

of them. Doubtless, volcanoes have their incipient cause in internal fires. Ashes are emitted from the craters of volcanoes. Ashes are formed by the burning of graphite and coal, and other substances. It seems unreasonable that the internal matter under the crust of the earth could be concentrated in a particular locality, so as to cause a volcano in that locality; but the combustion of graphite, or very solid coal, existing at a depth of a mile below the surface of the earth, would in time form a superheated cavern. There are fissures which convey water from the deep below the surface of the earth to elevated points. Some of the fissures convey boiling water high up in the mountain passes. It is reasonable that through certain causes, and in certain instances, the water has ceased to flow through some of the fissures; then, being open above, atmospheric pressure would force air down through them. Now, all that would be necessary to cause a combustion of a deep formation of carbon or sulphur, would be a current of electricity, which would be intercepted by the graphite or sulphur, and, thus, igniting the coal or sulphur. The supply of air, in conjunction with the current of electricity, would cause the combustion of the graphite or sulphur. Then a superheated cavern would be formed. In process of time a fissure with water would be broached. Water would flow into the heated cavern, then steam would be formed on an immense scale. Either a volcanic eruption or earthquake would follow. The steam would cause the flowage of the water in the fissure carrying it to be reversed. The rocks between the fissure would be heaved. They would undulate like waves, and the commotion would extend to the length of the fissure, and in a lateral direction to the width of it, which in some instances reaches hundreds of miles. Then the steam would be condensed, and water would flow again in the heated cavern, and another earthquake would follow; but perhaps of less violence, since the internal fire would be partly quenched by the water which first flowed into the cavern. A third or fourth inflowage would put the fire out, and the quaking of the earth would cease.

I have given this short synopsis of my explanation of one of the causes of earthquakes and volcanoes. If I were a president of a great college, all I would have to say in order to end the consideration of this subject, would be to say that it is *my opinion* that the islands and continents were *not* upheaved by volcanic agency.

This work will be extensively circulated in the towns where I will lecture. It will excite discussion. Men of ordinary learning in the

towns and cities will ask the professional gentlemen of their acquaintance their opinion of the new scientific dogma. Men who have achieved popularity, and whose income depends on that popularity, are very careful not to jeopardize their popularity; hence, they are wary in the expression of opinions. Their first answer may be:—I have not read the work. Then perhaps they will be urged to read it. If they have expressed the opinion that the deluge spoken of in the bible was only partial, they will not only find that idea refuted, but a demonstration that the deluge recorded in the 7th chapter of Genesis was just what the bible said it was—a flood that covered all the mountains and hills—so that “All in whose nostrils was the breath of life, of all that was in the dry land, died.”

If they have expressed the opinion that at first the whole earth was red hot, and that millions of years had to elapse before the earth was fit for human beings to live on it, and that there was subsequently an ice age which was followed by a mild era, they will not only find it explained how the earth was made so, that the surface was never red hot, but a complete refutation of the modern conception of a glacial age.

If they have taught that the coal fields were formed from peat bogs, they will not only find this theory refuted, but a rational explanation of the way the coal fields were formed. Now, if one of them accepts the explanation, and if his love of candor exceeds his pride, he will boldly and publicly state that those professors who have taught that the earth was at first a vaporous body, requiring millions of years to cool to a semi-red hot, solid condition, and millions of years more to form a cool crust, so that man could live on it; that there was an ice age followed by a temperate climate; and that the flood spoken of in the Bible as general, was only partial,—were simply mistaken. Then he will express his regrets that he was led by the high position held by said professors to teach ideas that were not in harmony with the spirit and letter of the Word of God. Methinks it would be no more mortifying for a man to acknowledge that he was mistaken on this point, than to acknowledge by counter-teaching that his forefathers were mistaken in their idea as to the extent of the deluge.

But another professional gentleman may not be willing to make a confession in harmony with his convictions, but he is expected to say something, however little that may be. I can fancy the manner in which he will express his little opinion. With a slight shrug of his shoulder and a disdainful toss of his head, he may say that he *does not agree* with the author of the work, and he may think that such an expres-