Each has a width of ¾ to 1¼ inches as desired, perpendicular to the axis, and a length of about six inches parallel to it. Each magnet is wound with fifty-five turns of insulated wire, and the wires are led out through the hollow axle to a connection board so arranged that the magnets can be connected in series, or

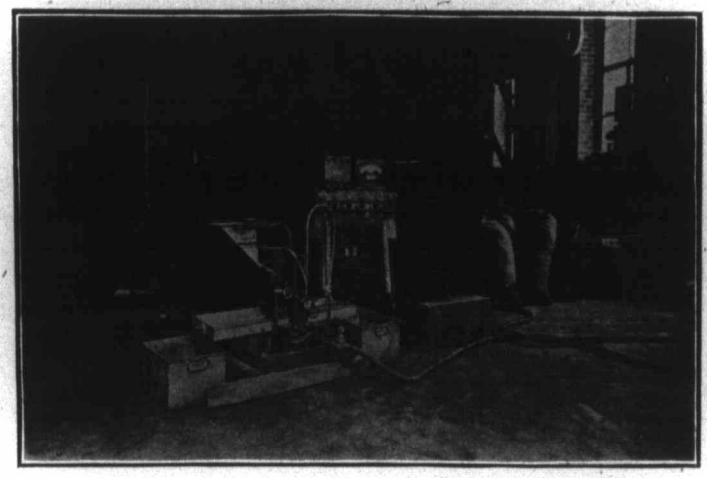

FIG. 1. View of Apparatus.

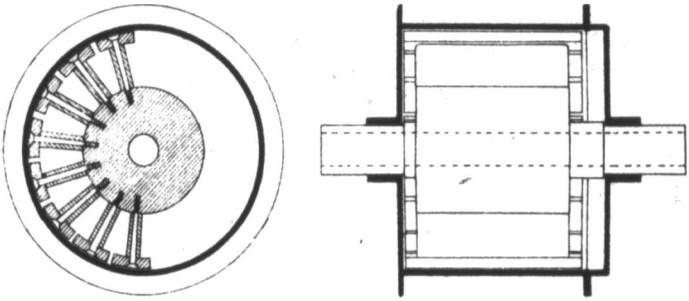

FIG. 2.

Sectional Elevations of Separator.

parallel, and each can be given either north or south polarity. In the experiments described below, the magnets were all in series, with alternate polarity thus: N-S-N-S-N-S. The magnets do not revolve with the cylinder, but may be set to cover any 180 degrees