

Although noticed by others, this fact was, I believe, first distinctly ascertained by Mr. Cavendish, who discovered that, after the combustion of these gases in the proportion before named, there was always produced a quantity of water nearly equal in weight to the gases which had disappeared. This experiment has been so often repeated as to leave no doubt of the fact; and is daily being familiarly exemplified by the burning of gas-lights and the water formed by the process.

Water has also frequently been decomposed, so as by the experiment to leave its composition without doubt; which may be easily done, either by galvanism or by passing the steam of boiling water through a red hot iron tube, (as, for instance, through a gun-barrel,) over a stratum of ignited charcoal; when, if a candle be held to the opposite end of the tube, the hydrogen gas will burn with a vivid flame. It is also remarkable, that Professor Clarke, of Cambridge, has discovered, that hydrogen and oxygen gases burned together by his blow-pipe in the same proportions that form water, give the most destructive flame of any yet discovered, being able by their air, to fuse the hardest and most refractory minerals and metals; substances hitherto deemed by other means quite infusible. From this fact he deduces the most probable and plausible theory of Volcanoes; shewing, from well-known observation, the probability of their owing their destructive flame and effects to sea-water obtaining access to subterranean fires, becoming decomposed, adding, by the gas, to the force of the flame; and, by the expansion of the steam and airs, producing the well-known phenomena of earthquakes, and all the usual consequences of volcanic eruptions.

Water becomes ice when reduced to the temper-