November 1945

TECHNOLOGY REVIEW

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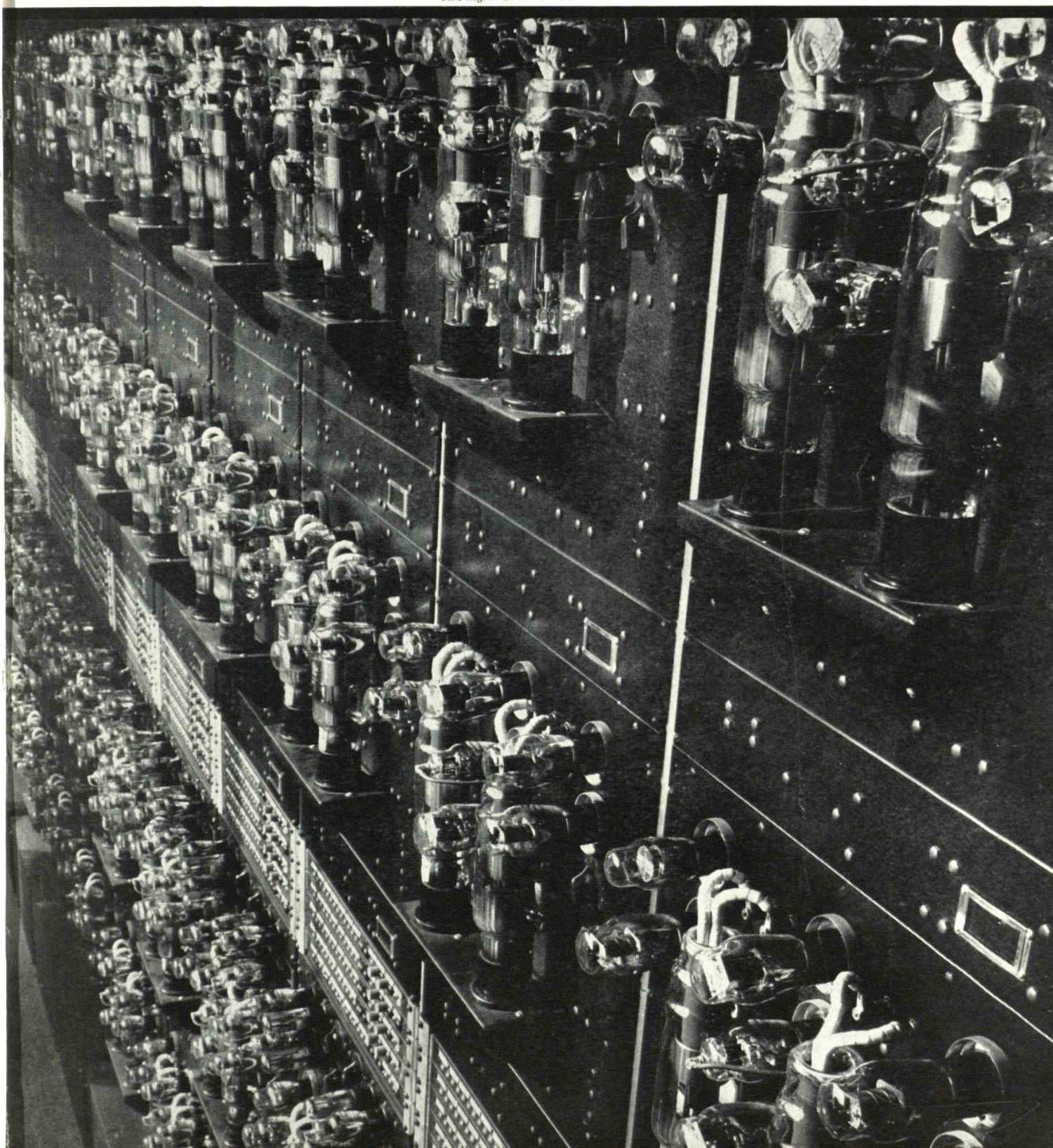
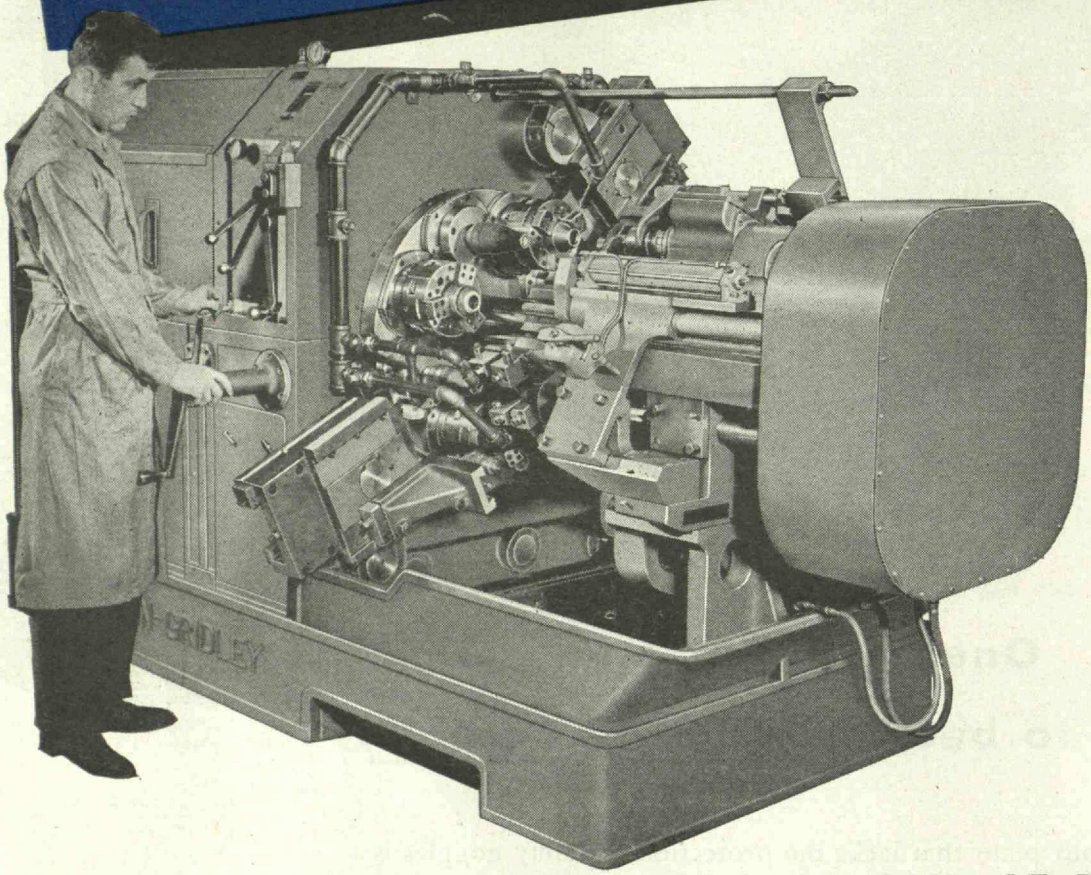


THE TECHNOLOGY REVIEW, November, 1945. Vol. XLVIII, No. 1. Published monthly from November to July inclusive at 10 Ferry Street, Concord, N. H. Publication date: twenty-seventh of the month preceding date of issue. Annual subscription $3.50; Canadian and Foreign subscription $4.00. Entered as second-class matter at the Post Office at Concord, N. H., under the Act of March 3, 1879.

LEADERSHIP
PROVED BY HUNDREDS OF CASE HISTORIES . .



NEW BRITAINS DELIVER . . . AT WAR AND AT PEACE

The automatic chucking machine business had its inception in the heart of Connecticut in the year 1911. Basic designs and operational features met with immediate success, for here was new speed and production of efficiency.

New Britain chuckers built in 1911 were years ahead in functional design and application, and extensive research coupled with advance engineering has kept them way out in front . . . to cope with mass production methods and keen competition.

New Britains' ability to speed up production of essential ammunition parts and equipment proved of great importance back in '18. During the era of industrial development that followed World War I, American initiative and ingenuity accounted for many refinements in design . . . to meet rigid specifications, quality and quantity production demands.

Today, the Army-Navy "E" award and three continuous performance stars are evidence of New Britain Machine's outstanding contributions to achieve a decisive Victory in World War II . . . a combination of the best in men, machines and materials to produce the ultimate in multiple spindle bar and chucking machines.

NEW BRITAIN AUTOMATICS

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

M-01017

...Here's One

Extensive metallurgical research is resulting in new manufacturing economies while turning out higher quality parts and products. The motor end frame is one of several typical jobs employing an alloy in preference to cast iron.

The aluminum alloy part presented an extreme chucking problem due to its 6.741" diameter and fragile 1/8" section. The selection of New Britain 88's proved to be the solution. Twenty-two (22) well-placed tools in eight positions are required to completely machine the rough casting . . . a part every 11.8 seconds. The machines are running 574 R.P.M. and produce 305 motor end frames per hour.

FIRST POSITION
Load in two-jaw hydraulically operated chucks.

SECOND POSITION
Face end of skirt from cross arm — Core Drill .7775 diameter — Rough turn 6.738 diameter. Face end of hub.

THIRD POSITION
Core drill 1 1/8" diameter and 15/16" diameter. Rough turn 1.330 diameter.

FOURTH POSITION
Single point bore .7775 and 1 1/8" diameters. Rough turn 1.433 diameter.

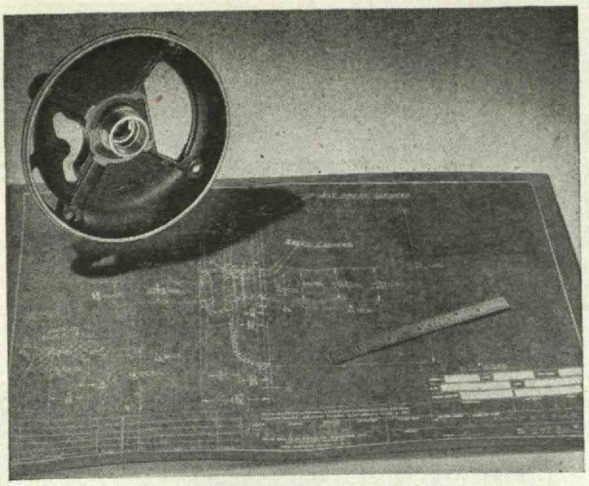
FIFTH POSITION
Single point bore .7775 and 1 1/8" diameters and chamfer 1 1/8" diameter. Semi-finish turn 6.738 diameter.

SIXTH POSITION
Finish face side of skirt from cross arm. Rough recess both grooves.

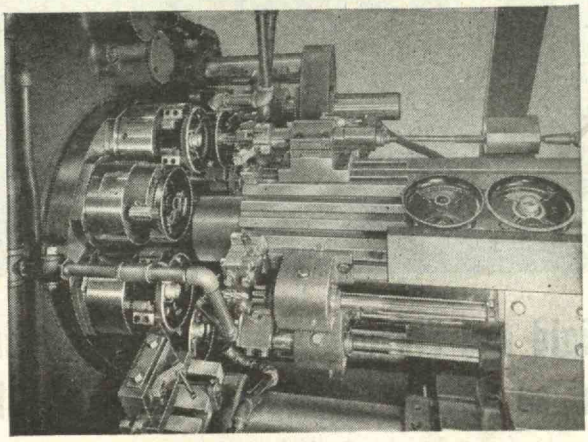
SEVENTH POSITION
Finish recess both grooves.

EIGHTH POSITION
Ream .7775 diameter — Finish turn and chamfer.

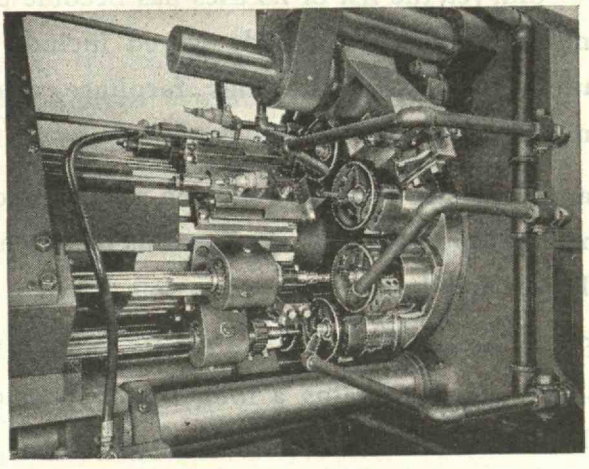
This difficult machining of an aluminum alloy motor end frame is but one of many outstanding applications of New Britian automatics . . . bar and chucking machines that are establishing new records daily for accurate and economical production. To manufacture your peacetime quality product at less cost . . . machine it on a New Britain multiple spindle automatic.



Finished Aluminum Alloy Motor End Frame machined to exacting tolerances.

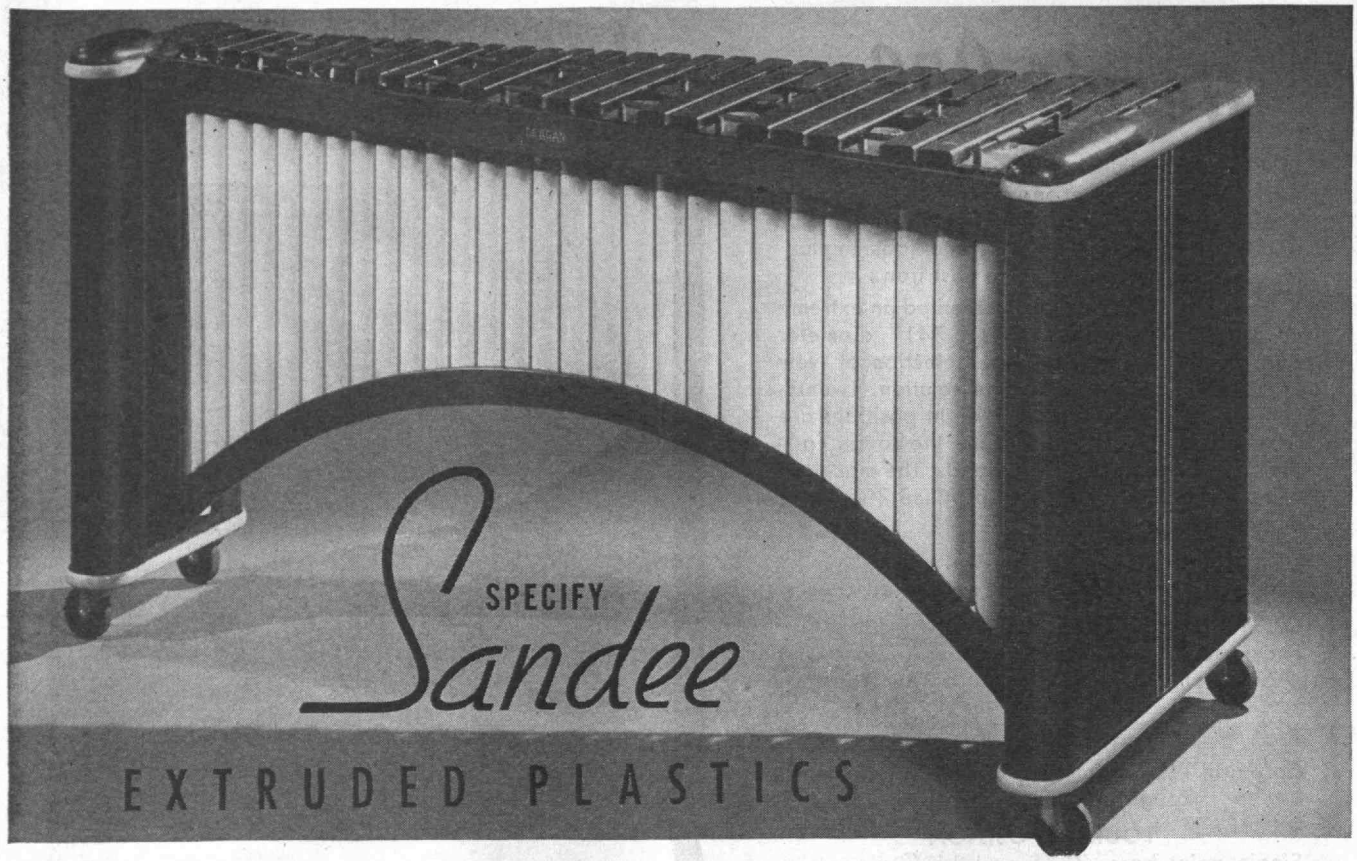


Front View of a New Britain Model 88 used in finishing the motor end frame . . . Note accessibility through open end construction.

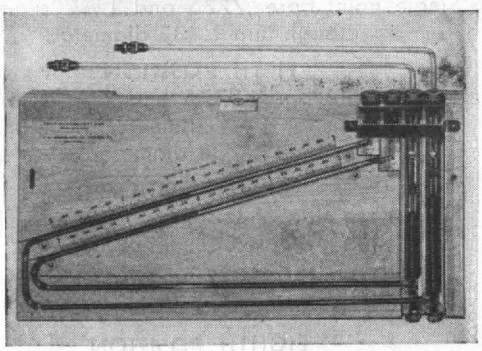


Rear View of a Model 88 shows relationship of cross arms to toolslide . . . Permitting more efficient tool layout and production.

The New Britain machine line includes four, six and eight multiple spindle automatic bar machines up to 2¼" capacity. Also a wide range of four, six and eight multiple spindle automatic chucking machines up to 12" capacity.



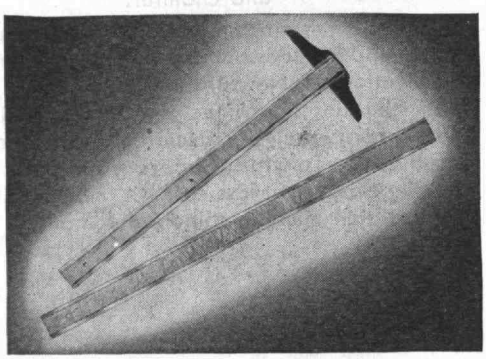
Rigid and Flexible Extrusions Are Being Used for an Almost Endless List of Modern Products



THE DRY extrusion of plastics is only a few years old, yet, the list of its uses has become practically endless. Industries already served include transportation, utilities, foods, drugs, furniture, refrigeration and others.

Sandee plastic engineers will be glad to cooperate in the development of any applications in which extruded plastics may be utilized.

If you do not have a copy of the Sandee Reference Book, which contains a long list of specific uses for plastic Extrusions, write for a copy today.



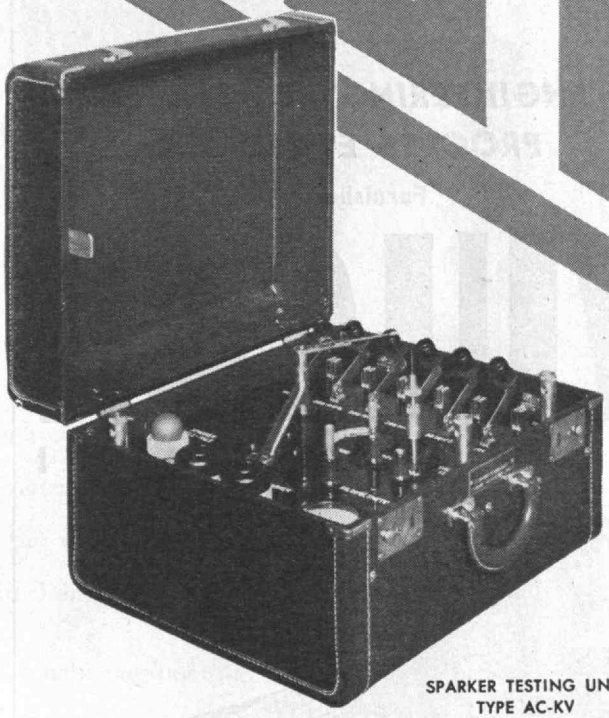
ELMER SZANTAY, M.E. '35
General Manager

SALES REPRESENTATIVES IN 19 PRINCIPAL CITIES

Sandee Manufacturing Company

3945 NORTH WESTERN AVENUE · CHICAGO 18, ILLINOIS

EXTRUDED PLASTICS AND SPECIAL TOOLS



SPARKER TESTING UNIT
TYPE AC-KV

This unit is suitable for testing the fault-relay circuit response efficiency of all types of wire sparkers of any make — both as to speed and as to sensitivity — from any 110 volt supply, or in place on automatic reelers. It is also equipped with an electrostatic kilovoltmeter and divider for checking sparker testing voltages up to 20,000.

The speed of response of fault relays (ranging from .001 to .1 second) is tested by a constant-speed motor, driving brass sectors of various widths past an adjustable stationary needle point.

Fault relay sensitivity is tested by placing variable series capacitances (from 25 to 575 micro-microfarads) in the test (high-tension) circuit of the wire sparker.

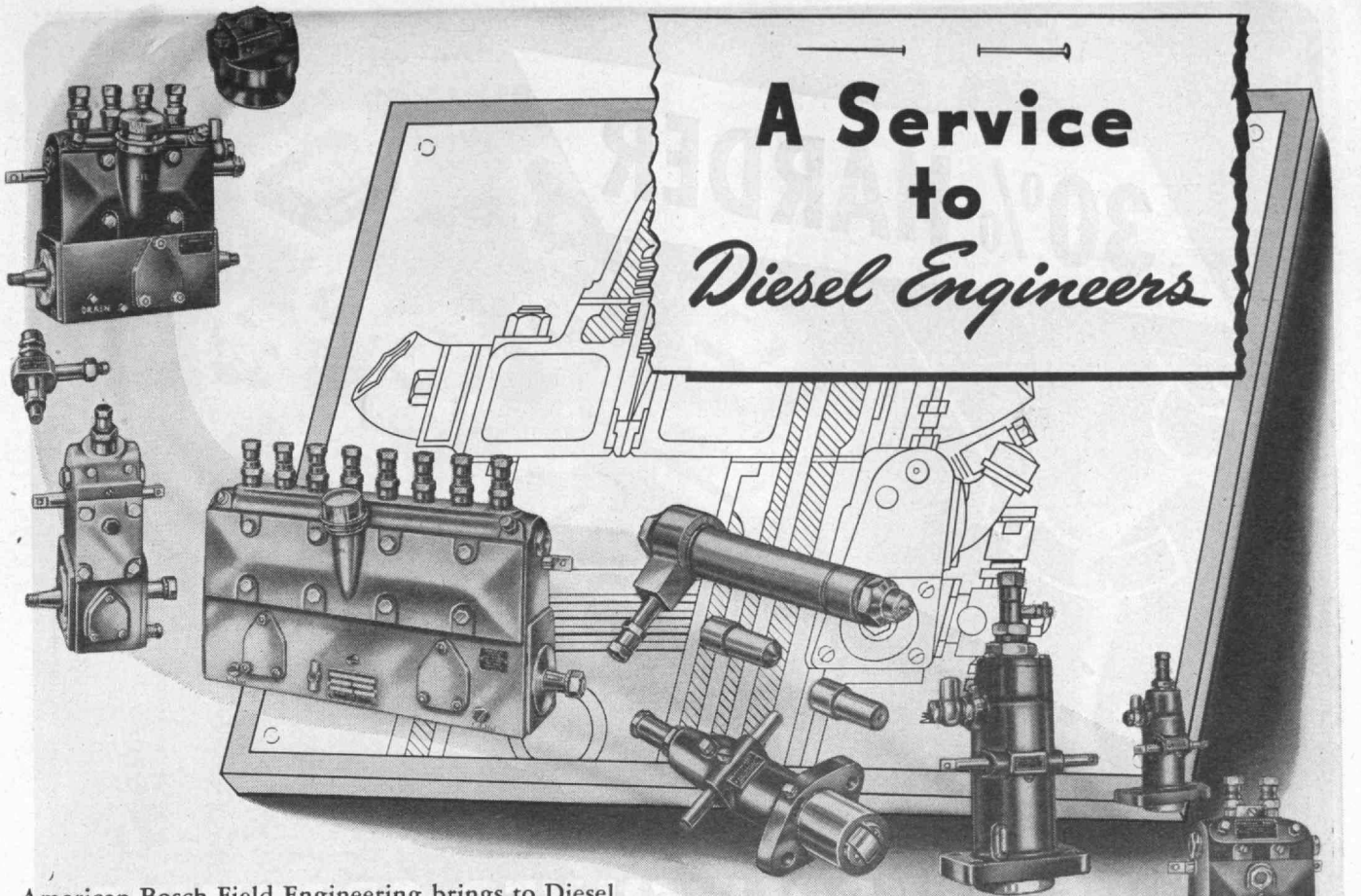
The unit is furnished complete with needles, attachment cords and fittings, is enclosed in an imitation leather case, 17½" x 15" x 11", and weighs only 26 lbs. Electrical parts are mounted on a hinged bakelite panel, with space underneath for accessories.

Send for specification sheet

JAMES L. ENTWISTLE CO.

43 CHURCH ST., PAWTUCKET, R. I.

WORLD'S LEADING MANUFACTURER OF SPARK-TESTING EQUIPMENT



A Service to *Diesel Engineers*

American Bosch Field Engineering brings to Diesel engineers a vast accumulation of knowledge and experience in the design and application of fuel injection systems for Diesel engines.

This field engineering service begins during engine design and is constantly active through the periods of layout, initial assembly, experimental testing, development, and regular production.

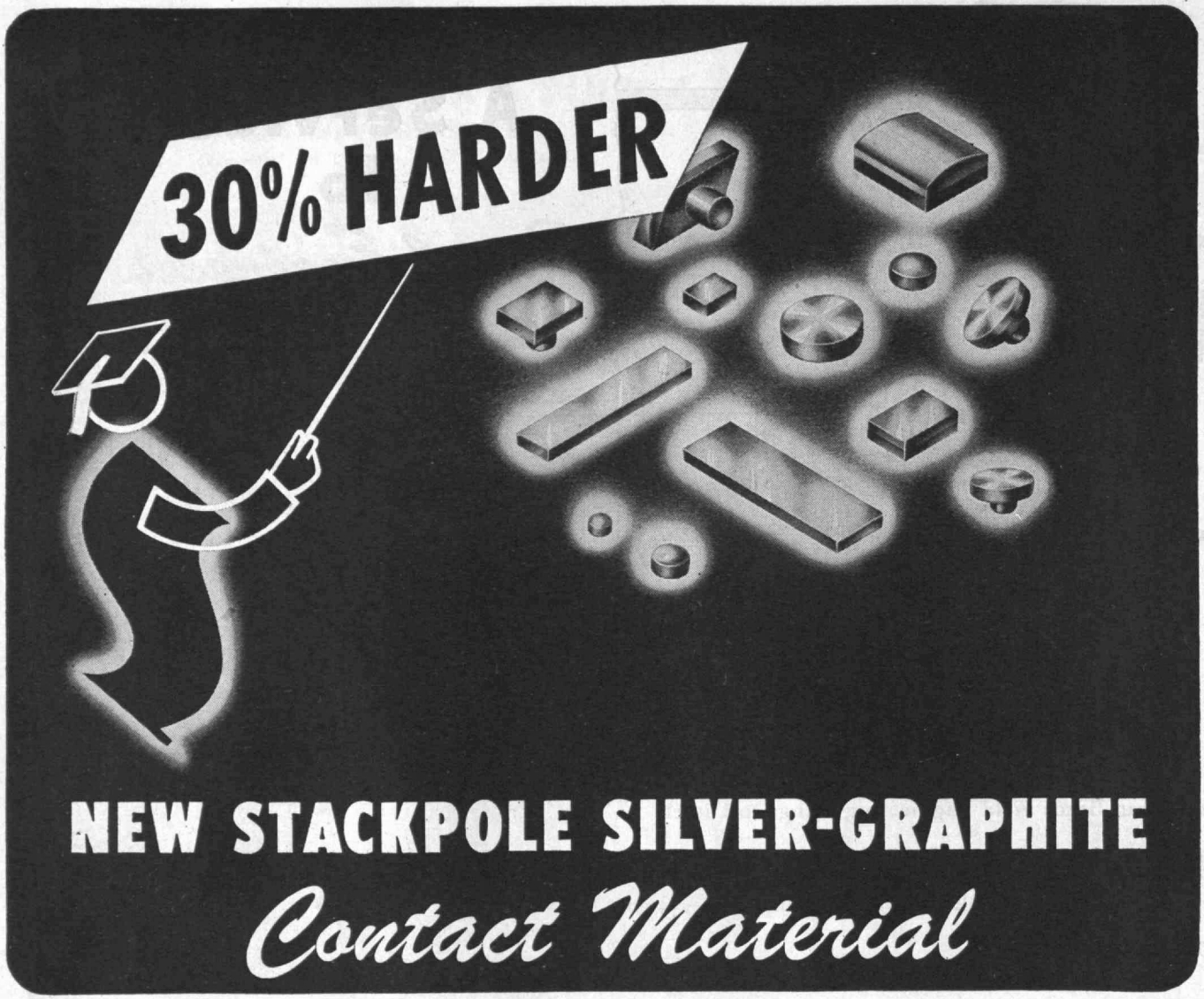
But the service does not stop here. It carries on further . . . . . through quality control and broadly into field service. Its benefits are ultimately felt equally by the engine manufacturer, the equipment manufacturer, the distributor, and the user.

Backed by craftsmanship which has become famous, this engineering service is largely responsible for the predominance of American Bosch Fuel Injection systems on America's Diesel engines.

AMERICAN BOSCH CORPORATION • *Springfield 7, Massachusetts*

AMERICAN BOSCH

PRECISION PRODUCTION FOR POWER



NEW STACKPOLE SILVER-GRAPHITE *Contact Material*

LONGER LIFE...GREATLY IMPROVED CONTACT DROP

A NEW Stackpole development comes as the first *major* Silver-Graphite Contact advancement since Silver-Graphite Contacts were pioneered years ago by Stackpole and Westinghouse engineers in collaboration.

30% harder than conventional Silver-Graphite types, but with no change in the composition of its ingredients, this new Stackpole material greatly prolongs contact life under short circuit conditions, assures far better contact drop, and improves wearing qualities tremendously. Operating against a silver tungsten contact on an actual circuit breaker application, the material has proved its ability to withstand up to 15,000 amperes under short circuit conditions!

It is an ideal material for a wide variety of circuit breaker, contactor, and relay applications. Composition ranges from 3½% to 10% graphite to meet individual operating conditions, and the contacts can be produced in practically any required shapes or sizes.

STACKPOLE CARBON CO.
ST. MARY'S, PA.
EXPORT: Stackpole Carbon Co.
254 W. 34th St., New York 1, N. Y., U. S. A.

STACKPOLE

MOLDED METAL CONTACTS

Silver-graphite . . . Silver-copper-graphite . . . Gold-graphite . . . Silver-nickel . . . Silver-molybdenum
Silver-tungsten . . . Silver-nickel-molybdenum . . . Silver-nickel-tungsten and dozens of special alloys