

two sets of electrodes are never in actual contact, a certain amount of water always separating them.

The therapeutic applications of galvanism are very varied, and the rationale of this treatment is best considered by referring to the action of a constant current passing through an electrolyte (Chapter I.) If this has been mastered, it can readily be understood that many complex changes of an electrolytic nature will take place in the fluids of the human body, containing in solution as they do a very large number of electrolytes. The therapeutic benefit of

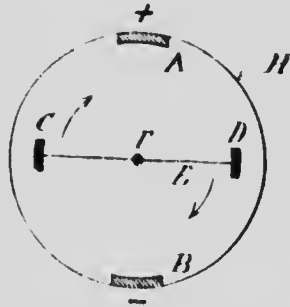


FIG. 6. WATER RESISTANCE.

*H*, Glass bowl containing water; *A* and *B*, electrodes connected to mains; *C* and *D*, electrodes connected to patient, attached to rod *E*; *F*, central point of *E* upon which *E* is pivoted.

galvanism certainly depends to a great extent on this electrolytic or ionic action. It is probable that ions resulting from disordered metabolism, disease, and fatigue, are driven out of tissues in which they have accumulated, fresh ions introduced, and a general ionic rearrangement brought about. It is obvious also that in some circumstances such disturbance of ionic arrangement may be detrimental to the organism, and ill effects result from its employment.

It will be seen from the above that the term