

shock. If, on the other hand, these precautions be neglected, an earth connection may be attended with very grave or even fatal results. Generally speaking, it is better not to employ the full body bath unless some form of "earth-free" generator, such as the pantostat, is available. If the mains must be used, a four-cell Schneec bath has nearly the same effect as, and is much safer than, the full body bath.

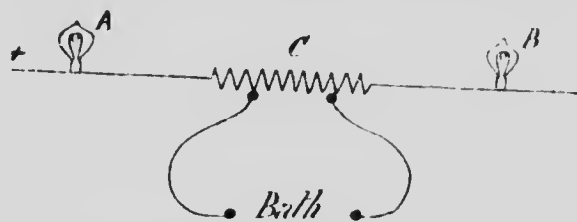


FIG. 5. —RESISTANCE FOR FULL BODY BATH OFF MAINS.

A and *B*, lamps; *C*, wire resistance.

Measurement of Current.—Direct, or the ordinary galvanic, current is measured usually by some modification of the galvanometer. The D'Arsonval milliamperemeter may be described as a type. This instrument consists essentially of a horseshoe magnet, between the poles of which is hung a coil of thin wire, wound upon a metal framework, and containing an iron core. This coil is connected with a pointer reading on a dial graduated in milliamperes, and is held in position by a spiral watch-spring so that the pointer indicates zero on the scale. The coil is then in such a position that its hollow centre, or its core, is at right angles to a line joining the poles of the horseshoe magnet. If a current be passed through the coil, it will immediately tend to turn so that this core is in a straight line with the line joining the poles of the horseshoe magnet. This movement is opposed by the spiral spring, and the