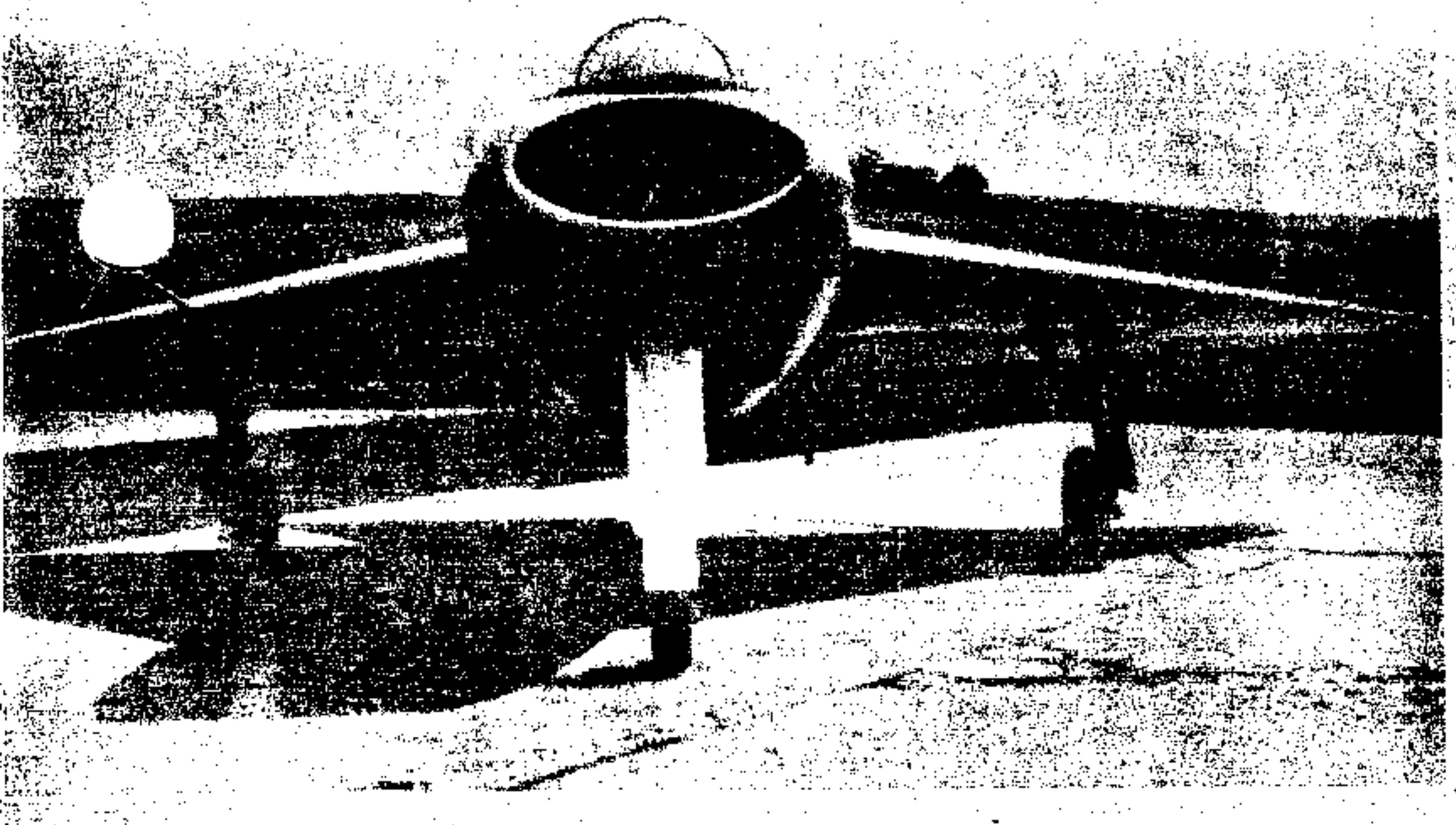


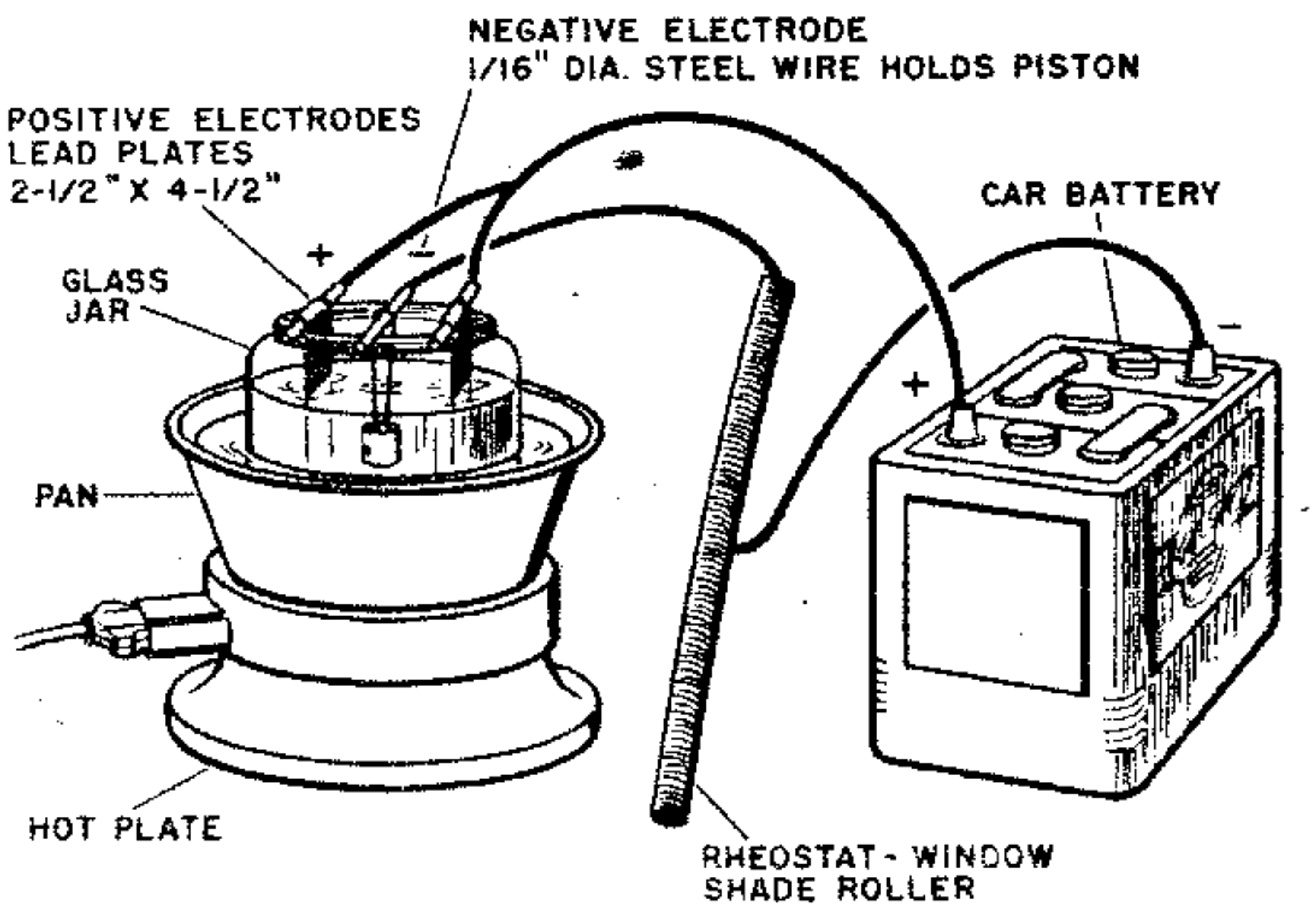
Boulton Paul P. 111

Drawing by BJÖRN KARLSTRÖM

■ Ever since Allied technical crews discovered several examples of German experiments in Delta wing aircraft, British and U.S. high-speed aircraft designers have been busy probing the possibilities of the triangular planform wing for supersonic aircraft.

The shape, which derives its name from the Greek letter Delta (Δ), is eminently suitable, because of its acute angle of sweep, for speed in the transonic and supersonic ranges. Besides displaying excellent stability characteristics at high speed, this type of wing is particularly adaptable for use with very thin airfoils because the triangular shape offers great structural rigidity. The first known examples, found in Germany after the war, were the work of the noted aerodynamist Dr. Alexander Lippisch—one was a Delta experimental glider, the DM.1, and the other a mock-up of a supersonic fighter, the P.12. Since then, the British have produced three experimental research aircraft of this configuration, the Avro 707, which was destroyed in a crash; an improved version, the Avro 707B, displayed at the British Aircraft Constructors show at Manchester; and the latest one, the Boulton Paul P.111, shown here. In the United States, the Consolidated Vultee Aircraft Corp. announced in February 1949 their Delta model, the XF-92.

Inasmuch as the Boulton Paul P.111 was a hush-hush project until it flew in October 1950, very little is known about it. Unlike is Avro predecessors, it has a very thin wing and is equipped with flaps which are not present on either the Avro or the XF-92. An unfavorable characteristic of the Delta wing is its high stalling speed and poor stability at lower speeds. Undoubtedly the flap on the P.111 is an attempt to correct this condition. A parachute brake in the tail of fuselage further reduces ground run in landing.



You Can Chrome—Plate Pistons

By C. O. WRIGHT

In the battle for more rpm's you can get out in front by utilizing "CO's" piston-plating method

■ The difference between a hot motor and a sick, hard-starting and missing one may be only wear on the piston that an ordinary micrometer could not measure. Too loose a fit on the piston not only decreases compression above the piston, it weakens the crankcase compression, lessens the by-pass charge and makes needle valve adjustments erratic. An easy repair may be made by chromium-plating the piston if it is a motor without rings.

Chromium is the ideal metal for piston plating as its coefficient of friction is low and it unites well with iron and steel. It will not come off. Chrome is not only as slick as banana peel, it is almost as hard as diamond. Chrome-plating is not expensive and not too difficult if you are willing to go at the job with sufficient deliberation and care and if you are willing to follow the simple directions given below without being too concerned as to the technical reasons why.

During the last eight years I have plated hundreds of pistons, usually with good success, that is, with motors coming out hotter than when new. If the motor is of the sleeve piston (*Continued on page 70*)