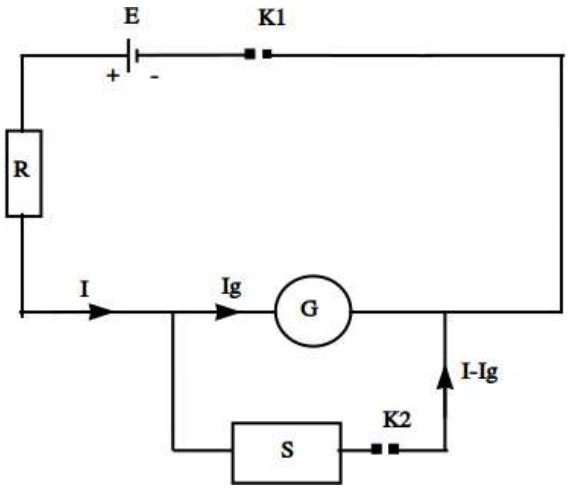
Galvanometer Half Deflection Method

Aim: To determine resistance of a galvanometer by half-deflection method and to find its figure of merit

Apparatus: Cells, Galvanometer, Keys, Resistance boxes, Connecting wires etc

Principle:



Resistance of the Galvanometer $G=\frac{RS}{R-S}$ where S is the value shunt resistance for half-deflection in the Galvanometer

The figure of merit of a galvanometer is the quantity of current required to produce a deflection of one division in the galvanometer.

Figure of merit $k=\frac{E}{(R+G)\theta}$ where E is the EMF of the cells used

Observations:

EMF in the cell E = V

Sl	Resistance R ohm	Deflection in the Galvanometer (θ)	Shunt Resistance for Half Deflection (S) ohm	Galvanometer Resistance $G=\frac{RS}{R-S}$ ohm	*Figure of merit* $k=\frac{E}{(R+G)\theta$ *Amp/div*
1 2 3 4 5					

Mean value of Galvanometer Resistance = ohm

Mean value of Figure of merit = *Amp/div*

Results:

Resistance of the Galvanometer = ohm

Figure of merit of the Galvanometer = *Amp/div*