canopy several hundred miles in width. It covered the plains for a distance of twenty-five miles, with a layer of dust sixteen feet thick. The headland was advanced 787 feet into the bay. Two new islands were formed from the ashes and stones. The wind carried the dust westward more than forty degrees of longitude, and a layer of pumice was formed at that distance which vessels penetrated with difficulty. On the east, the fall of ashes extended to Jamaica, 800 miles. The area covered by the fall was one and a half million square miles; and the total volume of matter which escaped was not less than 65½ billions of cubic yards. The sound of the explosion was heard at Bogotà, 1,025 miles distant. Impenetrable darkness reigned for forty-three hours throughout the region of the eruption.

The amount of lava from Kilau-e'-a in 1840 exceeded six billion five hundred and fifty million cubic yards. That from Mauna Loa, in 1835, flowed seventy-six miles from the crater. The volcano of Skaptar Jokul, in Iceland, was cleft asunder in 1783, and gave vent to two rivers of fire, each of which filled up a valley; one attained a length of fifty miles, with a breadth of fifteen miles; the other was of less dimensions, but the depth of the mass was in some places as much as four hundred and ninety-two feet. The whole volume of lava erupted on this occasion was not less than six hundred and fifty-five billions of cubic yards—a volume equivalent to that of the whole mass of Mont Blanc.

Many thrilling narratives of volcanic violence might be cited; but these must serve as examples. They demonstrate the existence of enormous reservoirs of molten rock within the earth, and the exertion of such inconceivable forces as suffice to burst mountains, to hurl rock-fragments a mile into the atmosphere; to blow into atoms, while escaping with steam and gases, sufficient matter to bury thousands of square miles in ashes. It appears that isolated volcanic cones, like Vesuvius, Ætna, and Shasta, are composed generally of piles of ejected materials, inaugurated by the escape of matter through an initial fissure. The volcanic cone is hollow above,