

parts with to *P*, becoming neutralized; under inductive influence of *X*, *A* reaches *L*, where the negative portion of its neutral charge is repelled once more along *Z*, leaving *A* with a positive charge. In this way plates *Y* and *X* acquire positive and negative charges, and these charges are stored on large brass balls. Discharge will take place through the air between these balls if they are brought close enough together. The violence of the discharge is much increased, though rendered intermittent in character if *X* and *Y* are connected with the inner coats of Leyden jars, the outer coats of which are earthed or connected together.

The Holtz and the Wimshurst machines are similar in principle, though differing in detail. The Holtz requires to be given a small preliminary charge before it can be started. The polarity of all these machines is apt to vary on different occasions.

Methods of Application.—The patient is usually seated on a chair placed on a raised wooden platform insulated by means of glass legs. A metal plate may be placed on the platform, to which one pole of the static machine is connected. The other pole may be connected to various electrodes, generally consisting of an insulated handle with a brass terminal (ball or spikes), or a glass vacuum electrode (see High-Frequency) may be used.

Types of Application—1. *Static Bath*.—One pole connected to the platform, the other connected to earth, the brass balls or the poles (prime conductors) being separated to the full extent.

2. *Morton Wave Current*.—Connections the same, but prime conductors at first in contact, then gradually separated, a continuous series of sparks passing between them.

3. *Static Spark and Static Breeze*.—Connections as before, except that the terminal previously earthed