

CHAPTER II

STATIC ELECTRICITY

STATIC electricity has been described as electricity without motion. It is of very high voltage or potential, and small amperage. The existence of a static charge on any object implies that the object is perfectly insulated, otherwise the charge would immediately be dispelled. The simplest example of static electricity is afforded by rubbing a glass rod with a silk handkerchief. The glass receives a positive charge and the silk a negative. The glass rod, being a non-conductor, will retain the charge at the part not held in the hand until the finger is brought close to it, when a tiny spark will leap across to the finger, the rod thus being discharged.

The simplest form of electro-medical static machine for descriptive purposes is the Teepler (Fig. 1). In this there is a fixed glass plate *D*, and a revolving glass plate *E* very close to it. On *D* are two strips of metal *X* and *Y*, which are connected with metal rods ending in collecting combs or brushes, *O* and *P*, which rub the surface of *E* distant from *D*. On this surface of *E* also are attached strips of metal, *A*, *B*, *C*, etc., arranged in a radial manner. There are also a pair of brushes *L* and *M*, connected by a rod *Z*, which rub these pieces of metal. The plate *E* is rapidly revolved. If *A* is followed, the following changes take place: The friction of the brush *L* produces a positive charge in *A*. Negative electricity