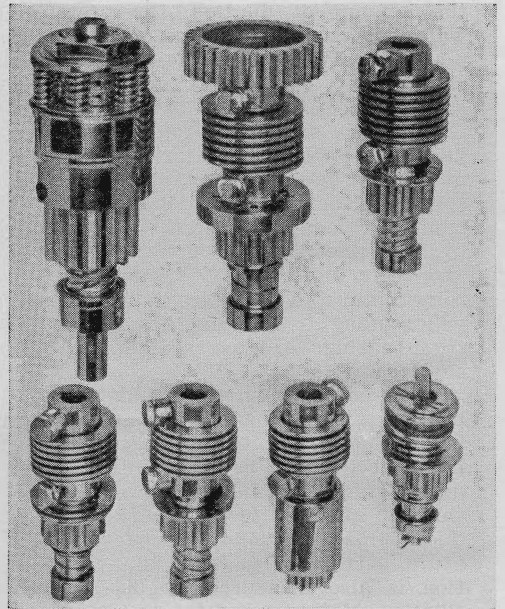




COLOR-CHANGING PAINT signaled cylinder temperatures in German test engines used to check motor fuels, according to a German technical publication. Instead of using a test cylinder studded with numerous thermometers or thermocouples, technicians sprayed one as at the left with a temperature-sensitive paint. This changed color at various well-defined temperature ranges. The cylinder, at first of uniform color, turned many-hued as it heated up in operation. By studying the shift of border lines between the several color zones, Nazi engineers could compare the operating temperatures of various portions of the cylinder to check the combustion characteristics of aviation and other motor fuels.

STARTING WAR MACHINES is a specialty at the Eclipse Machine Division of Bendix Aviation Corporation. Shown at right are seven of 500 standard and special starters. That at the upper left in the photo is used in tanks, the next is for PT boats, and that at right in the lower row is for starting generator plants. The others are typical models for jeeps and other military vehicles having internal-combustion engines.



SELENIUM-TREATED OIL is shown by tests at the Battelle Institute, of Columbus, Ohio, to support increased bearing pressures and to resist the tendency of motor oil to oxidize and form sludge and gummy resins. The nonmetallic chemical, a by-product of copper mining, is used in photoelectric equipment, talking movies, glass coloring, and various other industries.

PART TRUCK, PART TRAIN, this hybrid machine is a locomotive built from the junked cab, engine, and chassis of a truck. It is equipped with flanged train wheels and a discarded cowcatcher so it can ride the rails, and is powerful enough to haul a loaded freight car. Machinist Frank P. Hatfield, of Harriman, Tenn., used his ingenuity in putting it together to pull tank and gondola cars on the tracks at the naval air station at Houma, La.

