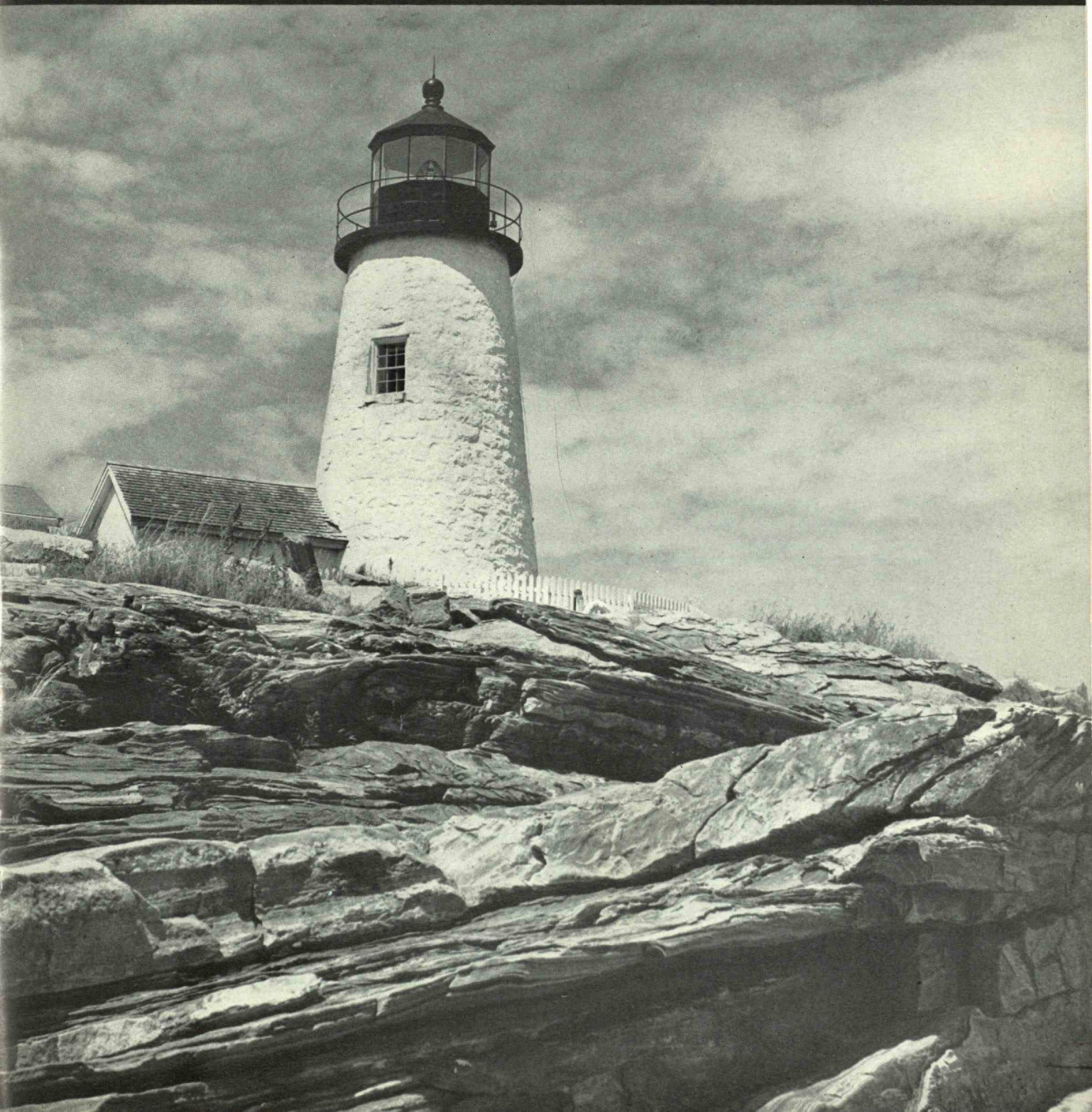


July 1948

TECHNOLOGY

REVIEW

Title Reg. in U. S. Pat. Office



STRONG...

FORGINGS FOR SAFETY

ALUMINUM FORGINGS USED
IN POSTWAR AIRLINERS
NOW IN PRODUCTION

HE

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

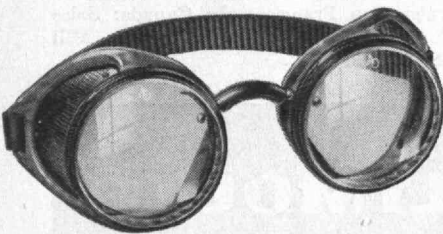


***Here's An Expense
that Can Be Slashed
in these
Days of Rising Costs***

Industrial Eye Accident Costs Up 78½%*



*Since 1939



Have you ever checked the figures on eye accident costs in *your* plant? You may find it good business to do as one manufacturer of electrical equipment did who saved \$14,000 in two years by installing an eye protection program. Or, as was done by a large machinery manufacturer who cut his annual eye accident costs from \$50,000 to \$5,800. 98% of all eye accidents can be prevented for approximately ½ a cent per day per man! Ask your nearest AO Safety Representative to come in and show you how.

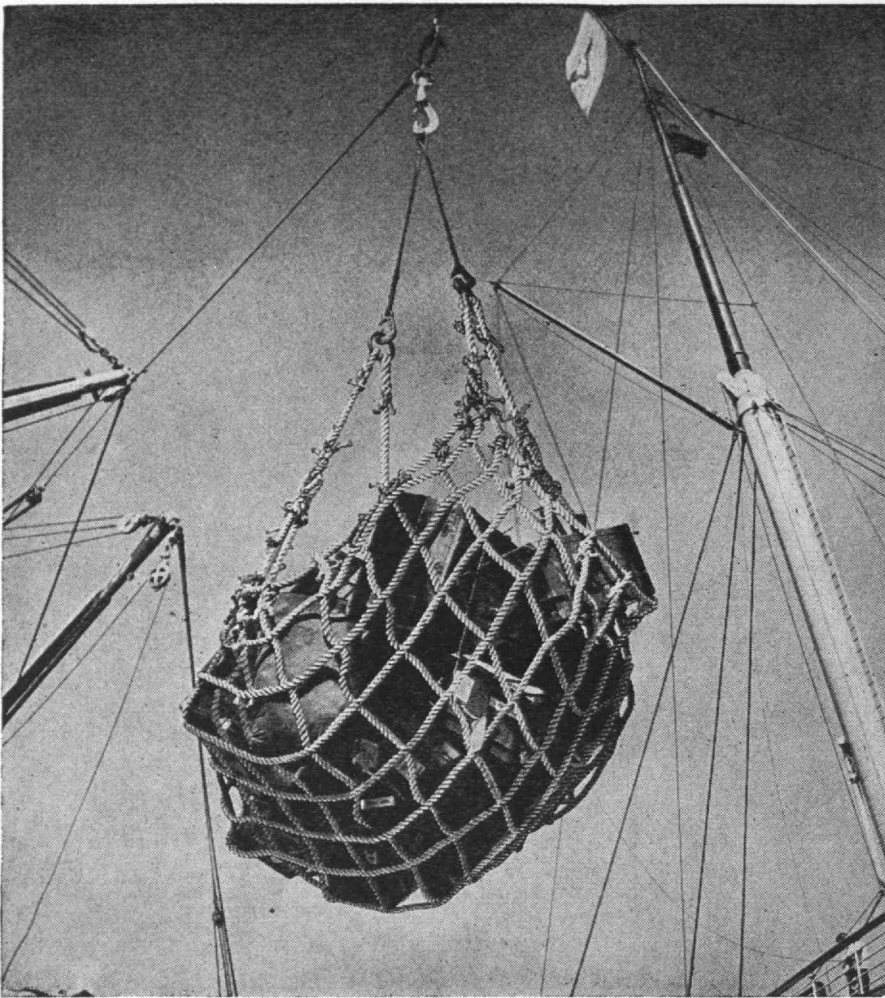
American Optical



COMPANY

*Safety
Division*

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES



50 FEET FOR PROFIT OR LOSS!

From Cadiz and Calcutta the ships come in, and from Hong Kong, Cape Town, Helsinki, Rio, Bordeaux. Hull down with valuable cargo, they have plowed across thousands of deep sea miles. But the final 50 feet are the most critical of the entire voyage, for the safety of the cargo.

Big booms hoist the loaded rope cargo nets up, and swing them over-side, down to the pier or lighter. Each net-load is packed with tons of sharp-edged crates and cases. A snapped rope may mean the loss of thousands of dollars of cargo!

It takes extremely good rope to stand the pull, friction, bending, and hard handling those nets must face.

Many of the nets safely used to load and unload ships in the ports of the world are made from a famous rope—Plymouth Ship Brand Manila Cargo Net Rope.

Ship Brand Rope is laid to various specifications for every marine purpose, in sizes from 9/16 inch to 12 inch. It is unsurpassed for *durable strength* under tough punishment. It is

the rope men trust to protect human lives and valuable property.

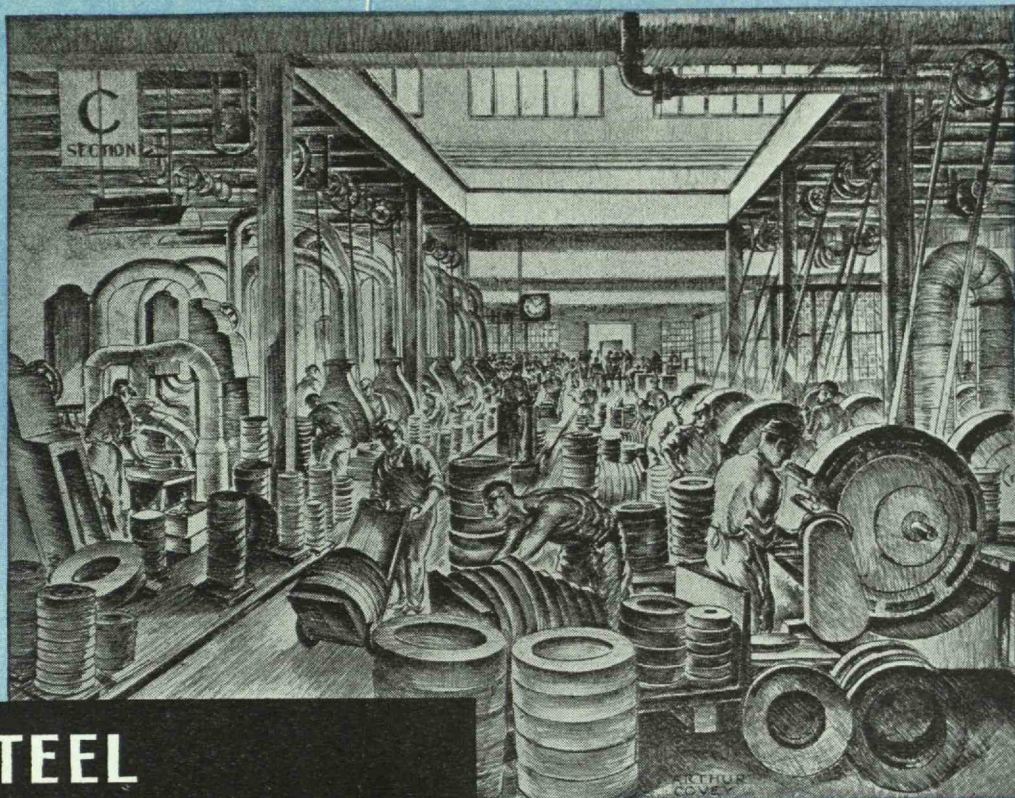
Plymouth Cordage Company, Plymouth, Massachusetts—world's largest makers of rope, tying twine and binder and baler twine.

Plymouth Cordage Company, Plymouth, Massachusetts. District Offices: Boston, New York, Chicago, Houston, San Francisco. Warehouse Stocks: New York, Boston, Philadelphia, Baltimore, Houston, Chicago, San Francisco. In Canada: Sales Office—Cordage Distributors, Ltd., Toronto. Mill—Welland, Ontario.

PLYMOUTH
Cordage Products



THE ROPE YOU CAN TRUST BECAUSE IT IS ENGINEERED FOR YOUR JOB



STEEL

Shapes the GRINDING WHEEL

YOU normally think of the grinding wheel as shaping steel. But in the Norton truing rooms it's just the opposite. There you see grinding wheels being shaped by steel.

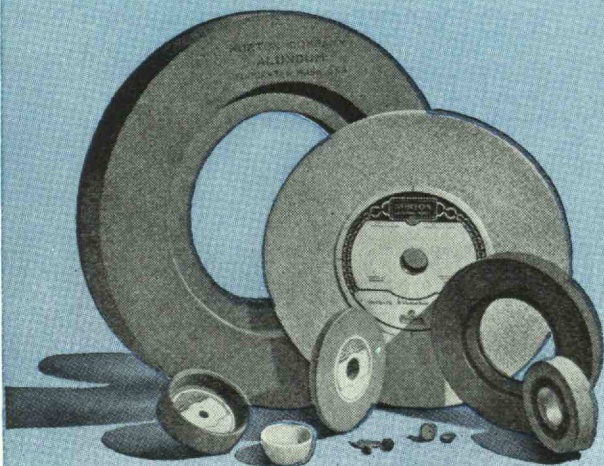
As the glass-hard wheels come from the kilns and ovens they are quickly shaped to the correct size and form by conical steel cutters operating in ingenious machines of Norton design and manufacture.

While this process is used for the majority of wheels, thousands of others are brought to the correct size by means of diamonds or by being ground with other Norton wheels.

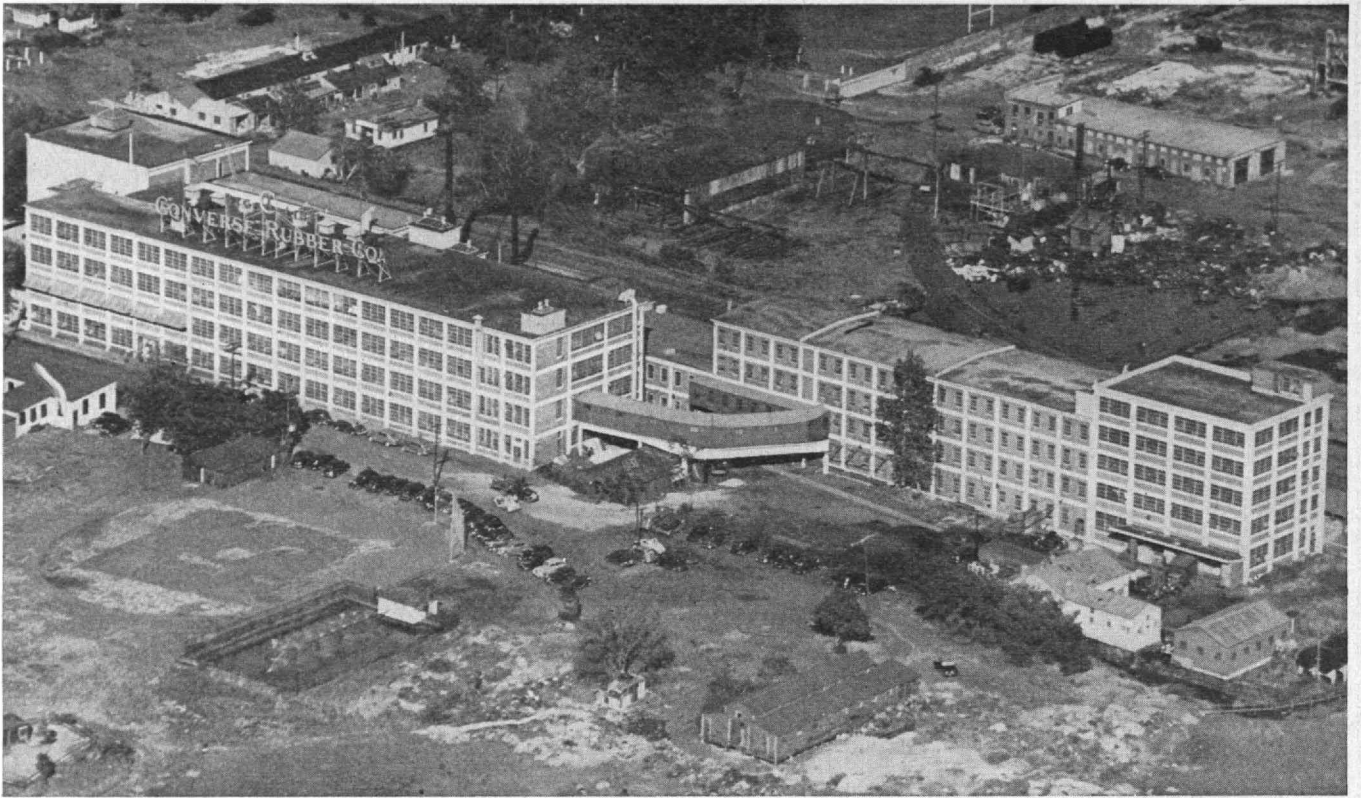
Whichever the process, you can be sure that the Norton grinding wheels which you are using were produced from start to finish with the "know-how" of over sixty years' experience—a "know-how" that gives Norton wheels outstanding cost-cutting ability.

NORTON COMPANY, WORCESTER 6, MASS.
(Behr-Manning, Troy, N. Y. is a Norton Division)

NORTON ABRASIVES



ABRASIVES • GRINDING WHEELS • GRINDING AND LAPPING MACHINES • REFRACTORIES • POROUS MEDIUMS • NON-SLIP FLOORS
NORBIDE PRODUCTS • LABELING MACHINES • (BEHR-MANNING DIVISION: COATED ABRASIVES AND SHARPENING STONES)



CONVERSE

A name respected for quality wherever waterproof rubber footwear, sporting footwear, basketball footwear and athletic footwear is made, sold and worn.

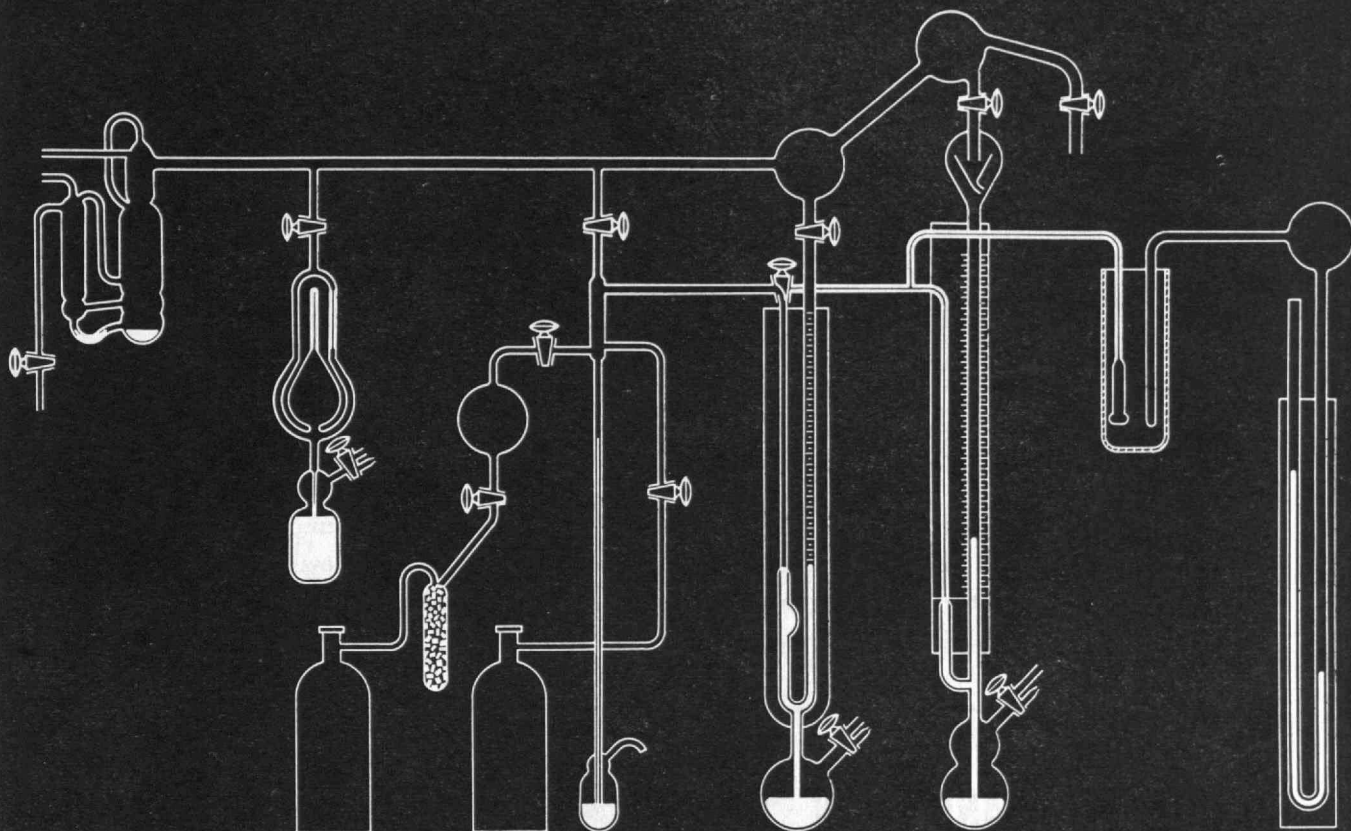
CONVERSE RUBBER COMPANY

Malden 48, Massachusetts

A. H. WECHSLER '21

L. P. SANBORN '17

CABOT RESEARCH AND DEVELOPMENT



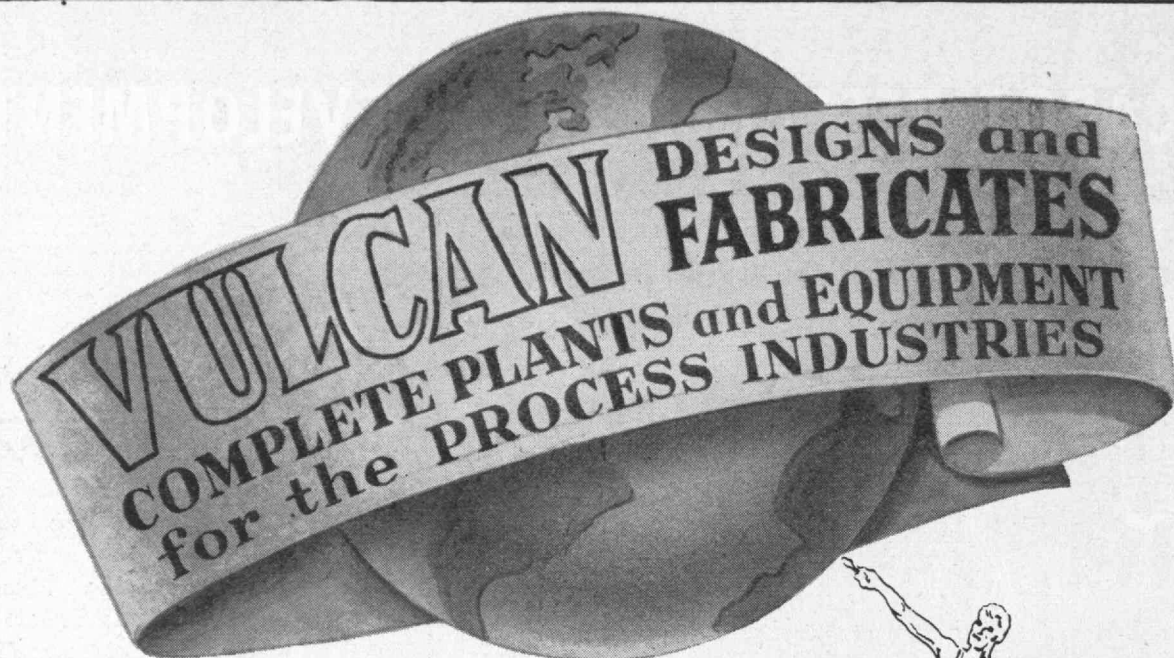
GAS ADSORPTION APPARATUS

The surface area value of carbon black provides another implement for control and maintenance of quality. This apparatus, developed in the Boston laboratories of Godfrey L. Cabot, Inc., has measured surface areas of hundreds of carbon black samples. Over the past eight years this contribution has provided rubber chemistry with yet another factor in the rubber reinforcement equation.



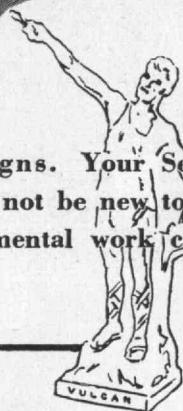
GODFREY L. CABOT, INC.

77 Franklin Street, Boston 10, Mass.



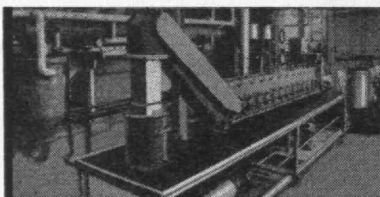
Vulcan's engineers are organized to handle Difficult Separation Problems. Vulcan's laboratories are organized to verify the operability and efficiency of

all new designs. Your Separation Problem may not be new to Vulcan. Costly experimental work can often be avoided.

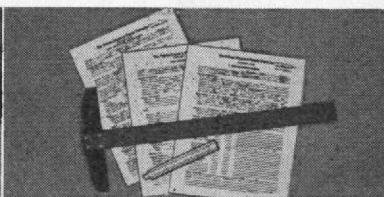


**COMPLETE ORGANIZATION
SERVICE FOR A
HALF CENTURY**

DISTILLATION
EVAPORATION
**PROCESSES
and
EQUIPMENT.**
EXTRACTION



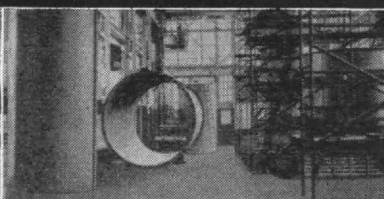
PILOT PLANT



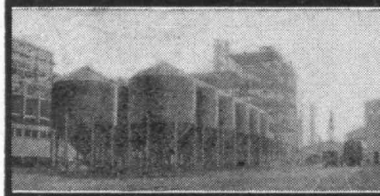
PROCESS DESIGN



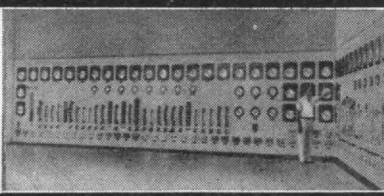
MECHANICAL DESIGN



SHOP FABRICATION



FIELD ERECTION



INITIAL OPERATION

THE VULCAN COPPER & SUPPLY COMPANY

General Offices and Plant — CINCINNATI, OHIO

NEW YORK

SAN FRANCISCO

BUENOS AIRES

IN CANADA — VICKERS-VULCAN PROCESS ENGINEERING COMPANY, LTD. — MONTREAL



STUYVESANT TOWN and PETER COOPER VILLAGE

HABIRSHAW WIRES AND CABLES

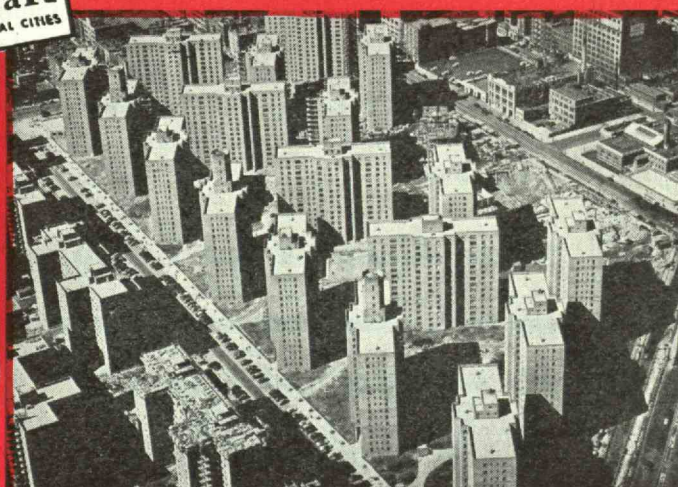
used throughout These Metropolitan Life Insurance Company's Housing Projects

STARRETT BROS. & EKEN, INC.
GENERAL CONTRACTORS

L. K. COMSTOCK COMPANY
ELECTRICAL CONTRACTORS



RIVERTON



PETER COOPER VILLAGE



PHELPS DODGE COPPER PRODUCTS CORPORATION

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MEMBER FEDERAL RESERVE SYSTEM

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

THE TABULAR VIEW

Unfinished Business. — On page 444 of the June issue of The Review there appeared the Technology Crossword Puzzle by JOHN M. KECK, '23. Should there be any who had difficulty in fitting the right letters to the appropriate squares, however, the pathway to success, on page 542 of this issue, may provide a welcome conclusion to unfinished business.

Energy Resources. — Taken as a whole, the world has ample natural resources of energy for generations to come. Such is the contention of ROBERT T. HASLAM, '11, Vice-president and Director of the Standard Oil Company of New Jersey, whose symposium address appears on page 493 under the title "World Energy and World Peace."

International Co-operation. — In demonstration of his convictions, the RIGHT HONORABLE CLARENCE D. HOWE, '07, Minister of Trade and Commerce in Canada, traveled from Ottawa to Cambridge to deliver his symposium address "Defense, International Co-operation, and Peace" which appears on page 497. Beginning as an assistant in civil engineering at M.I.T., after his graduation from the Institute, Mr. Howe's career as engineer turned public servant provides rich experience from which are drawn the sage conclusions recorded in this issue.

European Recovery. — Recently promoted to professor of economics after being associate professor at M.I.T. for six years, RICHARD M. BISSELL, JR., has been given unusual opportunity to practice his subject under crucial circumstances, as newly appointed director of operations, Economic Co-operation Administration, European Recovery Program. His symposium address, "The Economic Means to Peace," is presented in substance on page 499.

Domestic Education. — Unlike most graduating classes the Class of 1948 had the rare good fortune to have its commencement address delivered by a winner of the Nobel Prize, who, in accordance with family tradition of serving in academic circles, is chancellor of Washington University. The profound thoughts on the training and responsibilities of collegians, expressed in the commencement address of ARTHUR H. COMPTON, are recorded on page 501.

Into the World. — As his valedictory address to the graduating class, PRESIDENT KARL T. COMPTON took a stimulating but realistic stand in discussing the urge for self-improvement which characterizes man. His address to the graduates appears on page 504.

The Review is not published during the summer months following July. This issue, therefore, concludes Volume 50. Number 1 of Volume 51 will be published on October 27 and dated November. Readers who bind their copies are reminded that if they possess nine issues of Volume 50, their files are complete. An index to the volume will be ready on September 30 and will be supplied post free upon request.