

condition, this fact may be thus generally stated, that bodies in the same electric state repel each other, in opposite states they attract.

The effects produced upon bodies by the passage of accumulated electricity through them, are various and important. When discharged through steel, it frequently induces the magnetic property; when through magnets, it often destroys or disturbs their magnetism. The temperature of metals is raised when they are employed as conductors; and if the size of the metallic substance be proportioned to the intensity of the electric agent, fusion will be effected. Light is produced when electricity passes through elastic fluids, or liquids that have an inferior conducting power. Chymical effects, such as the composition and decomposition of bodies, may, under certain circumstances, result from the conduction of electricity. When the animal body is made the medium of transference, muscular action of a more or less violent character is produced, and instances are on record in which life has been destroyed. By these effects, the presence of accumulated electricity is determined; and when its quantity and intensity are not sufficient to produce them, the phenomena of attraction and repulsion never fail to give evidence of its presence.

#### IDENTITY OF ELECTRICITY AND THE AGENT THAT PRODUCES LIGHTNING.

The identity of agents is to be determined by the identity of their effects. Franklin seems to have recognised this principle; for, having observed that many of the effects produced by lightning were in a lesser degree occasioned by accumulated electricity as derived from the machine, he suspected that the agencies might differ in no other respect than in intensity. Among their many points of resemblance, he noticed that their motion from one irregular conductor to another is never in a right line; that they always strike the highest bodies, preferring those that are pointed and good conductors; that they ignite combustible bodies; fuse the metals; affect magnetic polarity; and destroy animal life. This similarity of effect might have been considered by some persons as a sufficient proof of the identity of the cause which produced lightning, and that we call electricity. But Franklin was not satisfied with any thing less than a demon-