

than mine. On the contrary, in parts of Europe where earthquakes are rare compared to America, scientific observers are inclined to admit an intimate connection between the undulations of the ground, and certain meteors, which appear simultaneously with them. In Italy for instance, the sirocco and earthquakes are suspected to have some connection; and in London, the frequency of falling-stars, and those southern lights which have since been often observed by Mr. Dalton, were considered as the forerunners of those shocks which were felt from 1748 to 1756.

On days when the earth is shaken by violent shocks, the regularity of the horary variations of the barometer is not disturbed within the tropics. I had opportunities of verifying this observation at Cumana, at Lima, and at Riobamba; and it is the more worthy of attention, as at St. Domingo, (in the town of Cape François,) it is asserted, that a water-barometer sank two inches and a half immediately before the earthquake of 1770. It is also related, that, at the time of the destruction of Oran, a druggist fled with his family, because, observing accidentally, a few minutes before the earthquake, the height of the mercury in his barometer, he perceived that the column sank in an extraordinary manner. I know not whether we can give credit to this story; but as it is nearly impossible to examine the variations of the weight of the atmosphere during the shocks, we must be satisfied with observing the barometer before or after these phenomena have taken place.

We can scarcely doubt, that the earth, when opened and agitated by shocks, spreads occasionally gaseous emanations through the atmosphere, in places remote from the mouths of volcanoes not extinct. At Cumana, it has already been observed that flames and vapours mixed with sulphurous acid spring up from the most arid soil. In other parts of the same province, the earth ejects water and petroleum. At Riobamba, a muddy and inflammable mass, called *moya*, issues from crevices that close again, and accumulates into elevated hills. At about seven leagues from Lisbon, near Colares, during the terrible earthquake of the 1st of November, 1755, flames and a column of thick smoke were seen to issue from the flanks of the rocks of Alvidras, and, according to some witnesses, from the bosom of the sea.