meter needle commenced to move away from the stationary position assumed under the influence of the volta effect, when a pressure of approximately 8 cms. of mercury was reached, and the direction of displacement was such as to correspond to the acquisition of a positive charge. The sign of the charge acquired, it will be seen, fitted in then with what was to be expected from the absorption of the rays. For the higher pressures the rate of motion of the needle as it moved to take up

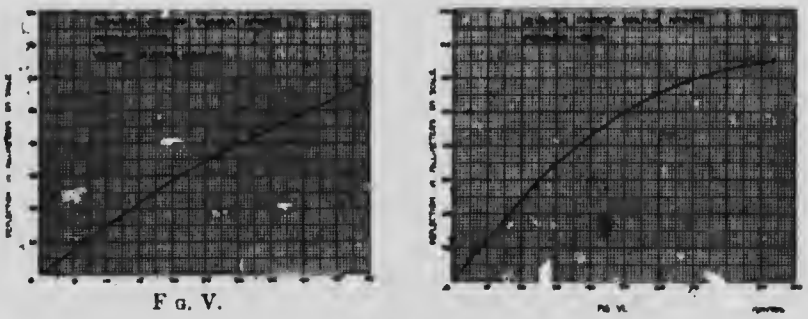

FIG. V.

TABLE III.

Time in Min.	Deflection in mm.
0	0
7	11
12	17
17	24.5
27	35
34	42.5
39	48
50	58
58	65

the deflection corresponding to a selected pressure was slow, and on this account the second line of procedure mentioned above was followed. In taking the observations the pressure was reduced as low as possible and then the rate of motion of the needle noted as it moved out to take up the equilibrium position.

Examples of these movements of the needle are given in the numbers recorded in Tables III and IV, and in the curves drawn from them and shown in Figs. V and VI. In the one case the movement corre-