

obstacle to the further developement of its principles, the subject being immediately taken up with a kind of prophetic ardor by Volta, who at once generalized the phenomena, rejecting the physiological considerations introduced by Galvani, as foreign to the inquiry, and regarding the contraction of the muscles as merely a delicate means of detecting the production of electrical excitements too feeble to be rendered sensible by any other means. It was thus that he arrived at the knowledge of a general fact, that of the disturbance of electrical equilibrium by the mere contact of different bodies, and the circulation of a current of electricity in one constant direction, through a circuit composed of three different conductors. To increase the intensity of the very minute and delicate effect thus observed became his next aim, nor did his inquiry terminate till it had placed him in possession of that most wonderful of all human inventions, the pile which bears his name, through the medium of a series of well conducted and logically combined experiments, which has rarely, if ever, been surpassed in the annals of physical research.

(374.) Though the original pile of Volta was feeble compared to those gigantic combinations which were afterwards produced, it sufficed, however, to exhibit electricity under a very different aspect from any thing which had gone before, and to bring into view those peculiar modifications in its action, which Dr. Wollaston was the first to render a satisfactory account of by referring them to an increase of *quantity*, accompanied with a diminution of *intensity* in the supply afforded. The discovery had not long been made public, and the instrument in the hands of chemists and electricians, before it was ascertained that the electric current, transmitted by it through conducting liquids, produces in them chemical decompositions. This capital discovery appears to have been made, in the first instance, by Messrs. Nicholson and Carlisle, who observed the decomposition of water so produced. It was speedily followed up by the still more important one of Berzelius and Hisinger, who ascertained it as a general law, that, in all