

been immediately discovered. The laws which govern matter are universal ; and, when once understood, offer a ready explanation of a great variety of appearances, though certain minute differences may be observed, arising from either the nature of the substance upon which they act, or the circumstances under which the forces are developed. But this simplicity of design is equally evinced in the constitution of bodies. All the circumstances of motion and rest to which bodies are subject can be traced to gravitation and centrifugal force, and their composition is attributable to the forces of cohesion and chymical affinity,—the number of physical forms which bodies may take are few, being either solid, liquid, or gaseous, and their chymical composition is directed by laws not difficult of explanation.

Although a superficial examination of the various substances composing terrestrial bodies would lead to a suspicion that there must be an immense number of elementary principles, when the means offered by chymistry are employed, it is found that all, or nearly all, substances are compounds, and that their varieties of form, character, and properties, are to be traced to the admixture, in different proportions, of a few simple principles. According to the present state of chymistry, there are fifty-four elementary substances, or, in other words, substances which the chymist has not yet been able to decompose. Many of these possess properties in common, while others are perfectly opposed to each other in character and effect ; there are some which readily unite with others, and are found abundantly in nature ; there are others which can scarcely be made to enter into the same combinations, and are rarely found ; some are essentially necessary for the maintenance of the present condition of material and animated nature, and others seem so unimportant that their annihilation would not, in the slightest degree, affect any of the present arrangements of nature. Forty-one of these simple substances are metals, and these constitute, in combination with each other and with other substances, the greater portion of matter as exhibited upon the surface of the earth. The following table gives the names of the elementary principles now known to chymists ; and, without entering upon a description of all their properties, the means by which they were discovered, and the compounds they form, we shall state so many of their peculiarities as