

ingly subtile fluid, while others imagine that there are two such fluids ;—some believe electricity to be a property of matter, and others identify it with gravity. But, whatever opinion may be entertained concerning the agent, there is no doubt as to the means by which it may be excited, the conditions it obeys, and the effects it produces.

Supposing electricity to be present in a latent state in all matter, it may be disturbed by five means ; friction, chymical action, the contact and disunion of magnetic poles, the unequal circulation of heat through metals, and the muscular action of certain fishes. The electricities derived from these several sources have received different names, but are distinguished from each other by comparative rather than by absolute qualities, all producing the same effects, though not in an equal degree. A few general remarks seem to be necessary for an accurate explanation of the phenomena, to which we must refer.

When electricity is excited upon the surface of a substance, as always happens when two substances, whatever their nature, are rubbed together, it may be transferred, under particular circumstances, from place to place, and even accumulated. But all bodies are not capable of conducting electricity ; for, while some absolutely resist its progress, there are others that give it an easy passage. Glass, the resins, and atmospheric air, are not conducting substances ; while the metals, water, and aqueous vapour transfer it with great facility. It might, therefore, be expected, that while the one class conducts electricity of the smallest possible intensity, the other can only transmit it when its resisting force is overpowered by the energy of the electric agent.

According to some persons, there are two kinds of electricity, while others acknowledge the existence of but one, though they admit that its conditions may vary. Without attempting to prove or disprove either of these statements, may be mentioned that there is an evident difference of character, according to the manner and circumstances under which the agent is produced. A substance charged with electricity produced by the excitation of glass, will attract one that is charged with the electricity of resin ; but if the two bodies be excited with the electricity of either glass or resin, they will repel each other. Now, if we consider that in one case the agent is in a positive, and in the other in a negative