whence along the eastern shore of Asia, a line of volcanic activity extends to the terrible burning mountains of the Indian archipelago. Volcanic islands are widely scattered over the Pacific basin, and volcanoes burn amidst the thickribbed ice of the Antartic continent. The Atlantic area is in like manner marked by volcanic islands from Jan Mayen and Iceland, to the Canaries, the Azores, and the Caribbean islands, and southward to Ascension, St. Helena, and Tristan d'Acunha.

The continents, with the exception of the two areas already defined, present no evidences of modern volcanic action, and the regions of ancient volcanic activity, as shown by the presence of great ontbursts of eruptive rocks, are not less limited and circumscribed. In northern Europe, the chain of the Urals, an area in central Germany, and one in the British islands are apparent, and in North America there appear to have been but two volcanic regions in the paleozoie period-one in the basin of Lake Superior, and another, which may be described as occurring along either side of the Apallachian chain to the north-east, including the valleys of the lower St. Lawrence, Lake Champlain, the Hudson and Connecticut rivers, and extending still farther southward. The study of the various eruptive rocks of this region shows that volcanic activity in different parts of it was prolonged from the beginning of the paleozoic period till after its close.

Having thus before us the principal facts in the history of volcanoes, we may proceed to notice the various theories from time to time put forward to account for them. The first and most obvious notion is that of combustion, and we find early writers supposing that volcanoes might be due to the burning of coal, bitumen, or sulphur. As juster ideas were acquired of the nature of combustion, and the necessity of a supply of air for its maintenance, other chemical agencies were invoked as the probable source of internal fire. Lemery suggested the oxidation of subplurets in the presence of water, and the brilliant discovery by Davy, in the earths and alkalies, of metallic bases which decompose water with great violence, and even with the phenomena of combustion, gave rise to the so-called chemical theory of volcanoes, which has found its defenders down to our own time. This theory supposes that the interior of the globe consists of the metallic bases of earths and alkalies, which are oxidized by the gradual access of the ocean's water, with the production of intense heat, causing the fusion of the resulting oxides,