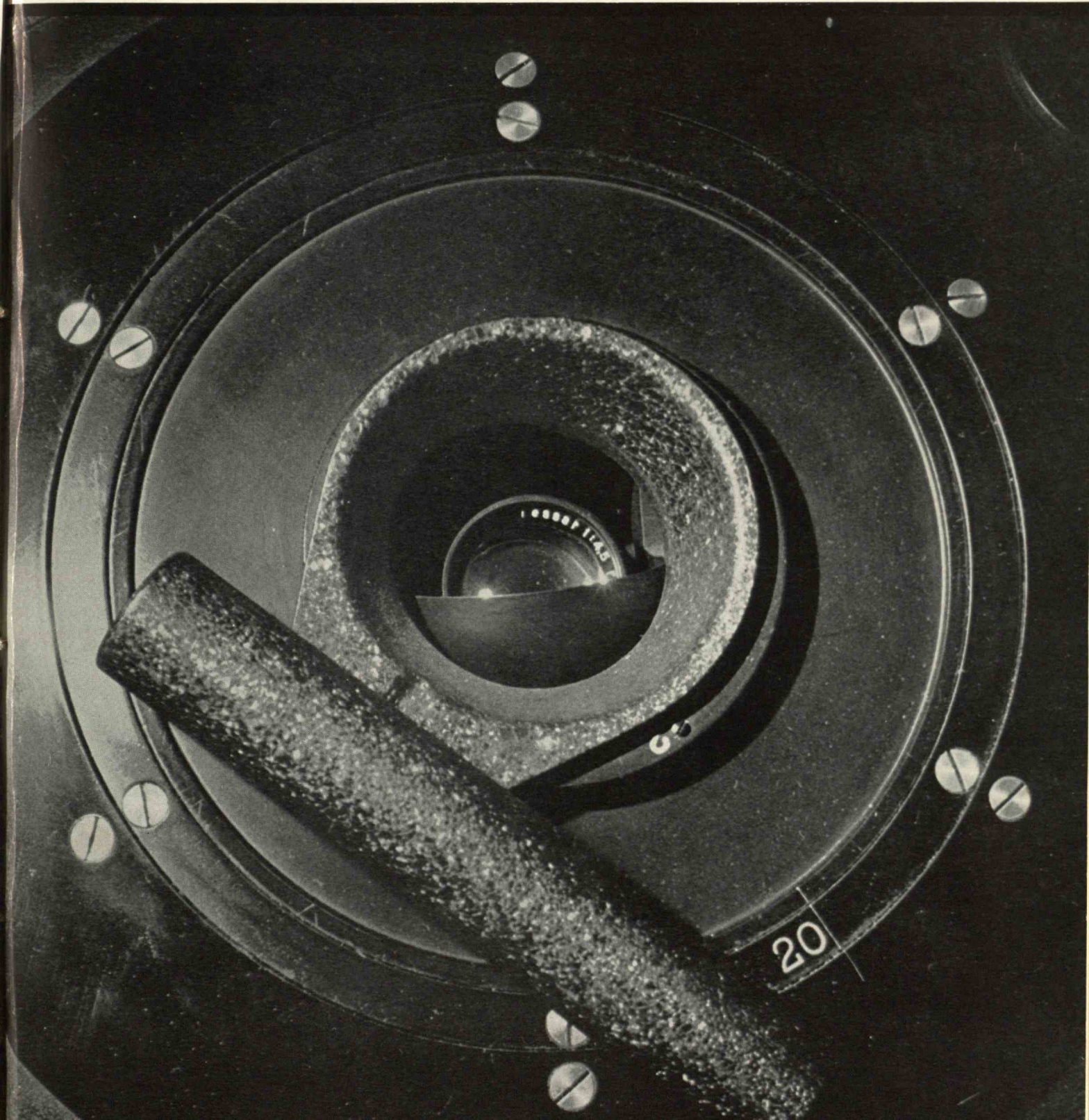
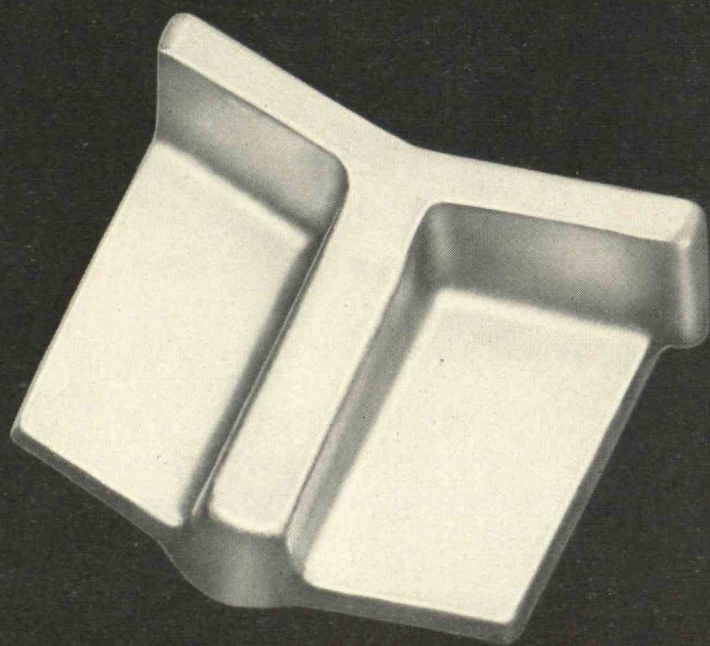
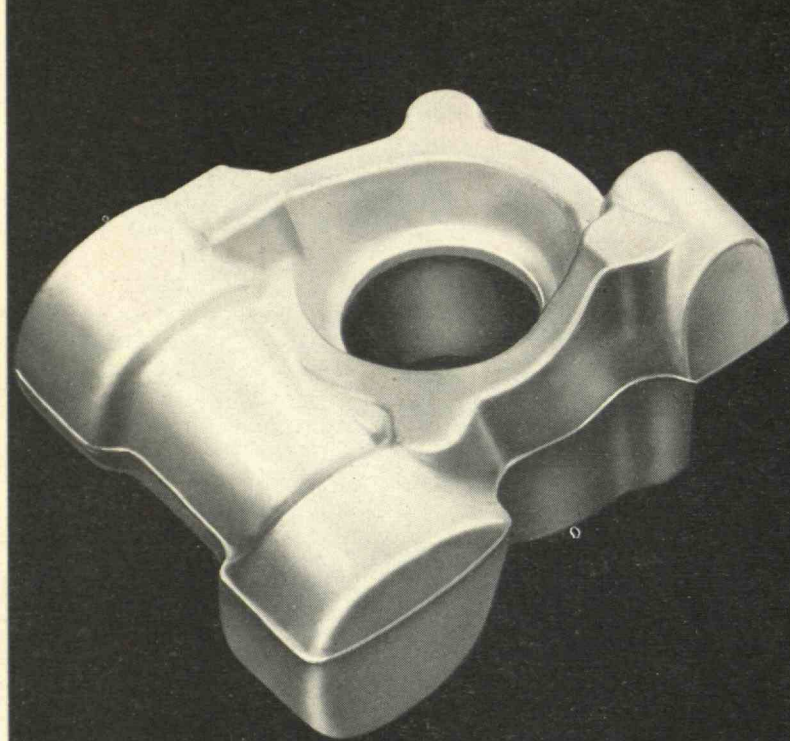


June 1945

TECHNOLOGY REVIEW

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Precision
FORGING

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
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Target for Today



The eyes of your workers are constant targets for dangerous flying particles . . . unless you have an adequate eye protection program. And eyes are *expensive* targets when you consider that one eye injury can cost you more than \$1,000 in lost time, medical care and compensation.

AO Safety Goggles protect your workers' eyes . . . and protect you against lost production and increased costs. Call in an AO Representative for a complete eye hazard survey of your plant . . . at no obligation.

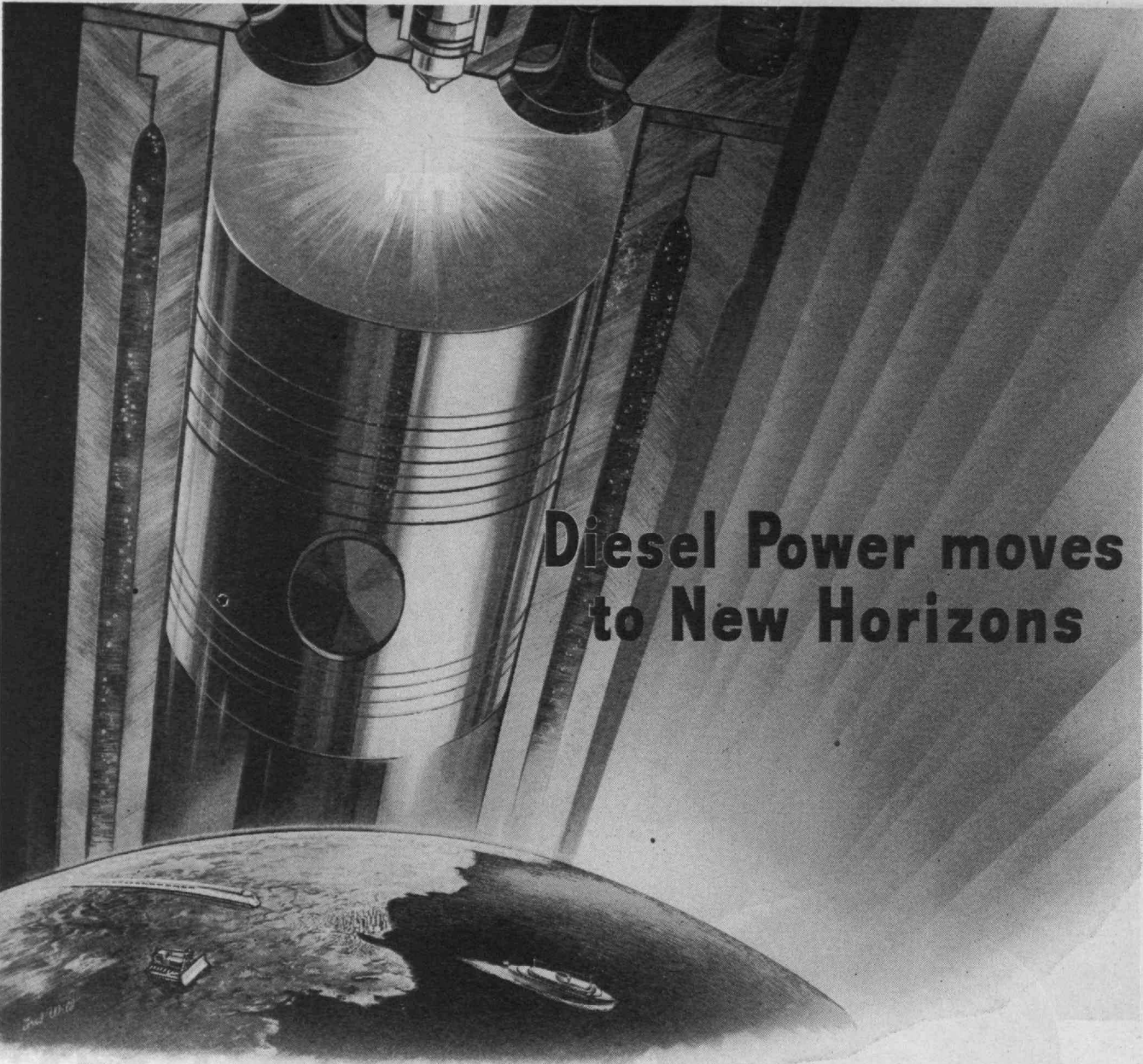


American  Optical

COMPANY

SOUTHBRIDGE, MASSACHUSETTS

Manufacturers for more than 112 years of products to aid and protect vision.



Diesel Power moves to New Horizons

Tomorrow, Diesel Power will speed commerce around a shrinking globe and lift century-old burdens from the backs of millions.

For our Diesel industry has grown tremendously in the past decade. The lash of war has further stimulated its growth. Tomorrow, Diesel's inherent advantages of economy, high power-output, durability, versatility and ruggedness will be more widely available than ever in history.

America's engine builders have long since learned to come to American Bosch for the engineering skill to apply fuel injection equipment to ever-improving Diesels. Here they also find the New England craftsmanship to meet unheard of demands for precision production in quantity.

These twin skills have come to be known as "Precision Production for Power." Perhaps better than any other, that phrase describes the American Bosch of today and tomorrow.

AMERICAN BOSCH CORPORATION • Springfield 7, Mass.

AMERICAN BOSCH

PRECISION PRODUCTION FOR POWER



FOR GRINDING Hard-to-get-at PLACES

NORTON

Mounted Points
Mounted Wheels

THAT'S one of the chief uses of these Norton spindle-mounted abrasive wheels—to grind in the hard-to-get-at places on dies, molds, jigs and castings. In air or electrically operated grinders mounted in lathes, millers and other machines they are often the means of solving troublesome production problems.

Norton Mounted Wheels and Points are available in nearly 200 standard sizes and shapes—in Alundum, Crystolon and diamond abrasives—in Vitrified, Resinoid, Rubber and Fiber Resinoid (Norflex) Bonds.

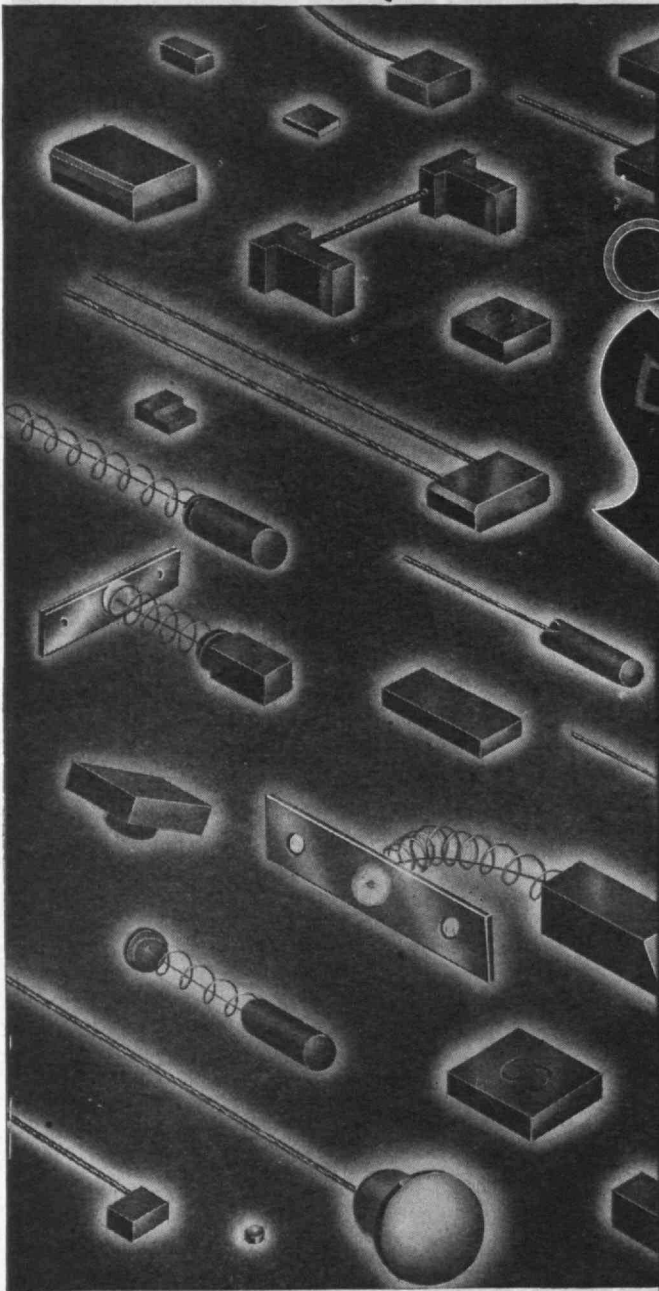
NORTON COMPANY

Worcester 6, Mass.

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

NORTON ABRASIVES

Silver-Graphite BRUSH HEADQUARTERS



- **LESS RADIO INTERFERENCE**
- **LESS AUDIO AND RADIO FREQUENCY NOISE**
- **LOW CONTACT RESISTANCE**
- **UNIFORM CONTACT RESISTANCE**
- **LONG LIFE**

Twenty years ago, at the suggestion of Westinghouse engineers, Stackpole pioneered silver-graphite contacts. The result was an almost immediate revolution in circuit breaker design. Later, as the advantages of this unique mix were applied to brush engineering, equally important advances were scored, particularly on low-voltage commutator and slip ring motor applications.

Today, the important thing is not so much the fact that Stackpole Silver-Graphite Brushes are supplied in all sizes and shapes. What counts even more is the unsurpassed wealth of engineering experience that permits Stackpole engineers to recommend exactly the correct, "tailor-made" silver-graphite mix for best results on your particular application. Backed with complete details of your equipment, they welcome the opportunity to submit Silver-Graphite Brush (or Contact) samples for test. You be the judge!

STACKPOLE CARBON COMPANY
ST. MARYS, PA.

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**

CHEMICAL CARBONS

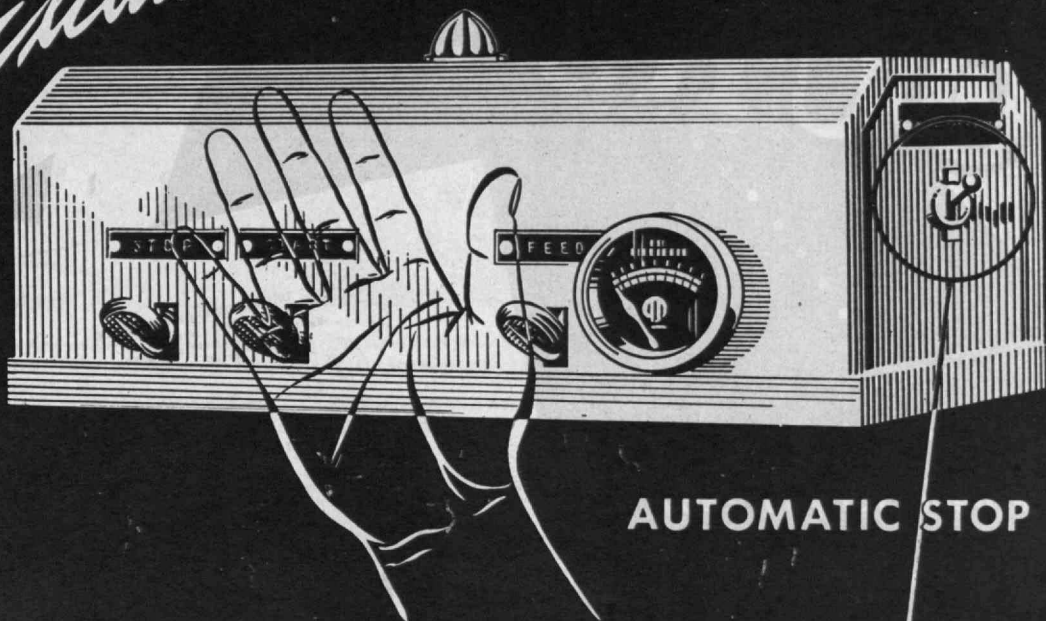
CARBON PIPE POWER TUBE ANODES

MOLDED SPECIALTIES, etc.

STACKPOLE

MOLDED METAL POWDER AND CARBON PRODUCTS

Exclusive WITH NEW BRITAINS



AUTOMATIC STOP

ELIMINATES LOST PRODUCTION

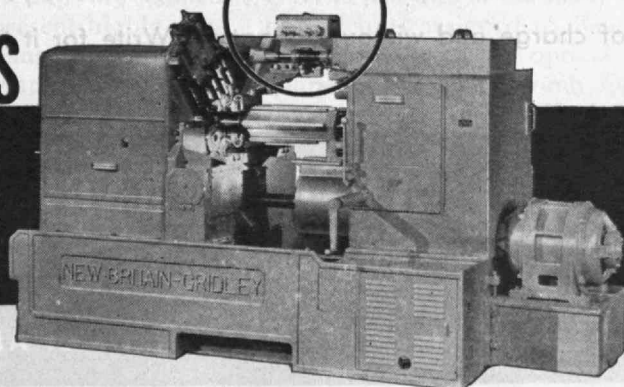
The new electric automatic stop supplied on New Britain-Gridleys is but one of the many outstanding screw machine developments of the era . . . materially facilitating the setting of tools, providing the operator with complete control and assuring the manufacturer of high production efficiency.

When stock is exhausted in any position, the stop mechanism automatically disengages the feed clutch to avert needless machining of the butt end and eliminates costly tool damage. The empty spindle is at the loading station with collet open, slides are withdrawn and a conspicuous red light signals the operator. Reloading is made simple and fast.

Manufacturers employing the most efficient and dependable methods and machines will rely on the automatic stop and other New Britain Machine features to help overcome postwar manufacturing and marketing problems. Many can be solved automatically by your nearby New Britain Sales Engineer. Let him prove how New Britains produce more . . . better and faster . . . for less.

NEW BRITAIN AUTOMATICS

THE NEW BRITAIN MACHINE COMPANY
NEW BRITAIN, CONNECTICUT
NEW BRITAIN-GRIDLEY MACHINE DIVISION

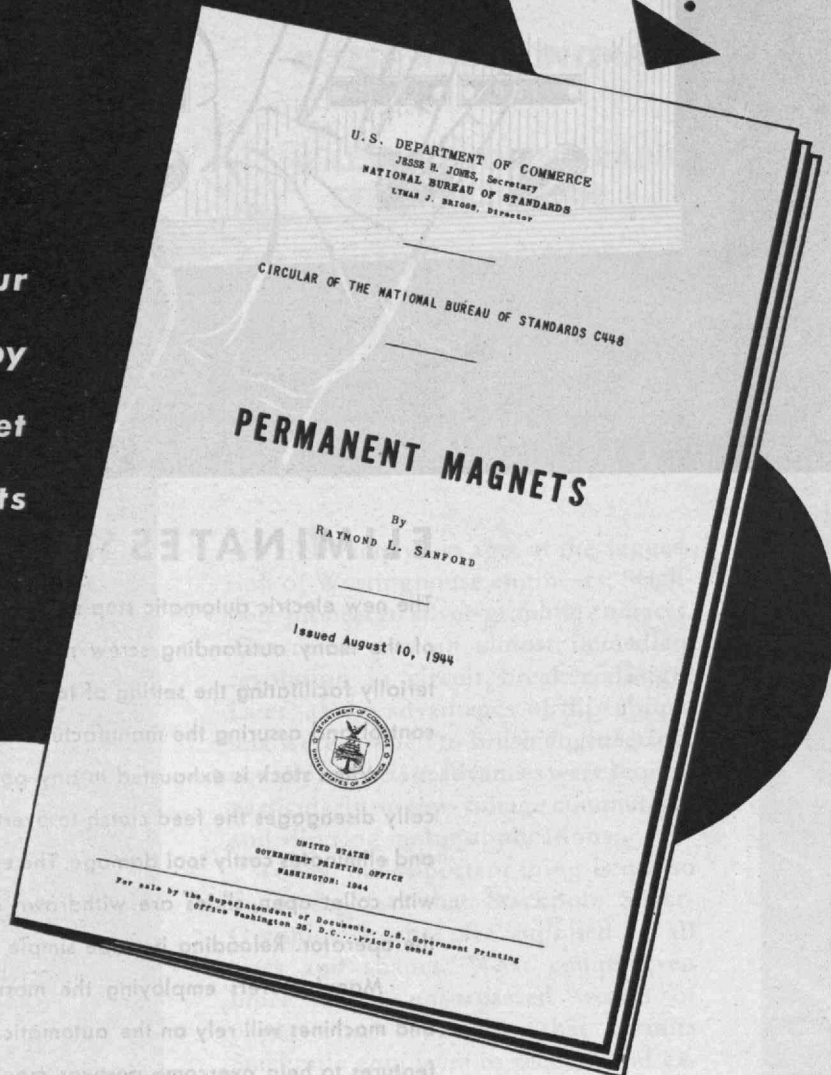


YOURS!

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● 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.

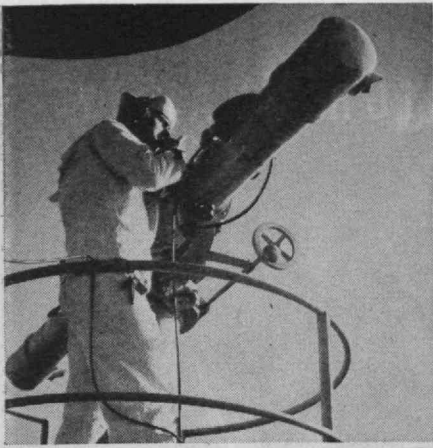
This 39-page book of permanent magnet theory, design data and references was published by the government. Arnold is pleased to make it available to you free of charge and without obligation. Write for it today!



THE ARNOLD ENGINEERING COMPANY

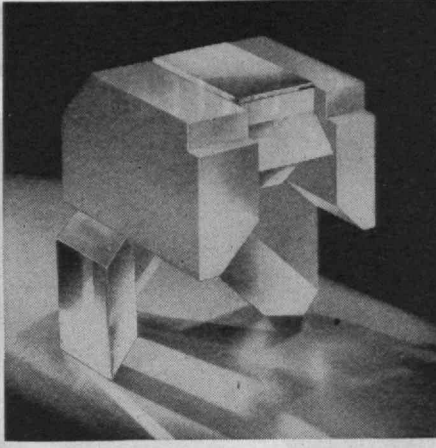
147 EAST ONTARIO STREET, CHICAGO 11, ILLINOIS

Specialists in the Manufacture of ALNICO PERMANENT MAGNETS



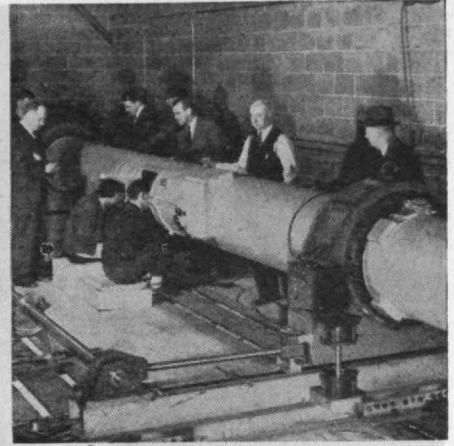
A seaman manning a 2½ meter Range Finder reports range continuously during action.—U S. Navy Photo.

In testing, the Range Finders are filled with compressed gas and immersed in water to reveal leaks.



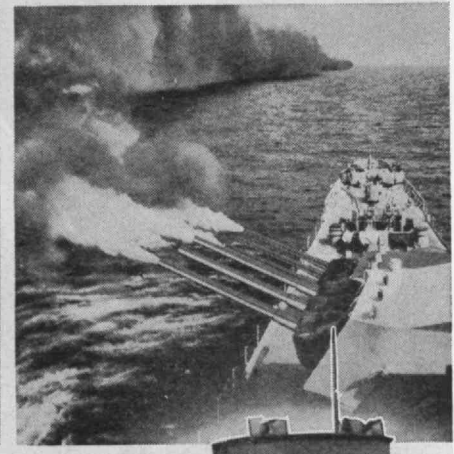
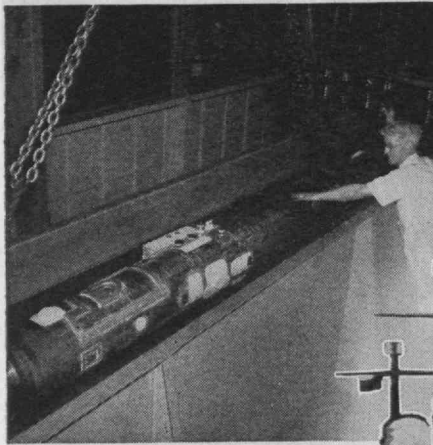
The coincidence prism shown here is the most complex of the precision optical parts in a Range Finder.

Giant Range Finders which span the battleship turrets represent two tons of precision optical instrument.

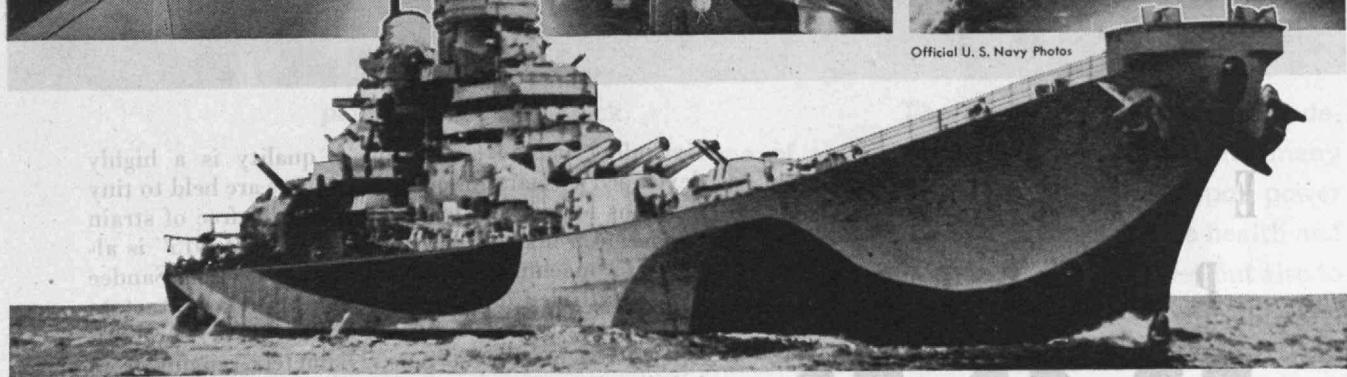


Test chamber duplicates the continuous vibration of the ship and the shock of a broadside of heavy guns.

Accurately aimed naval gunfire knocks out many enemy shore installations to make troop landings safer.



Official U. S. Navy Photos



The War's Toughest Optical Job



When the big guns of America's warships speak, the sea, the sky, and the earth tremble. Enemy shore installations and enemy ships, pinpointed by the accuracy of our gunfire, crumble even as the hopes of the aggressors have crumbled.

Creating and building the optical "eyes" that help to make possible this unerring accuracy is the war's toughest optical job. These eyes are

the giant range finders which span each gun turret and fire control tower. They represent highly complex optical systems, so precise that the allowable deviation of some parts is but one-half second of arc, equivalent to 1" at 6½ miles—systems so rugged that accuracy remains constant under the shock of thundering salvos and continuous ship vibrations.

The production of these giant optical instruments in the quan-

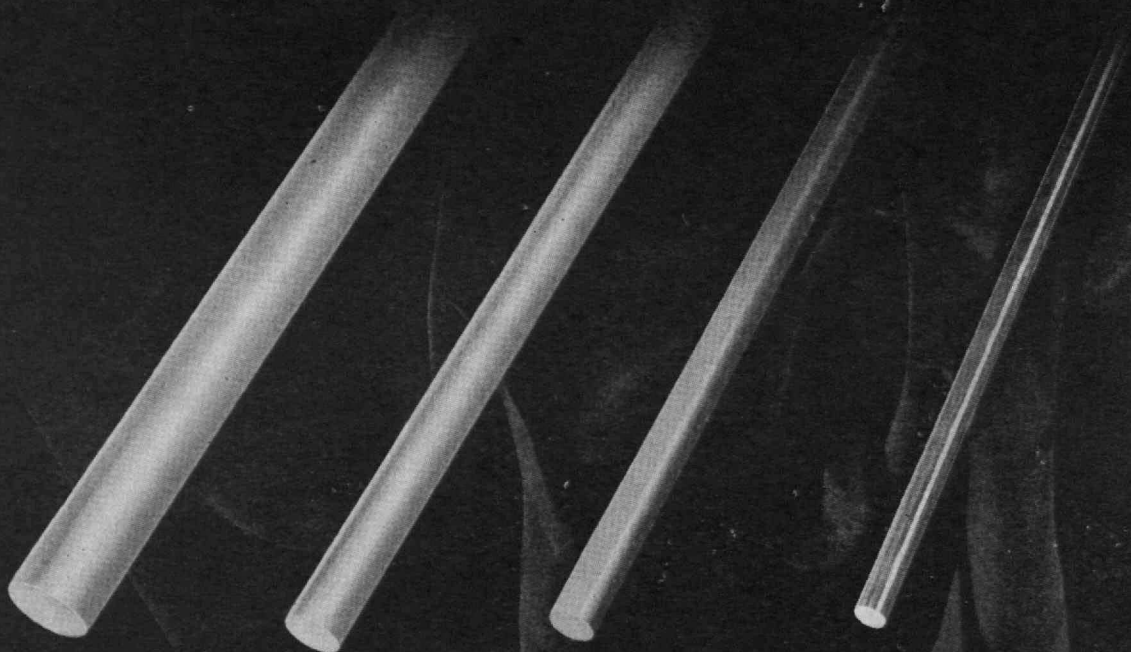
ties needed by the world's greatest Navy is just one of the many tough optical jobs assigned to Bausch & Lomb . . . America's optical headquarters. Bausch & Lomb Optical Co., Rochester 2, New York.

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ESTABLISHED 1853



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Extruding plastic rod of finest quality is a highly developed specialty of ours. Tolerances are held to tiny fractions for custom jobs. Substantially free of strain Sandee Rod machines easily. A margin of .015" is allowed for machining to exact size when desired. Sandee Rod is extruded of Polystyrene and Cellulose Acetate Butyrate. Extreme clarity and brilliance are characteristic of Sandee Polystyrene. Diameters ranging from 1/16" to 2", all convenient lengths, and a wide choice of colors are available. The new Sandee Catalog contains complete information on Rigid and Flexible Extruded Plastic Products. Write for a copy on company stationery, please.

Elmer Szantay, M.E. '35, General Manager

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