

April 1945

TECHNOLOGY REVIEW

Title Reg. in U. S. Pat. Office





FORGED IN!

FOR STRENGTH...
AIRCRAFT HAVE THEIR
"V" FOR VICTORY

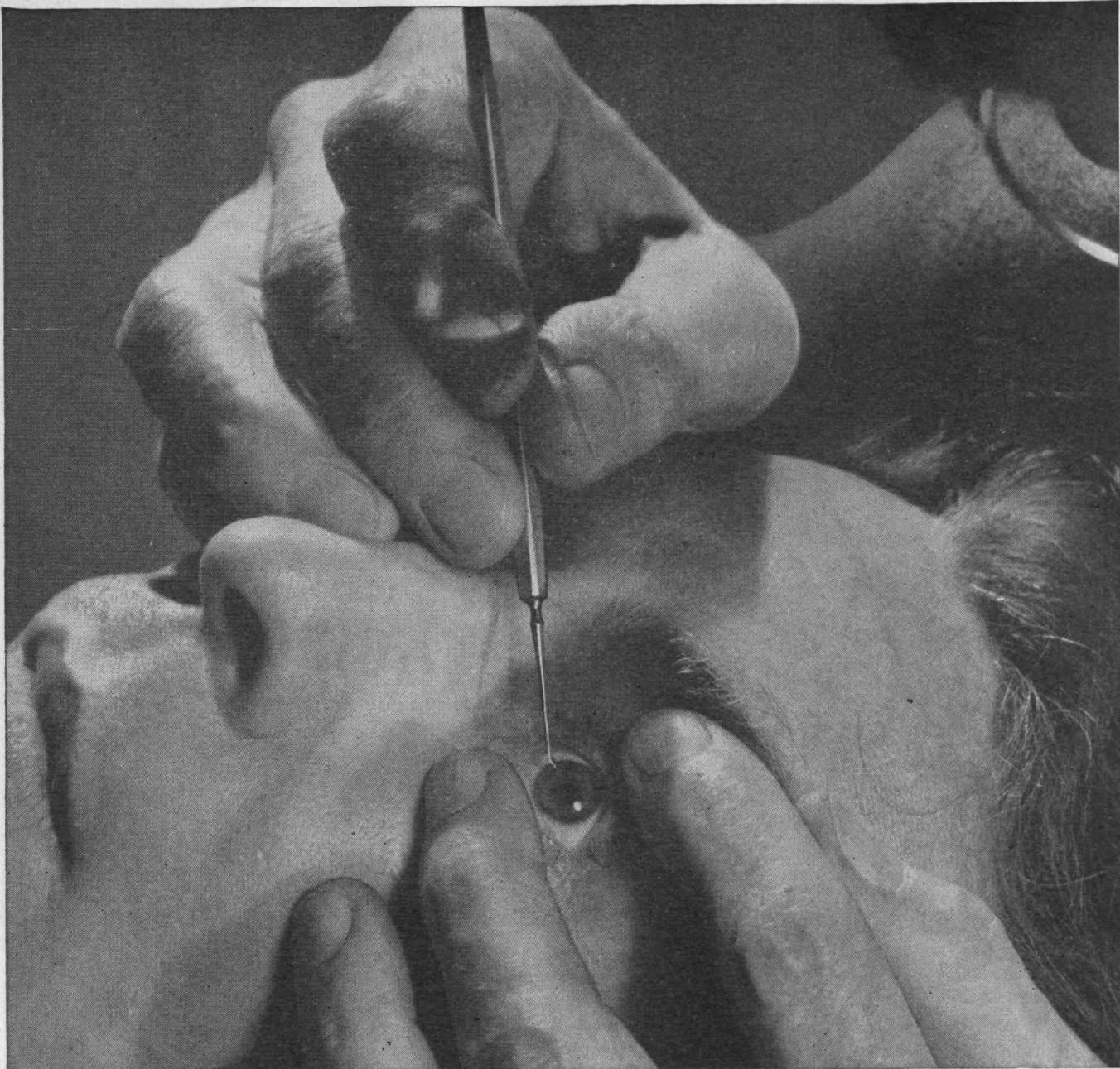
THE
HARVEY

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



Minor Eye Accidents Are A Major Cost

For every "lost eye" accident, there are approximately 300 "minor" eye injuries. What these "minors" cost in hours...in lost production...seldom appears in company records...yet, the totals far exceed those of the claim cases.

Ninety-eight per cent of these eye accidents are

preventable. Scientifically designed AO Safety Goggles will protect workers against practically *all* industrial eye injuries. For greater efficiency, bigger production, lower costs, take advantage of an AO Safety Representative's experience. Call the nearest American

Optical Branch Office.



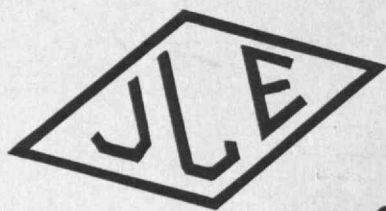
American  Optical

COMPANY

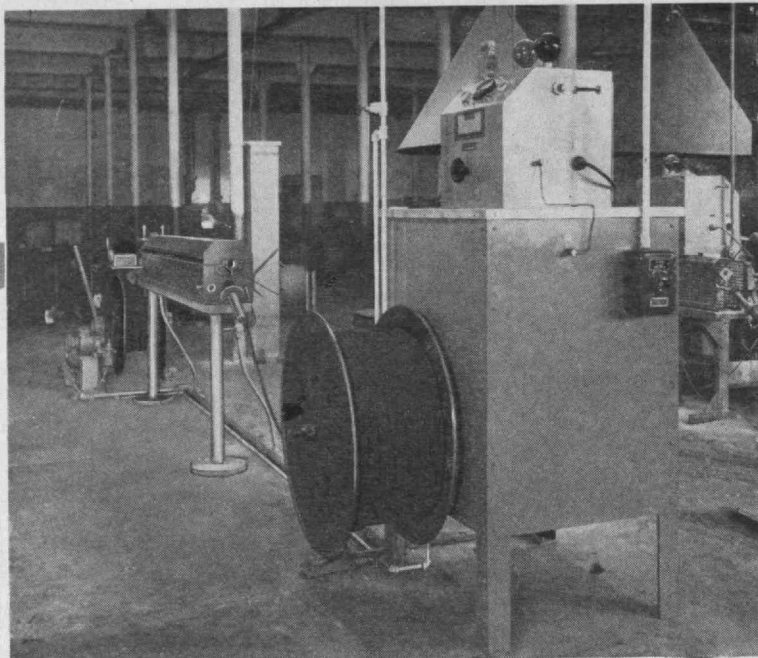
SOUTHBRIDGE, MASSACHUSETTS

Automatic Reeling, Measuring and Spark-Testing Equipment Installed at Anaconda Wire & Cable Co. at Pawtucket, Rhode Island

ANACONDA
SELECTS



SPARK-TESTING EQUIPMENT



AND USES  PROPOSED STANDARDS
FOR SPARK-TESTING THEIR INSULATED WIRE AND CABLE

The James L. Entwistle Co. has paced the spark-testing field for more than 26 years — has, in fact, developed every improvement in spark-testing equipment which has taken place over that period.

Today, only Entwistle high-speed, high-sensitivity wire sparkers are guaranteed to meet Navy 15-Ci (INT.) specifications, British and Canadian specifications and all present or future specifications of the Underwriters' Laboratories for the Spark-Testing of Insulated Wire.

SEND FOR THE PROPOSED  SPARK-TESTING STANDARDS

The Entwistle Proposed Standards for Spark-Testing are being used more and more where production spark-testing of insulation is specified in place of, or allowed as an alternate to the water test. These proposed standards outline the points in the manufacturing process where spark-testing should be used, give length of electrode for various wire speeds, recommend test voltages for various compounds and insulation thickness. A copy of the proposed standards will gladly be forwarded upon request.

JAMES L. ENTWISTLE CO.

43 CHURCH ST., PAWTUCKET, R. I.

WORLD'S LEADING MANUFACTURER OF SPARK-TESTING EQUIPMENT

Precision plus Production

Another New NORTON GRINDER —

It's the Norton 4" Type C—a grinder that gives extreme accuracy, high production and convenience of setup and operation on a wide variety of small revolving parts used in instruments and mechanisms of modern high speed machinery and appliances. Electronic control of headstock permits speeds from 100 to 1000 r.p.m. This fast, accurate, convenient Norton Grinder is engineered to meet the production requirements of many cylindrical grinding jobs on small work.

NORTON COMPANY, Worcester 6, Mass.

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

*Particularly
suited to grind—*

HEATING EQUIPMENT PARTS

GUN PARTS

AIRPLANE PARTS

AIR CONDITIONING PARTS

GAGES

INSTRUMENT PARTS

REFRIGERATION PARTS

AUTOMOBILE PARTS

PUMP PARTS

SMALL MOTOR SHAFTS

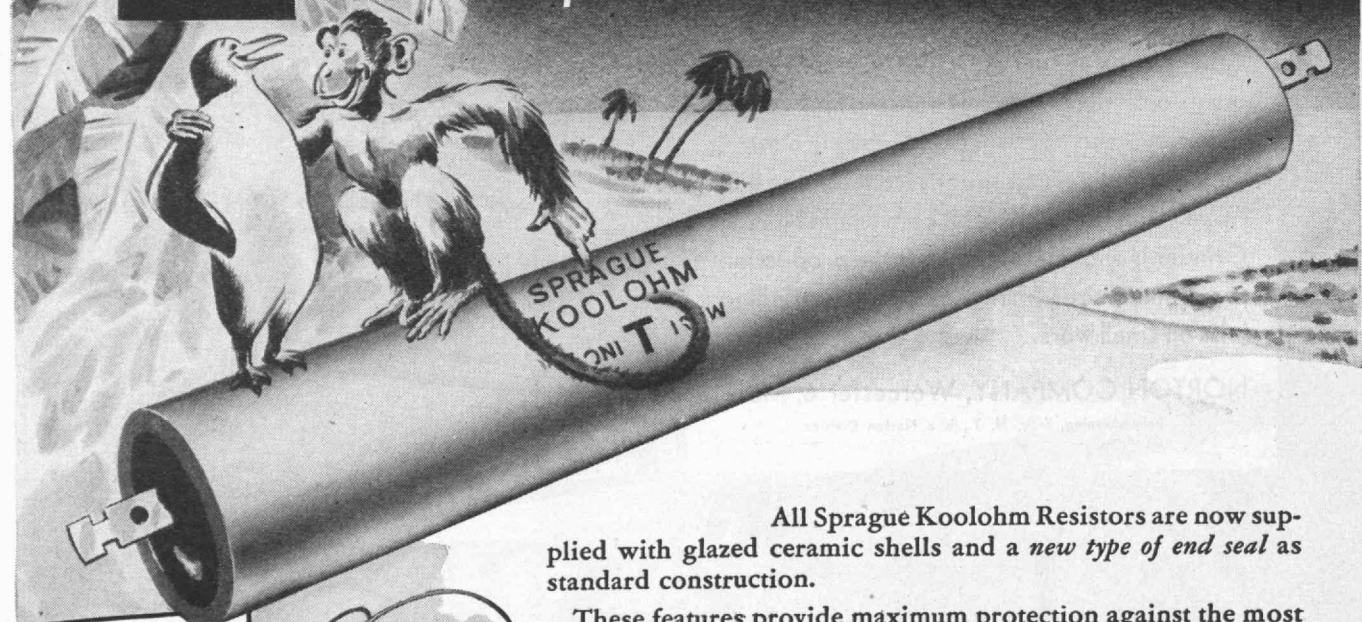
SMALL VALVES



NORTON GRINDERS
and Lappers

T IS FOR "TROPICALIZED"

.... which means that **STANDARD** Sprague Koolohms now have the same **EXTRA HUMIDITY PROTECTION** formerly obtainable only on special order.



All Sprague Koolohm Resistors are now supplied with glazed ceramic shells and a *new type of end seal* as standard construction.

These features provide maximum protection against the most severe tropical humidity and corrosive conditions. Extensive tests in the laboratories of the armed forces and prime contractors have proven the ability of the "KT" construction to "take it" under the most brutal air thermal shock, humidity, and corrosive conditions.

Type "KT" Koolohms correspond to characteristic "J" of resistor specification JAN-R-26.

All previous catalog designations remain the same except for the addition of the letter "T" to the old type numbers to designate the new standard construction.

Thus "T" is for "Tropicalized"—and all Sprague Koolohms have it. One type of Koolohm, the *standard* type, does the job—under any climatic condition, anywhere in the world.

SPRAGUE ELECTRIC CO., Resistor Division, North Adams, Mass.
(Formerly Sprague Specialties Co.)

**WOUND WITH
CERAMIC
INSULATED
WIRE**

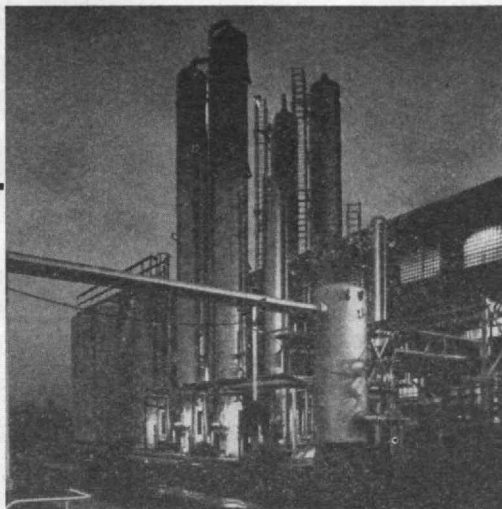


SPRAGUE

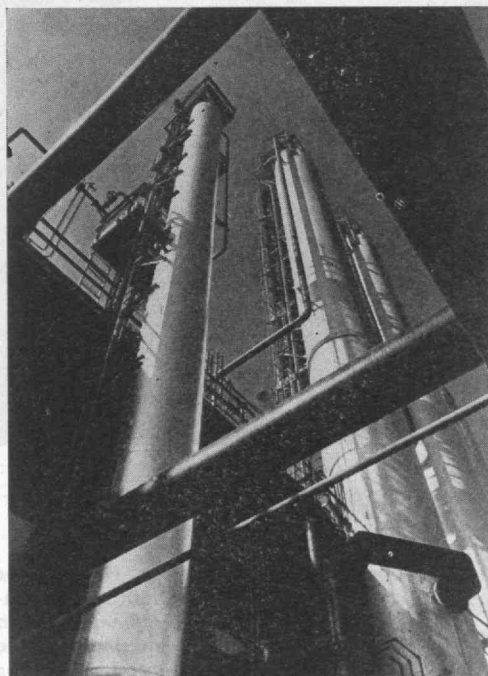
KOOLOHM RESISTORS

COMPLETE CHEMICAL AND PETRO-CHEMICAL PLANTS OR PROCESSING UNITS

Phthalic anhydride. Phenol. Formaldehyde. Acetic acid. Acetic anhydride. Alcohols and synthetic solvents. Beverage alcohol. Nitro-paraffines and chlorinated hydrocarbons. Esters and phthalates. Ethers and ketones. Butadiene. Toluene. Explosives and smokeless powder. By-product coke chemicals. Fatty acids. Penicillin. Synthetic chemicals and other products of current chemical research and development.



Badger will build what you want



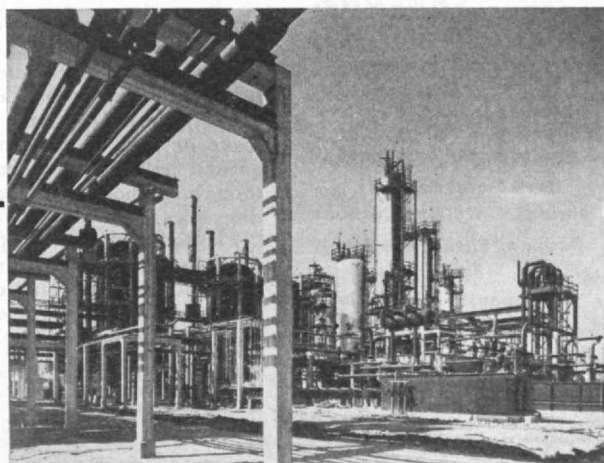
PETROLEUM PROCESSING UNITS

Atmospheric distillation units. Vacuum distillation units. Superfractionators. Thermoform catalytic cracking units. Houdry fixed bed catalytic cracking units. SO_2 solvent refining units. Furfural solvent refining units. MEK dewaxing units. Extractive distillation. Filtrol fractionation. Thermal reformers, crackers, vis-breakers and cokers. And many others.

COMPLETE PETROLEUM REFINERIES

For Gasoline—All facilities, utilities and process units from crude storage and desalting to blending, leading and storage of gasoline.

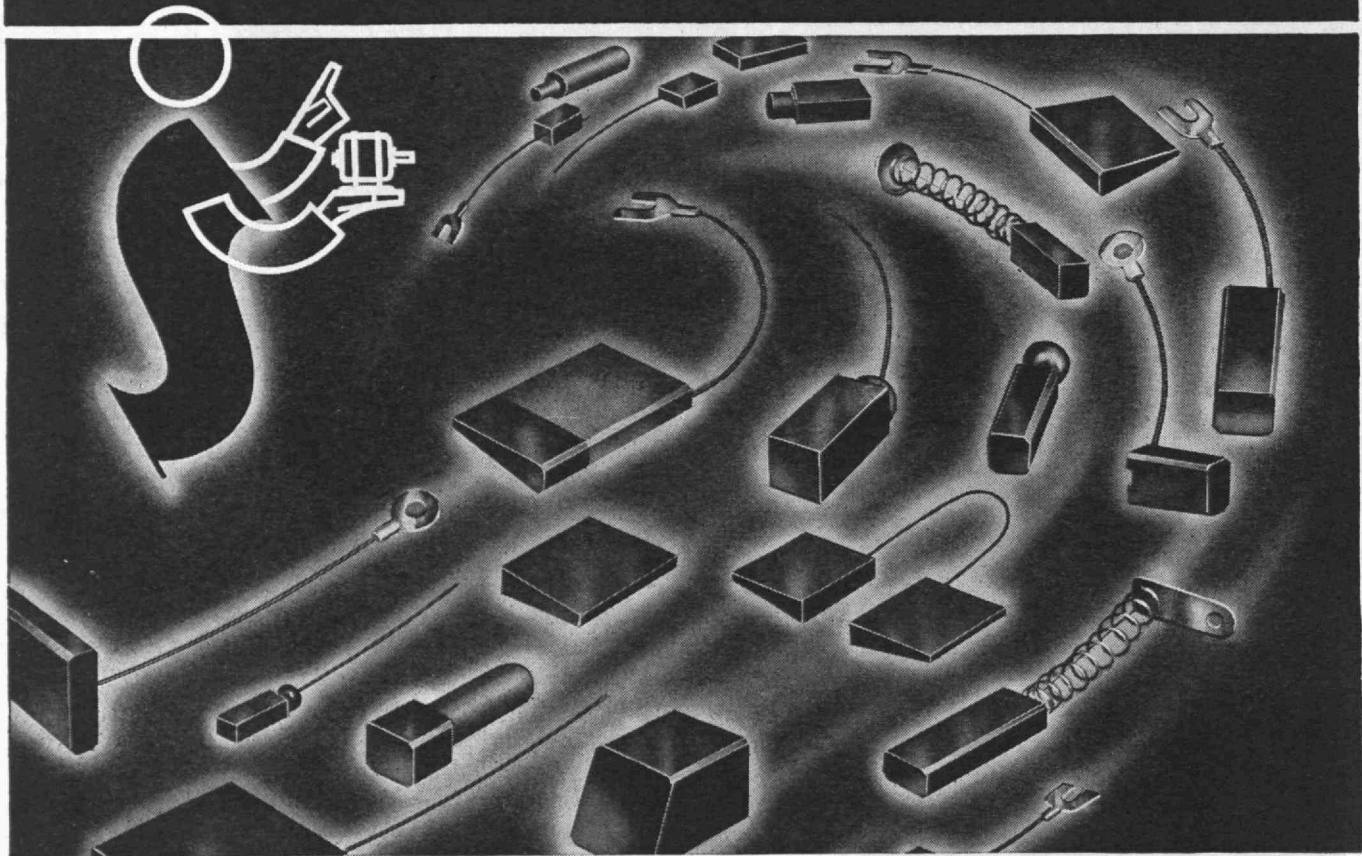
For Lubricating Oils—Vacuum distillation. Solvent extraction and dewaxing. Clay treatment, viscosity blending and additive adding equipment. Packaging plants.



E. B. Badger & SONS CO., Est. 1841 • BOSTON • New York • Philadelphia • San Francisco • London

PROCESS ENGINEERS AND CONSTRUCTORS FOR THE CHEMICAL, PETROLEUM AND PETRO-CHEMICAL INDUSTRIES

EVERY FRACTIONAL HORSEPOWER MOTOR HAS A BRUSH PROBLEM



HEADQUARTERS FOR MOLDED CARBONS, GRAPHITES, METALS, AND COMPOSITIONS

Brushes and Contacts
(All carbon, graphite, metal,
and composition types)

Rare Metal Contacts
Bearings Welding Carbons
Packing, Piston and Seal
Rings

Continuously Adjustable
Carbon Rheostats
Sintered Iron Components
Fixed and Variable Resistors,
etc., etc.

... and here's why

A fractional horsepower motor brush for use on 110 V. requires an entirely different composition of ingredients than one to be used on a similar motor but, say, for 6 V. operation. Again, a brush that may do very well on one make or type of vacuum cleaner will be regarded as only mediocre on another—even though the points of electrical or mechanical difference are so small as to seem unimportant.

Almost without exception, small motors differ in their brush requirements. Even a slight difference in the "mix" of a brush may—and often does—make a whale of a difference in its life or performance. Emphasis on long life, or

quiet operation, or minimum commutator wear, or various other factors should all be considered—and in the light of the specific application!

Backed with unparalleled experience in the production of more small motor brushes for more applications than any other manufacturer, Stackpole engineers are in an enviable position to help you in this all-important respect. Moreover, for 25 years, it has been their practice to have customers send their equipment to our laboratories. Thus, Stackpole brush recommendations are made NOT by guesswork, but on the sound basis of exhaustive tests on the actual equipment.

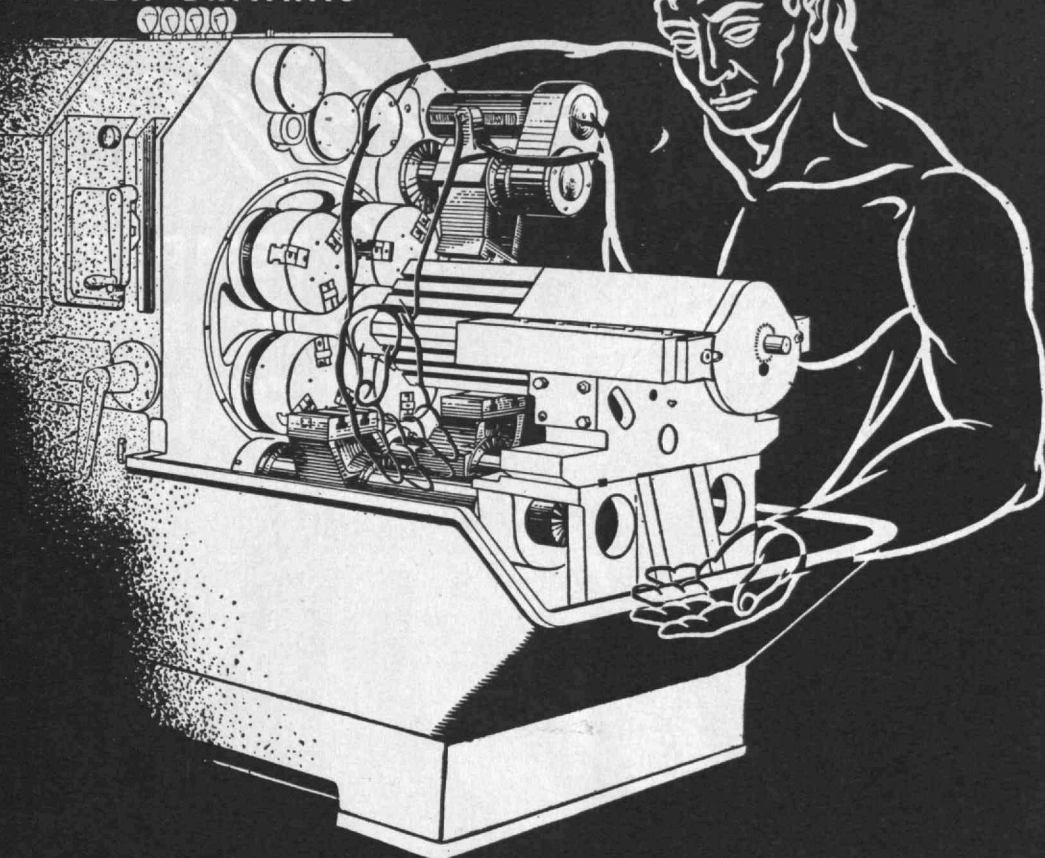
STACKPOLE CARBON COMPANY, St. Marys, Pa.

STACKPOLE

THE NATION'S LARGEST PRODUCER OF SMALL MOTOR BRUSHES

Exclusive

WITH NEW BRITAINS



OPEN END CONSTRUCTION

PROVIDES COMPLETE ACCESSIBILITY

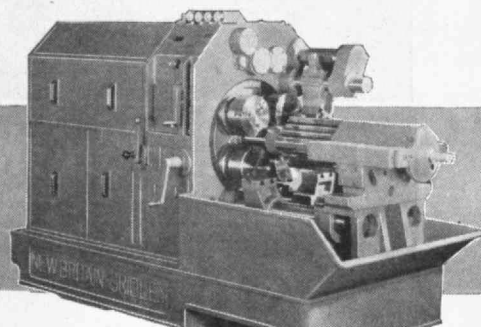
With production demands at their peak today, New Britain Chuckers are delivering the ultimate in consistent and trouble-free performance. The open end exclusive design permits easy accessibility from all sides and above...and allows for convenient chip removal. Every tool attachment and chucking feature is within easy reach for set-up and adjustment...keeping downtime at a minimum. Other time tested features of New Britains assure maximum tool efficiency, accuracy, weave elimination and instant adjustable chucking pressures. Automatically, any postwar problem calls for New Britains...for adaptability, speed, accuracy and economy. Consult the New Britain Sales-Engineer in your vicinity or write direct to the Executive Offices at New Britain, Connecticut.

NEW BRITAINS PRODUCE MORE...BETTER AND FASTER...FOR LESS

NEW BRITAIN

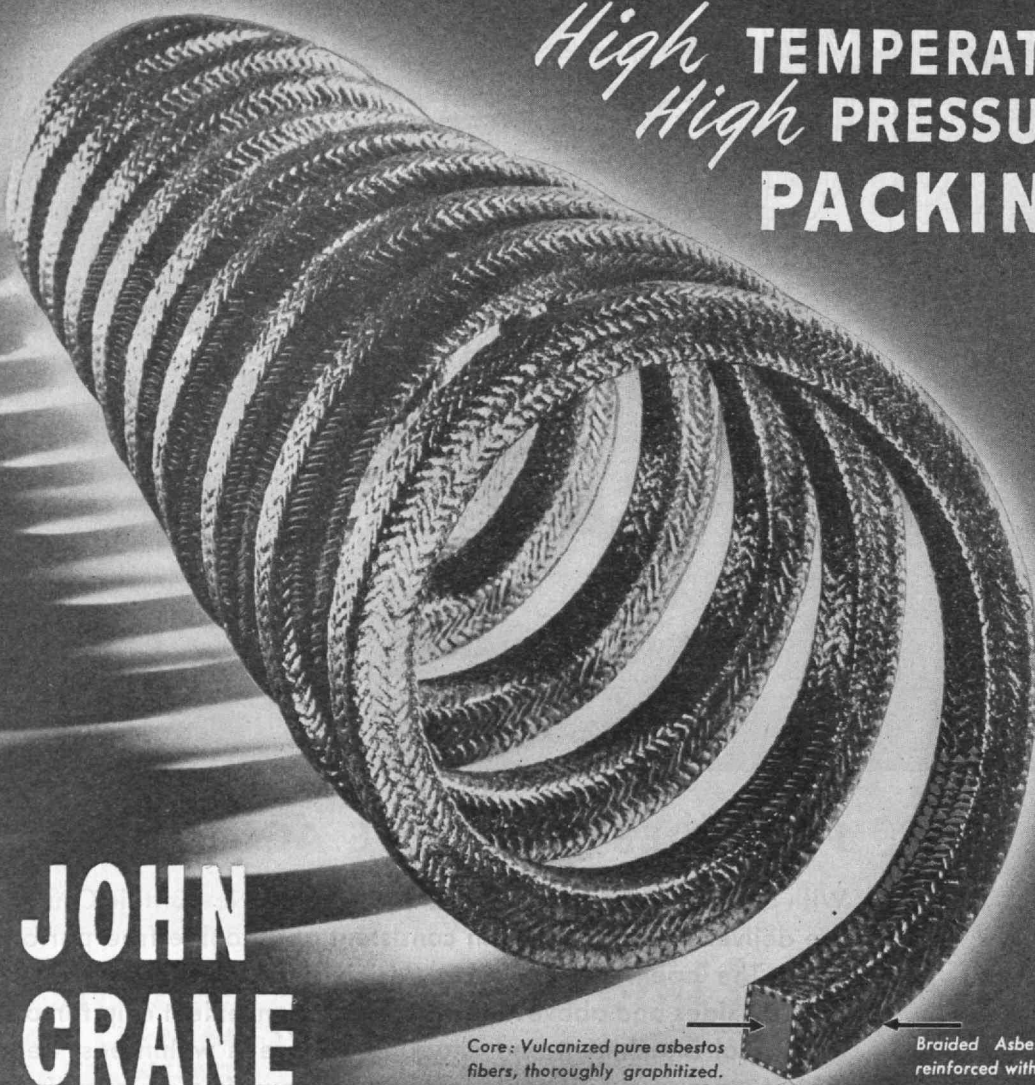
THE NEW BRITAIN MACHINE COMPANY • NEW BRITAIN, CONN.

NEW BRITAIN-GRIDLEY MACHINE DIVISION



HERE'S THE "Tiffany" OF

High TEMPERATURE— High PRESSURE PACKING



**JOHN
CRANE**
Style
6-AM

Core: Vulcanized pure asbestos fibers, thoroughly graphitized.

Braided Asbestos Jacket: reinforced with monel wire.

Large steel plant, Youngstown, Ohio:

"6-AM installed in open hearth valves. No difficulty."

Cleveland steel mill:

"Open hearth valves still packed after 9 months. Exceptional service."

Large high-pressure power plant, Painesville, Ohio:

"Excellent service with steam on stop valves at 2000 p.s.i., 650° F. and superheated 300°. Have standardized on 6-AM."

Operating Engineers: Order spirals, coils, spools, die-formed rings or sets.

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.

CRANE PACKING CO., LTD., Hamilton, Ontario, Canada.
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