compounds are formed; as when nitrate of baryta* and sulphate of soda are mixed, the nitric acid of the former compound quits its form, and enters into a new compound with the soda; while the salphuric acid quits the soda, and enters into a new compound with the baryta: so that two new compounds, nitrate of soda and sulphate of baryta, are formed. It is evident from what has been said, that there are some laws which govern the union of particles of different natures. Concerning these and concerning the causes propelling the particles to unite, many conjectures have been made, but nothing certain has been discovered. Some suppose that all particles of matter are endued with one of the two electricities, and that these subtle fluids arealways tending to unite. But as we do not intend to enter upon the more abstruse points of chemistry, but merely to take a general and popular view of the science, we will pass on to the next general power alluded to, heat, or caloric.

There are many doubts entertained as to the nature of this agent. It is however generally supposed to be a fluid pervading, more or less, all matter, and has been divided into

I. FREE CALORIC.

II. SPECIFIC HEAT, OR COMBINED CALORIC.

The name caloric has been proposed in the new nomenclature as a substitute for heat, which has by common use been applied merely to the *sensation* of heat. One of the great characteristics of caloric is, that it always tends to an equilibrium. It may

^{*} Although the reader may not yet know what these drugs are, he may still make the experiment alluded to. It would be quite impossible to preserve any regularity of design, if we *topped te explain the nature of each drug alluded to by way of example. They will all of them be explained hereafter.