tained by Professor Charles Lory, by Ebray and Magnan. Professor Favre also dissented from the supposed vertical uplift of the Alps. In 1867, in a now classic description of the geology of Mount Blanc, he ascribed the complex fan-shaped arrangement of the rocks in that mountain to the action of strong lateral pressure.

Important additions to the knowledge of mountain-structure were meantime being made by the North American Geological Survey. In 1842, at a Congress of British and American Scientists, H. D. Rogers had expressed his views on the stratigraphical composition, the tectonical relations, and the mode of origin of the Appalachian mountains. The one-sided asymmetric arrangement of the folds in the Alleghanies, the absence of any central axis consisting of crystalline eruptive rocks, the fact that the whole mountain-system was composed of numerous parallel folds, most of them curved in form, could not in Rogers's opinion be brought into harmony with the theories of mountain-upheaval which were at that time current in Europe. He argued against the conception that ascending eruptive masses uplifted superincumbent rock-strata, and also against Prévost's opinion that mountains were formed as a consequence of local inthrows and crust subsidences. His own theory of mountain-folding supposed the disturbing cause to be wave-like pulsations into which the molten magma of the nuclear body was thrown from time to time, when the accumulated tensions in the earth's thin crust caused an actual rupture. The form, arrangement, and inclination of the folded strata were ascribed to a combined wave-like and tangential movement, which was also accompanied by an injection of eruptive masses into the cavities created within the folds during the movement.

Professor Dana[1] was the geologist who first gave clear ex-

[1] James Dwight Dana, born on the 12th February 1813 at Utica in New York State, entered Yale University in 1833 and made a journey to Europe during his college course. In 1838 he was selected as geologist and mineralogist for the Wilkes Exploring Expedition, and during the four years' voyage became acquainted with the coasts of South America and the Pacific Ocean. Dana was shipwrecked off the coast of Oregon, but fortunately succeeded in reaching San Francisco and sailed once more by the Sandwich Isles, Singapore, and St. Helena to New York. Thirteen years were then devoted to the examination and description of his geological and zoological collections. His reports on the geology of the Pacific Ocean, the volcanoes of the Sandwich Islands and coral reefs,