

Blasting Galvanometers

by Mark Bohannon

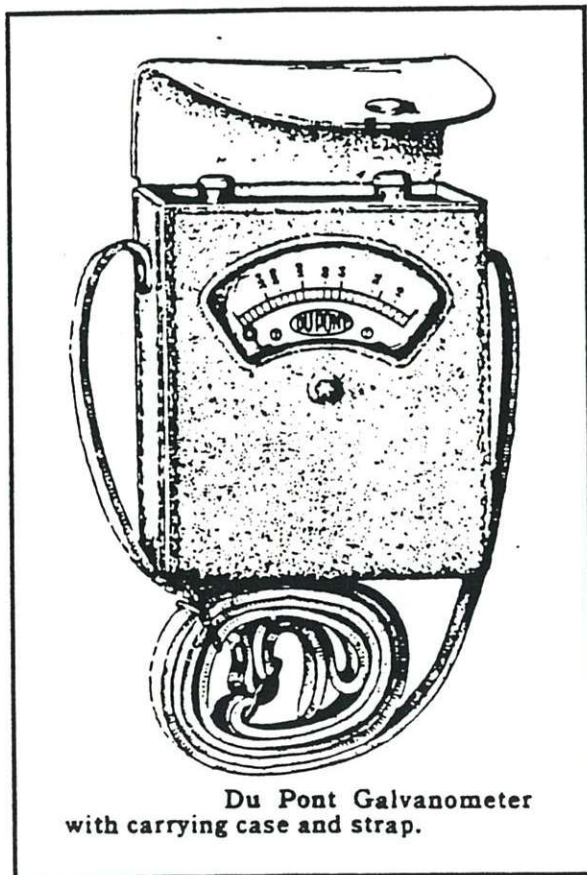
The galvanometer is an instrument used by powdermen to test electrical blasting caps and blasting circuits to determine whether or not the blasting circuit is "closed" and in the proper condition for the blast. A blasting circuit may be defective by being "open" or have a short circuit in which case the circuit is defective. Galvanometers are also used to determine the approximate resistance of a circuit.

The galvanometer consists of a silver chloride battery and meter contained in a case usually made of Bakelite and metal with two contact posts. This is in turn contained in a leather carrying case with a strap and measures about 3" x 4" x 2" deep. The small silver chloride dry cell battery furnishes the very weak current that is necessary to move the meter pointer across the graduated scale. The current sent through an electrical blasting cap from this battery during a test is less than one-tenth the strength required to explode it.

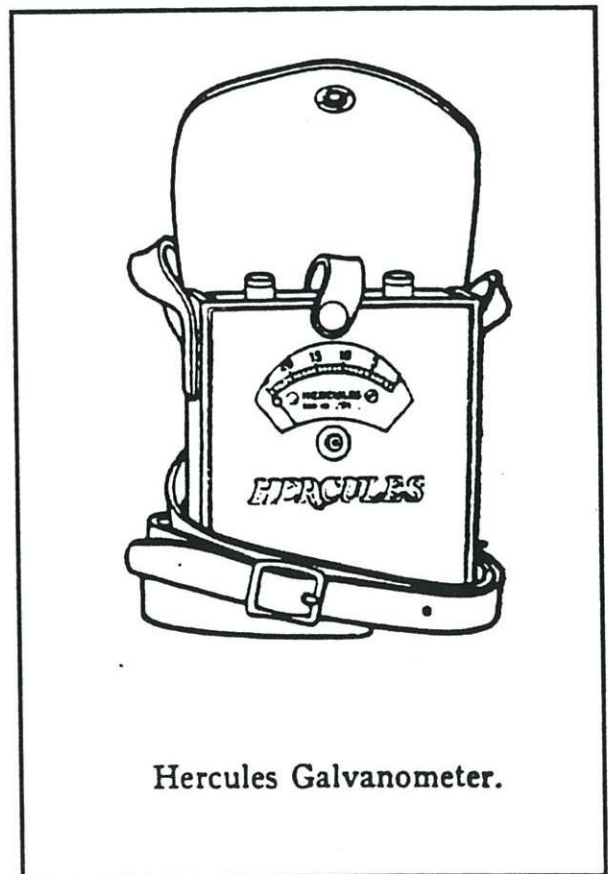
To make a test, the blaster touches the two ends of the wires of a cap or series of caps to the two contact posts on the galvanometer. If there is a closed circuit, the needle will immediately move over the scale. If there is a break or a bad cap, the meter needle will not move.

To test the strength of the battery, a short piece of copper wire is placed between the two contact posts. The wire having virtually no resistance, will cause the meter needle to move to its limit. If it doesn't, the battery is weak and should be replaced.

Blasting galvanometers, like most other blasting accessories, were sold by most major powder companies. Many have a brass tag on the outside leather case with the powder company's name.



Du Pont Galvanometer
with carrying case and strap.



Hercules Galvanometer.