

The movement of its balance-spring, which could not be heard through the air at that distance, may be perceived with the greatest facility through the inter-medium of the pole or beam. Thus, then, the noises produced in the earth's womb by the crackling rupture and dislocation of solid mineral masses transmit themselves to very great distances, and make themselves heard at a remote point from their place of origin.

According to Humboldt, at Caracas—in the plains of Calabozo—on the banks of the Rio-Apure, one of the affluents of the Orinoco—that is to say, over an area of 15,000,000 square acres—a frightful subterranean report was heard at the very moment, as was afterwards ascertained, that a torrent of lava burst from the volcano of Saint Vincent, in the West Indies, distant 720 miles. To assist the reader in forming a conception of this rapidity of progression, we may remind him that it was just as if the discharges of Vesuvius were simultaneously heard at Dover.

During the great eruption of Cotopaxi, in 1744, the report of the subterrene detonations was transmitted to Honda, a distance of about 500 miles; these two points, moreover, present a difference of level equal to 17,700 feet, and are separated from one another by colossal mountains. During the earthquake of New Grenada, in February 1835, subterranean noises were heard in the Caracas, at Haïti, in Jamaica, and on the banks of the lake of Nicaragua.

But these subterranean noises not unfrequently occur without the terrible accompaniment of any visible signs of internal disturbance. On the 9th of January 1784, a sound like remote thunder (*bramido y truenos subterranos* \*) was heard at Guanaxuato, the chief town of the Mexican province of the same name, and lasted for upwards of a month, broken at intervals by violent detonations. From the 13th to the 16th of January, they resembled a tempest; brief sharp reports, like the vollied lightning, alternating with the reverberations of distant thunder. Though Guanaxuato is not situated in the volcanic region of Mexico, its inhabitants were stricken with terror, and deserted their homes *en masse*.

Great quantities of silver in "bars" were then stored up at Guanaxuato, and a few individuals, whom the bait of so splendid a prize enabled to resist the general infection, broke open the houses and enriched themselves at will. Gradually, however, the population took heart, and began to re-enter the town; and a company of

\* Literally, "roarings and subterranean thunders."