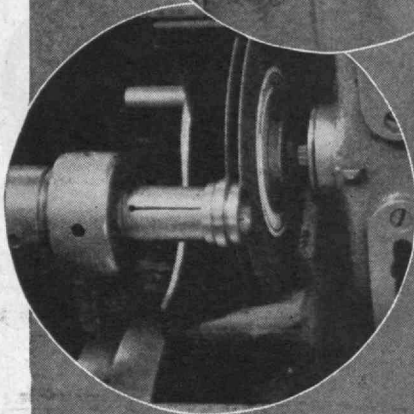
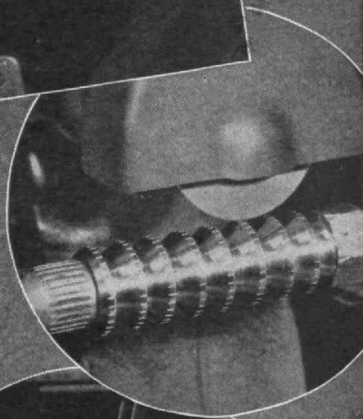


**CUTTING-OFF** by abrasive wheels is the modern way of speeding up operations and lowering cutting-off costs. Norton provides complete cut-off wheel service—resinoid, rubber and shellac bonds; Alundum, Crystolon and diamond abrasives.

Because Norton engineers have a variety of bonds and types of abrasives to work with they can give unprejudiced assistance on all types of cutting-off and slotting jobs—metallic or non-metallic materials by dry, wet or submerged methods.

**NORTON COMPANY • Worcester 6, Mass.**

Behr-Manning, Troy, N. Y. is a Norton Division



❖ **NORTON ABRASIVES** ❖



# Exclusively

## FOR ENGINEERS WHO ARE LOOKING AHEAD!

Where and How Might this Class C  
High-Temperature Wire Insulation  
Fit into Your New Product Planning?

Sprague \*CEROC 200 is an inorganic wire insulation having outstanding space factor and high-temperature advantages:

- Applied to copper, nickel, or other types of wire, it permits continuous operation at 200°C.
- Wound in coils, the thermal conductivity of \*CEROC insulated wire is such that it does not develop hot spots to a point of nullifying much of the high-temperature gain which might otherwise be expected.
- \*CEROC 200 has an exceptionally high space factor as the ceramic coating is only one quarter of a mil thick and is uniform for all wire sizes.

Sprague \*CEROC 200 is by no means a new or untried development. Pioneered and perfected by Sprague several years ago, it has been supplied exclusively and in large quantities for war applications. Its *proved* advantages are these:

- Substantial volt-ampere rating increases can be obtained.
- Thimble-size coils can be wound to do spool-size coil jobs.
- Throughout the entire field of insulated wire wound electrical devices, countless opportunities exist for re-designing and re-rating products for greater efficiency in smaller sizes and at higher temperature operation.

Wire insulated with \*CEROC 200 can normally be supplied in sizes to meet almost any coil, transformer, or motor need. Although practically 100% of the present greatly expanded production is still going for war uses, samples of several popular sizes are available in "engineering" quantities. These represent a real opportunity to those who recognize the tremendous design advantages inherent in this unique insulation development, and who seek to test it, not so much for existing products but in relation to entirely new or re-designed products that look to the future.

Write today for copy of \*CEROC 200 Bulletin 505

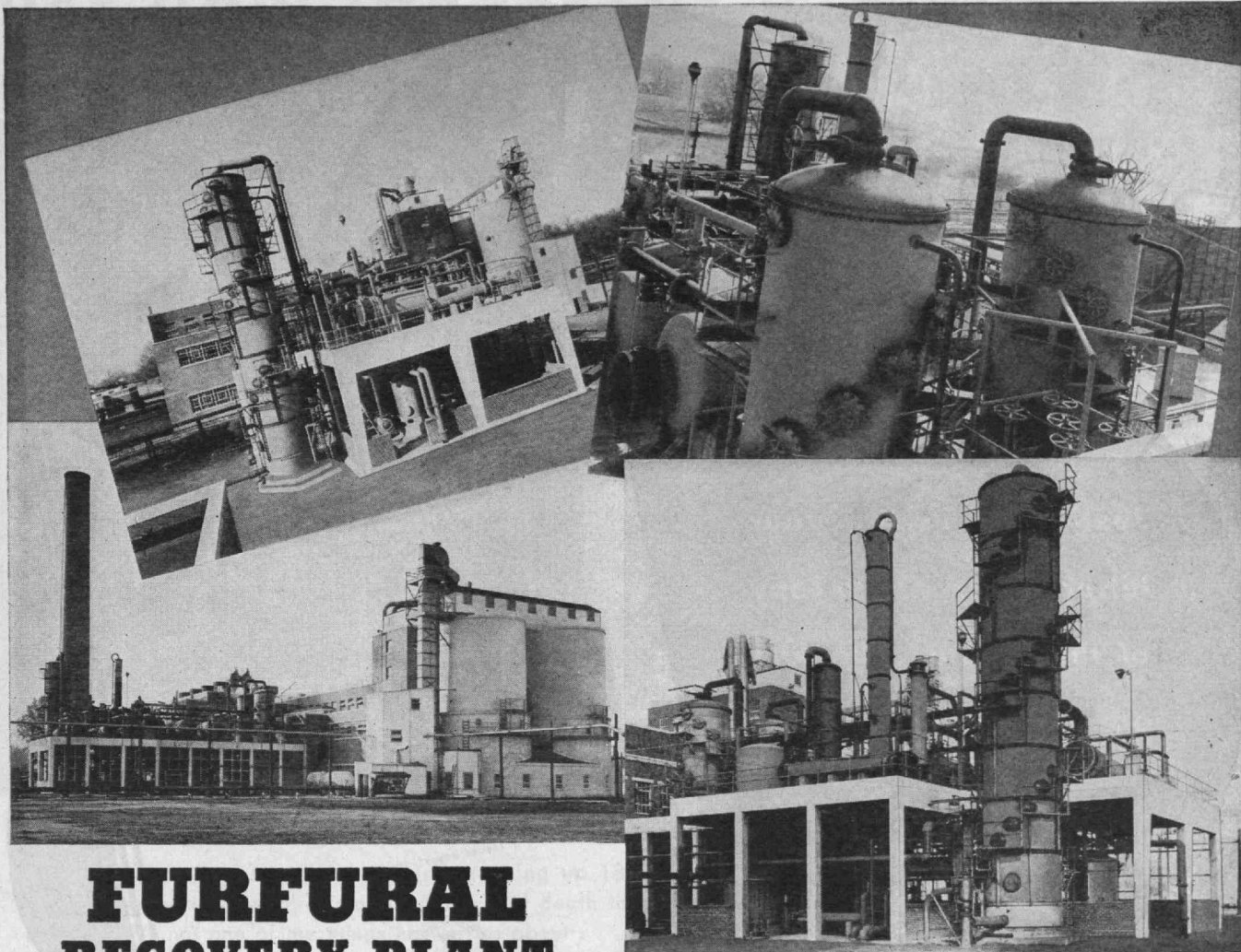
**SPRAGUE ELECTRIC COMPANY**  
NORTH ADAMS, MASSACHUSETTS

# SPRAGUE

PIONEERS IN ELECTRIC-ELECTRONIC PROGRESS

\*Trademark Reg. U. S. Pat. Office





## FURFURAL RECOVERY PLANT

operated by  
THE Q. O. CHEMICAL COMPANY

Designed and Built by

# VULCAN

THE new uses for this chemical were expanding rapidly, both in number and importance, before the war. The sudden demand for synthetic rubber and its major component—butadiene—called for a selective solvent such as furfural in its processing from petroleum.

Existing production facilities for furfural were inadequate to meet this new demand. New plant capacity was required without delay. The commercial

producers of furfural knew where to turn for a competent engineering organization to design the required distillation train, and also for the fabrication of the requisite equipment. The choice was easy—Vulcan's experience in the engineering and fabrication of the only other large furfural plant in this country gave it the necessary "know how" to engineer and fabricate a new modern plant in the shortest possible time.

## DISTILLATION - EVAPORATION - EXTRACTION

### PROCESSES and EQUIPMENT

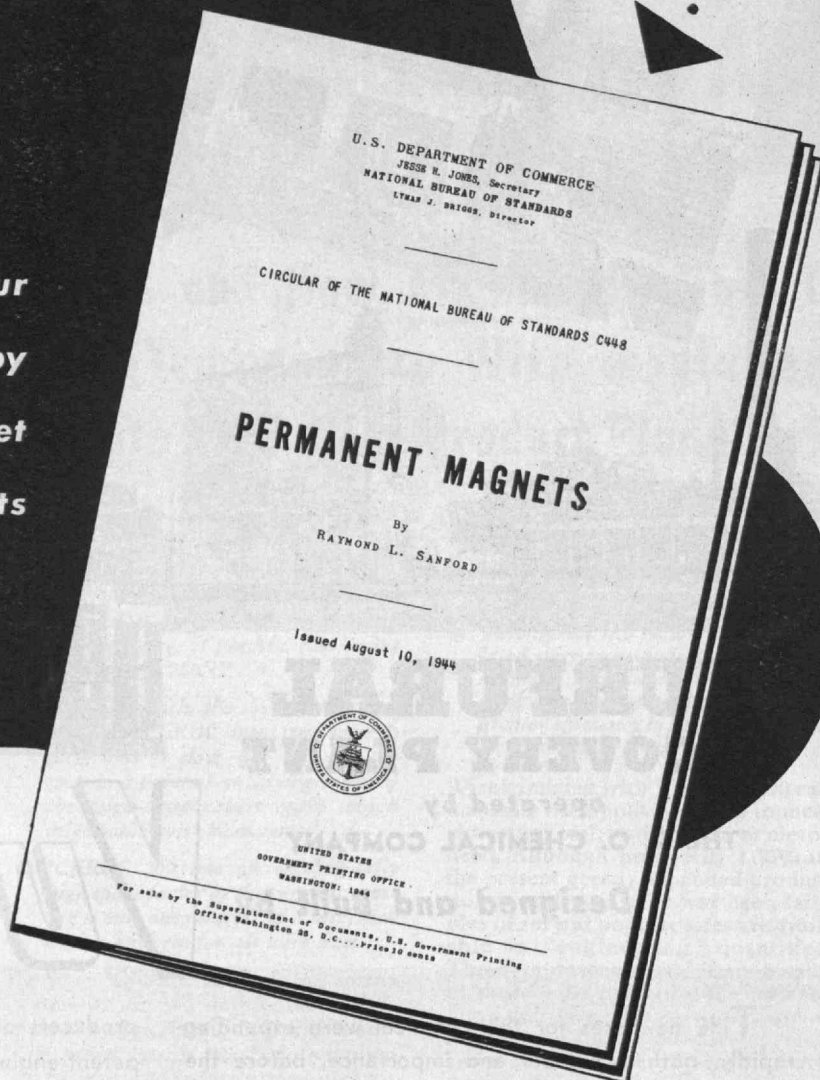
THE VULCAN COPPER & SUPPLY CO., CINCINNATI, OHIO

# YOURS!

*Just write us, on your letterhead, for your copy of this valuable booklet on permanent magnets*

● As a service to industry, The Arnold Engineering Company is "lending a hand" in the distribution of what Arnold engineers believe to be a very informative study on the subject of permanent magnets.

This 39-page book of permanent magnet theory, design data and references was published by the government. Arnold is pleased to make it available to you free of charge and without obligation. Write for it today!



## THE ARNOLD ENGINEERING COMPANY

147 EAST ONTARIO STREET, CHICAGO 11, ILLINOIS

*Specialists in the Manufacture of ALNICO PERMANENT MAGNETS*



# JUST HOW IMPORTANT IS A HUB NUT?



At twenty thousand feet, with the prop turning up 1800 R.P.M. this hidden part is strictly a matter of life and death to the pilot. Naturally it's not one of the things he worries about . . . he doesn't have to . . . because the manufacturer of his new type hollow ribbed steel automatic propeller left nothing to chance.

Production of faultless unseen components like propeller hub nuts present real manufacturing problems. This world famous manufacturer wisely turned the job over to the Model 675 New Britain Chucker, fully equipped with the latest carbide tipped tools. Then the high sustained production of the part . . . demanding smooth finish and complex, accurate cuts . . . became a routine procedure.

It is a typical example of how American Industry is turning out new and better weapons of war that command the respect and admiration of the men who stake their lives on mechanical perfection.

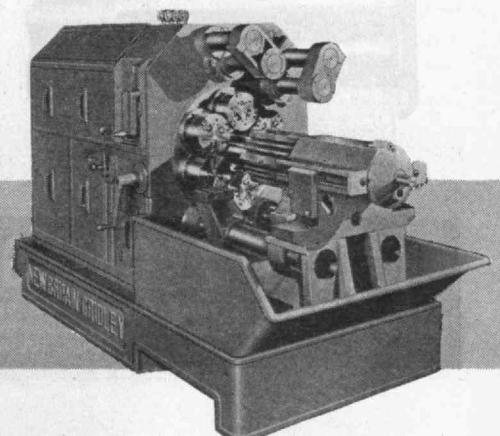
New Britain automatics can furnish the right answer to production puzzles in your plant, now and postwar. Check your problems with the New Britain sales-engineer in your district today.



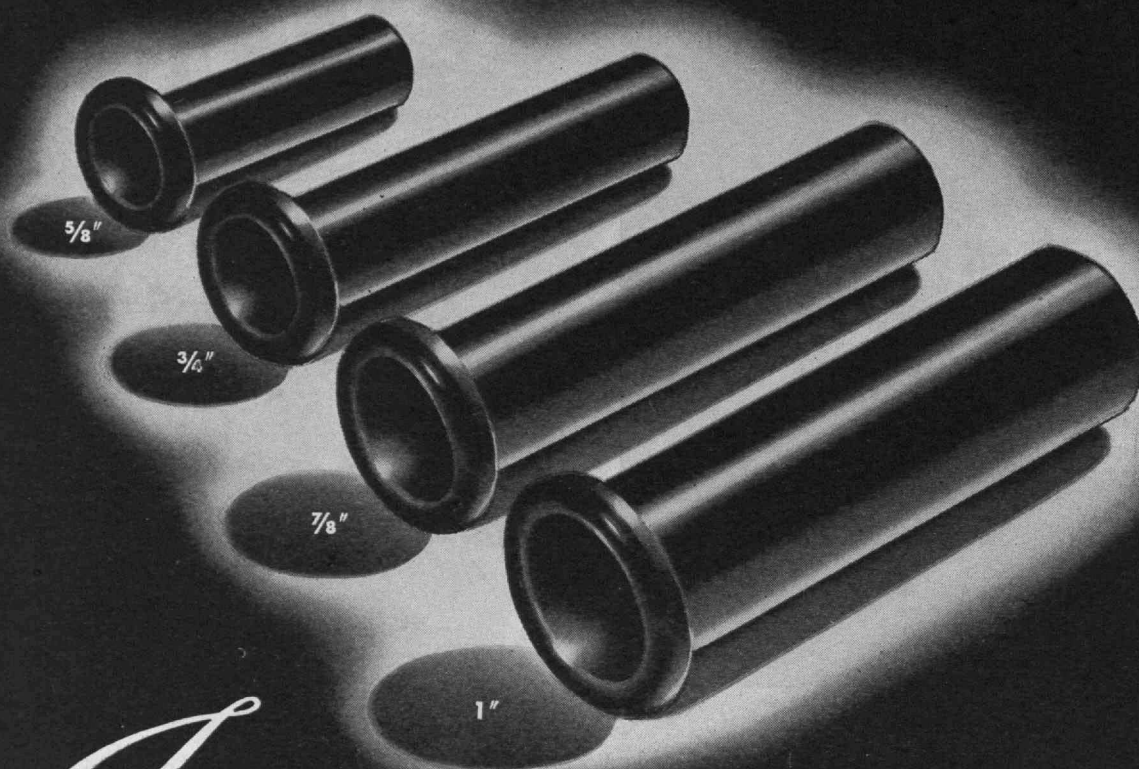
AIRPLANE PROPELLER HUB NUT  
REQUIRES FIFTEEN CUTS TO  
ASSURE EXTREME ACCURACY.

## NEW BRITAIN

THE NEW BRITAIN MACHINE COMPANY • NEW BRITAIN, CONN.  
NEW BRITAIN-GRIDLEY MACHINE DIVISION



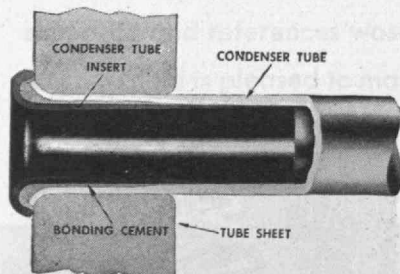
# Make CONDENSER TUBES Last Longer!



## Install JOHN CRANE CONDENSER TUBE INSERTS

Unprotected condenser tubes most often fail at the inlet end; the section most vulnerable to pitting and thinning. The John Crane Condenser Tube Insert arms the belled mouth and entrance section of the tube—completely eliminates inlet end air erosion and sand abrasion; helps to prevent outages.

These Inserts are molded of a hard, wear-resistant bakelite material, unaffected by temperatures to 275° F. and resistant to contaminated salt or fresh water. Installation is easy on old or new tubes: simply slip the Insert into place. Available for 5/8" and 3/4" 16 gauge, or 5/8", 3/4", 7/8" and 1" 18 gauge tubes.

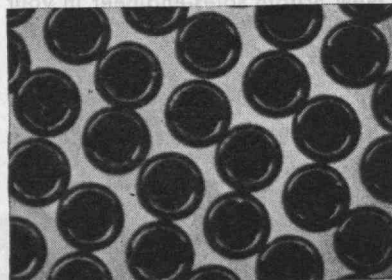


Insert in position. Flow is streamlined.

Service tests over a long period of time show that John Crane Condenser Tube Inserts

- Greatly lengthen tube life
- Save critical metals
- Pay for themselves many times

Send for illustrated bulletin, or consult our branch office nearest you for full information.



Section of tube sheet with Inserts installed.

### CRANE PACKING COMPANY

BALTIMORE, BOSTON, BUFFALO, CLEVELAND, DALLAS, DETROIT, HOUSTON, LOS ANGELES, NEW ORLEANS, NEW YORK, PHILADELPHIA, PITTSBURGH, SAN FRANCISCO, ST. LOUIS, TULSA

1888 CUYLER AVE. • CHICAGO 13, ILL.

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