dial is graduated so that the pointer, by its greater or less deflection, indicates the amount of current passing.

Usually a shunt or number of shunts are provided. Most of the current passes through this, but the dial is graduated to indicate the current through the shunt plus that actually flowing through the coil of the milliamperemeter. When more than one shunt is provided, the contact is marked with a number (*e.g.*, 5), which means that the figures on the dial must be multiplied by five to obtain a correct reading.

This type of milliamperemeter is known as "dead-beat," since the indicator comes to rest rapidly, and does not swing back and forth on the dial. This is due to the lines of force generated in the metal framework round which the small coil is wound.

Another type of milliamperemeter is the "hot wire." This consists of an indicator attached to a length of wire. When a current is passed through the wire it becomes hot and increases in length, and the indicator reads on a dial graduated to show the amount of current passing according to the expansion of the wire.

The D'Arsonval milliamperemeter will only give accurate readings of unidirectional currents, but the hot-wire instrument can be used for alternating current also.

The amperemeter is constructed on similar principles to the above, but is made for heavier currents, and graduated in amperes.

Variation in Current Strength.—It has been found in certain types of cases, generally speaking those in which some muscular contraction is desired, that results are much improved by partially interrupting the current at regular intervals. The current does