

length settled. The Duchies of Limburg and Luxembourg, the dominion of which formed the principal bones of contention, have eventually found a place among the Rhenish provinces. The British merchants are making attempts to bring the horrors of the Spanish war to an end.

CABINET OF SCIENCE.

THE ATMOSPHERE.—If the atmosphere be considered as a vast machine, it is difficult to form any just conception of the profound skill and comprehensiveness of design which it displays. It diffuses and tempers the heat of different climates; for this purpose it performs a circulation occupying the whole range from the pole to the equator; and while it is doing this, it executes many smaller circuits between the sea and the land. At the same time it is the means of forming clouds and rain, and for this purpose, a perpetual circulation of the watery part of the atmosphere goes on between its lower and upper regions. Besides this complication of circuits, it exercises a more irregular agency, in the occasional winds which blow from all quarters, tending perpetually to restore the equilibrium of heat and moisture. But this incessant and multiplied activity discharges only a part of the functions of the air. It is, moreover, the most important and universal material of the growth and sustenance of plants and animals; and is for this purpose every where present and almost uniform in its quantity. With all its local motion, it has also the office of a medium of communication between intelligent creatures, which office it performs by another set of motions, entirely different both from the circulation and the occasional movements already mentioned; these different kinds of motions not interfering materially with each other: and this last purpose, so remote from the others in its nature, it answers in a manner so perfect and so easy, that we cannot imagine that the object could have been more completely attained, if this had been the sole purpose for which the atmosphere had been created. With all these qualities, this extraordinary part of our terrestrial system is scarcely ever in the way: and when we have occasion to do so, we put forth our hand and push it aside, without being aware of its being near us. . . Its effects on light are a constant source of utility and beauty. Without air we should see nothing, except objects on which the sun's rays fell, directly or by reflection. It is the atmosphere which converts sunbeams into daylight, and fills the space in which we are with illumination. . . The contemplation of the atmosphere as a machine which answers all these purposes, is well suited to impress upon us the strongest conviction of the most refined, far-seeing, and far-ruling contrivance. It seems impossible to suppose that these various properties were so bestowed and so combined, any otherwise than by a beneficent and intelligent Being, able and willing to diffuse organization, life, health, and enjoyment through all

parts of the visible world; possessing a fertility of means which no multiplicity of objects could exhaust and a discrimination of consequences which no complication of conditions could embarrass.—*Whewell.*

SINKING DOWN OF MOUNTAINS.—Mountains sink down, or separate into fragments, from the agency of other causes than earthquakes or volcanic explosions. Sometimes the waters of a rapid river, of an agitated lake, or even of a subterranean current, waste, consume, and secretly undermine a mass of rocks, or of solid earth. The beds of sand, gravel, clay, and chalk, which serve as a support, are dissolved or swept away; an excavation is formed, and the superincumbent mass sinks down by its own weight. At other times subterranean waters penetrate under a new stratum, under a vegetable bed; they at first support this crust, then loosen it, tear it off, and at last finally wash it away piece-meal, or swallow it entirely up. Sometimes there is a fissure by means of which part of a mountain is detached from the principal mass and overturned in consequence of its being deprived of its natural support. . . We perceive every where around us nothing but wrecks and ruins; those beds of rocks displaced, overturned, shattered; those lakes so deeply excavated; those caverns which reach down towards the centre of the earth; those peaks which tower to the sky; those precipitous coasts which surround, as with an immense rampart, all the seas of the globe; those Alps which overhang Italy; those Andes which plunge their gigantic sides into the ocean; those forests, those races of quadrupeds, those aquatic animals buried in the earth in mingled confusion: all these circumstances impress us with the awful and overwhelming thought, how vast must have been the heavings and agitations which have contributed to give to the globe its present appearance. . . The general deluge which some have endeavored to represent as impossible, may be naturally explained, merely on the supposition of a general sinking down of the inhabited regions of the earth; then the waters of the sea, instead of being elevated, as has been generally imagined, would have needed only to follow the laws of gravitation, in order to cover the antediluvian world, and leave dry our present continent.—*Mallet-Brun.*

THE REVOLUTIONS OF OUR GLOBE.—The diluvial deposits of mud and clayey sand, mixed with round flints, transported from other countries, and filled with fossil remains of large land animals, for the most part unknown or foreign to the countries in which they are found—those vast deposits which cover so many plains, and fill the bottoms of caverns and clefts of rocks, deposits which took place when the hippopotamus, the elephant, the rhinoceros, the horse, the ox, and the deer, were the prey, even in our climate and soil of England, of the hyena, and the tiger—have been carefully distinguished from the alluvial deposits containing the remains of animals common to the country in which they are found, and are now considered as the most decisive proofs of an immense and ancient inundation. Far beneath the chalky stratum which lies under various alternate layers of marine and fresh water deposits, there have been found, more especially in England, the remains of gigantic reptiles, including crocodiles and other of the lizard tribe, the remains of an era now unknown—for it is above the chalk, and between it and the era of the general deluge, that the explanation of the